HWMA/RCRA STORAGE PERMIT

for the

SAFETY-KLEEN SYSTEMS, INC., BOISE SERVICE CENTER

ATTACHMENT 7 – CONTINGENCY PLAN

Section G Contingency Plan

Emergency Information

Evacuation Plan

Emergency Equipment

Memorandum of Agreement with Emergency Response Agencies

EFFECTIVE DATE: JULY 29, 2015
REVISION DATE: March 20, 2019

Section G Contingency Plan

G-1 270.14(b)(7) Contingency Plan

The Contingency Plan is located in Exhibit G-1.

G-2 270.14(b)(7); 264.52(d); 264.55 Emergency Coordinators

There is an emergency coordinator is on-site or on-call at all times. The emergency coordinator and the alternate coordinator are familiar with all aspects of the Contingency Plan, the operations and activities at the facility, the location and characteristics of materials handled, the location of records within the facility, and the facility layout.

G-3 270.14(b)(7); 264.52(a); 264.56(d) Implementation

The Contingency Plan will be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could human health or the environment.

G-4 270.14(b)(7)264.56 Emergency Actions

G-4a 270.14(b)(7); 264.56(a) Notification

Employees are authorized to activate the internal facility alarm or communication systems to notify all facility personnel and the emergency coordinator or alternate. The coordinator will notify state and local agencies as necessary. Safety-Kleen's Qualified Emergency Responder will be notified.

G-4b 270.14(b)(7); 264.56(b) Identification of Hazardous Materials

The emergency coordinator will identify the character, amount, and extent of any released materials. The coordinator may do this in conjunction with personnel who first identified the release, reviewing operating records, shipping documents, and chemical analyses.

G-4c 270.14(b)(7); 264.56(c)(d) Assessment

The emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (i.e. the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous run-off).

G-4d 270.14(b)(7); 264.52(a) Control Procedures

Every facility employee is trained on the actions they are to take to recognize or identify that a release has occurred. Upon recognition that a release has occurred, the emergency coordinator is notified.

G-4e 270.14(b)(7); 264.56(e) Prevention of Recurrence or Spread of Fires, Explosions, or Releases

All employees (with the exception of the Branch Administrators) are trained to respond and assist with cleaning up incidental releases. Response actions may include stopping processes and operations, collection and containing released material, and removing or isolating containers.

G-4e(1) 270.14(b)(7); 264.56(f) Monitor for Leaks, Pressure Buildup, Gas Generation, or Ruptures of Released Material

All facility is designed to be a passive waste management facility. Much of the material handled at the facility is contained in small containers and manually moved from storage to transport. The spent parts washer solvents that are unloaded into the dumpster/drum washer unit depend upon a pump for transfer to the storage tank. If the power or transfer equipment fails, this operation would be halted. There would be no leaks, pressure build-up or gas generation due to the halting of operations.

There are pressure/vacuum vents on the top of each tank to limit pressure and vacuum build-up in the tanks. Since the piping is connected to the tanks and the valves from the tanks to the piping are normally in the open position, the pressure in the piping is limited also.

G-4f 270.14(b)(7); 264.56(g) Storage, Treatment, and disposal of Released Material

The treatment, storage, and/or disposal of the recovered waste, contaminated soil, or surface water that results will be arranged by Safety-Kleen and carried out as expeditiously as possible.

G-4g 270.14(b)(7); 264.56(h)(1) Incompatible Waste

The emergency coordinator will ensure that in the affected area(s) of the facility, no substance that may be incompatible with the released material is brought on site until cleanup procedures are complete.

G-4h 270.14(b)(7); 264.56(h)(2) Post-Emergency Equipment Management

The emergency coordinator will ensure that, in the affected area(s) of the facility, all emergency equipment listed in the Contingency Plan is cleaned/decontaminated and fit for its intended use before operations are resumed.

G-4h(1) 270.14(b)(7); 264.56(i) Notification of Federal, State and Local Authorities before Resuming Operations

Within 15 days of the incident, a written report will be submitted to the appropriate State and Local authorities.

G-4i 270.14(b)(7); 264.52; 264.71 Container Spills and Leakage

The Contingency Plan describes procedures to be followed when responding to container spills and leaks (reference Exhibit G-1).

G-4j 270.14(b)(7); 264.196(a) Tank Spills and Leakage

G-4j(1) 270.14(b)(7); 264.186(a) Stopping Waste

The Contingency Plan describes procedures to stop the flow of hazardous waste.

G-4j(2) 270.14(b)(7); 264.196(b) Removing Waste

The Contingency Plan describes procedures to remove waste within 24 hours after a leak is detected, remove waste and allow inspection and repair of the tank system.

G-4j(3) 270.14(b)(7); 264.196(c) Containment of Visible Releases

The Contingency Plan describes includes procedures to conduct a visual inspection of a release.

G-4j(4) 270.14(b)(7); 264.196(d) Notification Reports

Any release to the environment will be reported to the IDAPA within 24 hours of detection.

G-4j(5) 270.14(b)(7); 264.196(e) Provision of Secondary Containment, Repair, or Closure

Safety-Kleen will satisfy the requirements of paragraphs 40 CFR 264.196 (e) (2) through (4) or the tank system will be closed.

G-4k 270.14(b)(7); 264.227 Requirements for Surface Impoundments.

The facility does operate any surface impoundments. Therefore, these sections do not apply.

G-4l 270.14(b)(7); 264.1101 Requirements for Containment Buildings

The facility does operate any containment buildings. Therefore, these sections do not apply.

G-4m 270.14(b)(7); 264.573(m) Requirements for Drip Pads

The facility does operate any drip pads. Therefore, these sections do not apply.

G-5 270.14(b)(7); 264.52(e) Emergency Equipment

Facility drawings indicating the location of emergency items is located in Exhibit F-3 and F-3.1. Current list of emergency equipment is located in Exhibit F-4

G-6 270.14(b)(7); 264.37; 264.52(c) Arrangements with Local Authorities

Copies of this document, and any revisions, are provided to local authorities and organizations listed on the Emergency Information sheet (Exhibit G-2). Refusal to enter into a coordination agreement will be documented.

G-7 270.14(b)(7); 264.52(f) Evacuation Plan for Facility Personnel

The site evacuation plan is shown in Exhibit G-4. Notice of evacuation will be made via the intercom system or by word of mouth.

G-8 270.14(b)(7); 264.56(j) Required Report Procedures

Safety-Kleen will record the time, date, and details of incidents requiring implementation of the Contingency Plan.

G-9 270.14(b)(7); 264.53 Location and Distribution of Contingency Plan

This plan and all revisions to the plan are kept at the facility and regularly updated throughout the operating life of the facility. Copies of this document, and any revisions, are provided to local authorities and organizations listed on the example Emergency Information sheet (Exhibit G-2).

Exhibit G-1

Contingency Plan

CONTINGENCY PLAN
ABSTRACT

PURPOSE: This plan describes the proper action to be taken be employees during an emergency.

RESPONSIBILITIES: The emergency coordinator or alternate is responsible for implementing the plan during an emergency.

EMERGENCY COORDINATOR: The Branch General Manager is typically the emergency coordinator. The alternate emergency coordinators are listed at the end of the Contingency Plan.

EMERGENCY NOTIFICATIONS:

Boise Police Department	911
Boise Fire Department	911
St. Alphonsos Regional Medical Center	(208)367-3221
Idaho State EMS Communications Center 24-Hour	(800)632-8000
Qualified Emergency Responder (24-Hours)[1]	(800)468-1760

[1] Safety-Kleen Systems maintains a contract with a primary emergency response contractor (currently Clean Harbors-subject to change). The initial notification for emergency response is to the Safety-Kleen Environmental Response phone number that is monitored by Clean Harbors Emergency Response Center, which takes the initial call and makes the appropriate internal notifications. Clean Harbors does not maintain emergency response teams within the Boise area, so H20 Environmental or other qualified contractor will also be contacted to provide emergency assistance during a release and/or cleanup, as needed.

CONTINGENCY PLAN
6334 Supply Way
Boise, Idaho 83716

1. PURPOSE

The Contingency Plan describes the actions to be taken by each employee in the event of a spill, fire or other emergency. It includes the information necessary to address emergency situations efficiently and in such a manner as to prevent or minimize hazards to human health or the environment due to fire, explosion, or any other release of hazardous materials to the air, soil, surface water, or ground water. The Contingency Plan is to be carried out immediately whenever there is a release of hazardous material that could threaten human health or the environment.

2. EMERGENCY COORDINATOR RESPONSIBILITIES

The emergency coordinator, or alternate coordinator, is responsible for implementing the Contingency Plan during an emergency; however, all employees must be familiar with the procedures in this plan and are responsible for proper implementation of the plan should the emergency coordinator or his alternate be unavailable. The Branch General Manager is typically the emergency coordinator the coordinator designates the alternate coordinator.

The emergency coordinator and alternate must be familiar with all aspects of this Contingency Plan, the operations and activities at the facility, the location of all records within the facility and the facility layout. In addition, these coordinators have the authority to commit the resources necessary to carry out the Contingency Plan. Their home addresses and telephone numbers, as well as the office telephone number, are listed in Exhibit G-2. At least one employee will be at the facility or on call to respond to an emergency situation at all times.

2.1 Responsibilities During an Emergency

Whenever there is an emergency situation that requires implementation of the Contingency Plan, the emergency coordinator (or alternate) will:

a) Activate the internal facility communication system to notify all facility personnel;

b) Notify Safety-Kleen's Qualified Emergency Responder using the 24-hour telephone number 800/468-1760, and

c) Notify appropriate state or local agencies with designated response roles, if necessary.

Whenever there is a release, fire, or explosion, the emergency coordinator (or alternate) must immediately try to identify the character, exact source, amount, and extent of any contamination. Because of the limited number of materials being handled at the facility, he or she may do this by observation or by review of facility records. If necessary, outside laboratories may be contacted to perform chemical analysis.

Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous run-off).

The emergency coordinator and alternates have been adequately trained to respond to an emergency. They have references such as various staff members at the corporate office and the Material Safety Data Sheets to help them make decisions during an emergency. Material Safety Data Sheets corresponding to the Safety-Kleen Systems' solvent supplied for each of the permitted core streams are found in Exhibit G-3. Please note these MSDS are subject to change and update as required. The current documents will be available via Safety-Kleen's website (www.safety-kleen.com) or via the company's internal website. The following table provides the name of each permitted waste stream and the corresponding name of the product that makes up the primary constituent.

Name of Permitted Waste	Name of Corresponding MSDS
Spent Parts Washer Solvent,Tank Bottoms Dumpster Sludge	Safety-Kleen Premium Solvent (Virgin and Recycled); Safety-Kleen Military PD680, Type II Solvent; Safety-Kleen Mil-PRF-680, Type II
Used Immersion Cleaner	Immersion Cleaner and Cold Parts Cleaner
DC Waste – Perchloroethylene	Safety-Kleen Refined Perchloroethylene (Note: there is limited availability of this product. The source of the majority of this waste is not from SK-supplied product).
Paint Waste	Safety-Kleen Heavy Duty Lacquer Thinner 6782, Multi-Use Lacquer Thinner, Heavy Duty 550 Cleaning Solvent, Premium Lacquer Thinner, Ultra Kleen Spray Equipment Solution, Clear Choice Cleaning Solvent

During an emergency, the emergency coordinator (or alternate) must take measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste storage areas at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

2.2 Remedial Action Responsibilities

If the environment has been contaminated or there is a potential for contamination as a result of a fire, explosion, or spill, the emergency coordinator must contact the Safety-Kleen's Environmental Compliance Manager. Either the emergency coordinator or the Environmental Compliance Manager shall report the incident. Appropriate remedial actions will be implemented to address contamination resulting from an emergency situation. The treatment, storage and/or disposal of any recovered waste, contaminated soil or surface water that results from an emergency situation must be arranged by Safety-Kleen and carried out as expeditiously as possible.

The emergency coordinator must ensure that, in the affected area(s) of the facility:

a. no substance that may be incompatible with the released material is brought on site until cleanup procedures are completed; and

b. all emergency equipment listed in the Contingency Plan is cleaned and fit for its intended use before operations are resumed. Exhibit F-4 Example Equipment List provides a list of equipment to be on hand and Exhibit F-3 Emergency Equipment Plan indicates the locations the basic emergency equipment is located.

2.3 Reporting Responsibilities

If the emergency coordinator determines that the facility has had a release that could threaten human health or the environment outside the facility, the coordinator must report those findings as follows:

a) If the assessment indicates that evacuation of local areas may be advisable, the coordinator must immediately notify appropriate authorities.

b) The coordinator must immediately notify the Safety-Kleen Environmental Compliance Manager. The Safety-Kleen Environmental Compliance Manager, or the coordinator, will report the incident to the Idaho State EMS Communications Center as soon as possible (no later than twenty-four (24) hours, including the:

1. Name and telephone number of notifier
2. Name and address of facility
3. Time and type of incident (e.g., release, fire)

4. Name and quantity of material(s) involved, to the extent known

5. The extent of injuries, if any, and

6. The possible hazards to human health, or the environment outside the facility.

The emergency coordinator (or alternate) must document the time, date, and details of any incident that requires the implementation of the Contingency Plan. Within 15 days of the incident, Safety-Kleen will submit a written report on the incident to the IDEQ. The report must include:

a) Name, address, and telephone number of the owner or operator;

b) Name, address, and telephone number of the facility;

c) Date, time, and type of incident (e.g., fire, explosion);

d) Name and quantity of material(s) involved;

e) The extent of injuries, if any;

f) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

g) Estimated quantity and disposition of recovered material that results from the incident.

2.4 Chain of Command

Based on the emergency response procedures described above, the chain of command during an emergency is as follows:

a. The person who discovers/causes the spill reports to the Emergency Coordinator or alternate.

b. The Emergency Coordinator contacts the Safety-Kleen Environmental Compliance Manager.

c. Safety-Kleen's Environmental Compliance Manager or the facility's emergency coordinator will contact the Idaho State EMS Communications Center.

2.5 Government Agencies and Local Authorities to Be Notified

During an emergency, the following government agencies and local authorities may be contacted:

Agency or Authority*	Rationale
Police Department	Notify is there is imminent danger to human health
Fire Department	Notify if there is a fire, uncontrolled spill, or other imminent danger
Hospital	Notify if there are any injuries
Idaho State EMS Communications Center	Report releases and fires
Qualified Emergency Responder	Call to assist with remedial action after a release

*Phone numbers may be found in Exhibit G-2 – Emergency Information for Service Center.

Arrangements have been made to familiarize the police department, fire department and local emergency response teams with the layout of the facility, the properties of hazardous materials handled and associated hazards, locations where facility personnel normally work, entrances to and roads inside the facility, and possible evacuation routes. Arrangements have been made to familiarize the local hospital with the types of injuries or illnesses that could result from fires, explosions, or releases at the facility. Memorandums of Agreement with Emergency Agencies are located in Exhibit F-5.

3. EMERGENCY RESPONSE PROCEDURES

Response actions to be taken in specific emergency situations are described in the sections that follow. Employees must assess the possible hazards to human health or the environment resulting from a release or fire by visually inspecting the area, reviewing Material Safety Data Sheets for the material released, and estimating the extent of the release and identifying the material to which it was released (e.g., soil, waste and/or air). Hazards must be assessed to make relevant decisions as to the appropriate personal protective equipment necessary to respond to an emergency.

3.1 Minor Spills

Minor spills that occur within secondary containment, and do not involve a release of material to the environment normally do not require implementation of the Contingency Plan. Procedures for addressing minor spills are summarized in this section. If a spill should occur while pouring spent solvent into a dumpster or filling drums with solvent product at the Return and Fill station, and it is contained in the secondary containment at the base of the Return and Fill station, the material will be collected and appropriately managed. Should the spill occur outside the

containment, different actions must be taken depending on whether the spill occurs on a paved or unpaved area:

a) If the material spills on a paved area, it will generally be collected with a wet/dry vac, pump, sorbent sheets, and/or granular absorbent. The free liquids (if any) and/or sorbents will be containerized and shipped to a permitted hazardous waste management facility for treatment/disposal.

b) .If the material spills on an unpaved area, attempts to recover any free liquids will be employed as in “a” above. Free liquids, sorbent material, and any contaminated soil must be containerized and shipped to a permitted hazardous waste management facility for treatment/disposal.

If a spill occurs while moving or delivering containers outside of the warehouse, the response actions described in 'a' and 'b' above must be followed. Spills inside the warehouse, Return and Fill, and the paint waste shelter will be prevented from contaminating the environment by the concrete floor and the secondary containment. In the event of a spill indoors, the doors may be opened to improve the ventilation in the confined area. If flammable material is spilled in a non-explosion rated area or is flowing in such, insure that all sources of ignition (e.g., thermostats or light switches) are left in the same position (either on or off) as at the time of the spill. Following the instructions of the appropriate Material Safety Data Sheet (if the released material is a Safety-Kleen product), the worker will enter the area wearing appropriate personal protective equipment and containerize the liquid, and return it to storage.

Cleanups are completed only when the workers have cleaned themselves and the emergency equipment with soap and water, or other suitable solvent as needed. All minor spills must be reported to the Safety-Kleen Environmental Compliance Manager. The Safety-Kleen Environmental Compliance Manager or the emergency coordinator will contact the Idaho State EMS Communications Center, if required.

3.2 Major Spills

Any spill which cannot be completely remediated using the methods described in 'a' and 'b' of section 3.1 is a major spill. A major spill is usually the result of a vehicular accident, tank overfilling, equipment failure, or a fire. Spilled material from this type of release can contaminate soil, surface water, ground water, sanitary sewer systems and storm sewer systems. Emergency response to this type of spill should be as follows:

a) Assist any injured people.

b) Stop the flow of material, if possible.

c) Retain, contain or slow the flow of the material if it cannot be stopped.

d) If material escapes containment efforts immediately call the local Fire Department, and report to the emergency coordinator (or alternate) and the Safety-Kleen Qualified Emergency Responder.

e) Immediately recover, to the extent possible, the spilled material to reduce property and environmental damage. Material resulting from a release, fire, or explosion may be stored onsite in containers or in tanks to the fullest extent possible. Material which cannot be contained using the storage facilities on site may be contained in tanker trucks or other containers as necessary.

The emergency coordinator or alternate shall report any incident as soon as possible to the Safety-Kleen Qualified Emergency Responder using the 24-hour telephone number: 800-468-1760. The emergency coordinator or alternate may also be required to report the incident to the National Response Center (telephone: 800/424-8802) and Idaho State EMS Communications Center (telephone: 800/632-8000 24-hour number). An emergency cleanup response contractor may be dispatched if it is deemed necessary.

Spills must be controlled and remediated to the fullest extent possible. However, personnel must not take health or safety risks; if there is any doubt as to whether a particular action is unsafe, it must be avoided. The flow of a released material may be stopped by turning off pumps, closing valves, righting tipped containers, or taking other appropriate actions. If the flow cannot be stopped, a berm should be formed by shoveling dirt or sorbent material around the free liquid to hold it in one place or at least direct it to the area where it will do the least amount of damage (e.g. secondary containment area in the warehouse or the tanker truck loading/unloading area).

The person reporting a spill should be prepared to give his name, position, company name, and address and telephone number. The person reporting should also describe the material spilled and, if possible, some estimate of the amount and the containment status, and specify any equipment needed.

Contaminated material resulting from remedial actions for major spills will be disposed of at a properly permitted treatment or disposal.

Every spill must be recorded in the electronic Incident Management System. Spill report forms and other appropriate information are reviewed with branch personnel to prevent similar spills from occurring in the future.

3.3 Response To Leaks Or Spills From Tanks (40 CFR 264.196(a-f)

a) Stopping Waste Addition **–** Should a leak or spill occur from the tank, Safety-Kleen personnel will immediately stop the flow of hazardous waste into the system and inspect the system to determine the cause.

b) Removing Waste –

1. If the release was from the tank system, Safety-Kleen will, within 24 hours after detection of the leak or, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system. This can typically be accomplished by transferring material into containers or pumping into a tanker.
2. If the material released was to a secondary containment system, all released materials will be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

c) Containment of Visible Releases – Safety-Kleen will conduct a visual inspection of the release. Safety-Kleen will prevent further migration of the leak or spill to the environment. Any contamination will be removed and disposed of properly.

d) Notifications and Reports –

1. A release to the environment, except as provided in paragraph (d)(2) of this section, will be reported to the Idaho State EMS Communications Center within 24 hours of its detection. Unless already reported pursuant to 40 CFR Part 302 , or is a leak or spill of hazardous waste exempted from the requirements by meeting the criteria of ≤ one (1) pound, and is immediately contained and cleaned up.
2. Within 30 days of detection of a release to the environment, Safety-Kleen will file a report containing the following information to the Idaho State EMS Communications Center:
    i. Likely route of migration of the release;
    ii. Characteristics of the surrounding soil (soil composition, geology,hydrogeology, climate);
    iii. Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within 30 days, these data must be submitted to the Idaho State EMS Communications Center as soon as they become available.
    iv. Proximity to down gradient drinking water, surface water, and populated areas; and
    v. Description of response actions taken or planned.

e) Provision of secondary containment, repair, or closure.

1. Safety-Kleen will satisfy the requirements of paragraphs 40 CFR 264.196 (e)(2) through (4) or the tank system will be closed

f) Certification of Major Repairs – If the repairs to the tank system are extensive (e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), Safety-Kleen will obtain a certification by a qualified Professional

Engineer in accordance with 40 CFR270.11(d) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. The certification will be placed in the operating record and maintained until closure of the facility.

3.4 Fire Control Procedures

It is Safety-Kleen's policy that employees respond only to incipient fires; that is, those that can be immediately extinguished with a fire extinguisher. Any fire that cannot be immediately controlled, or which has the potential to become uncontrollable warrants implementation of the evacuation plan and the proper authorities will be contacted.

If a small fire occurs, personnel must act quickly with the fire extinguisher to put out the fire before it spreads, where possible, without undue threat to personnel safety. If it cannot be extinguished immediately, evacuate the facility and call the fire department. Potential guidelines for response authorities to consider during a fire are discussed below.

Spent Parts Washer Solvent (PWS) (Petroleum Naphtha) - PWS may be stored on the property in steel containers, typically 15 to 55 gallon, or in the 12,000 gallon tank in the tank farm (a second tank holds product petroleum naphtha). Decomposition and combustion materials may be toxic. Burning may produce carbon monoxide and unidentified organic compounds. Fire extinguishing media include carbon dioxide, regular foam, dry chemical, water spray, or water fog. Vapors of petroleum naphtha exposed to a spark or open flame can flash at temperatures over 148° F. Bulked materials exhibit lower flashpoints due to contaminants. A petroleum naphtha fire can best be extinguished with foam. If foam is not available, sweeping the fire with water fog can cool it, directing the water spray to push the flames into a confined area, if possible. The flame should not be extinguished until the flow of the solvent has been stopped. Then attention should be directed immediately to extinguishing the flame. Keep storage containers cool with water spray. A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies. Firefighting control for PWS would cover Tank Bottom Sediments and Dumpster Sludge.

Immersion Cleaner – Immersion Cleaner is stored on site in containers, typically 15 gallon steel drums. Decomposition and combustion materials may be toxic. Burning may produce nitrogen oxides, acid halides, carbon monoxide, and unidentified organic compounds. Fire extinguishing media include carbon dioxide, alcohol-resistant foam, dry chemical, water spray, or water fog. If able to do so, fire crews should cool with water spray. A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Paint wastes and Gun Cleaner Waste – These waste streams are stored in steel containers typically from 5 gallon to 55 gallon in size. Decomposition and combustion materials may be toxic. Burning may produce phosgene, chlorides, chloroacetylenes, formaldehyde, peracetic acid, carbon monoxide and unidentified organic compounds. Fire Extinguishing Media includes carbon dioxide, alcohol-resistant foam, dry chemical, or water spray. A positive-pressure, self-

contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Dry Cleaning Perchloroethylene Wastes - are generally not flammable, but can produce toxic substances, such as hydrogen chloride and carbon monoxide when exposed to very high temperatures (about 1200° F). Fire extinguishing media includes carbon dioxide, regular foam, dry chemical, water fog or water spray. Positive-pressure self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies. While the potential for Perchloroethylene Waste reaching a decomposition temperature is minimal, Safety-Kleen personnel and local authorities must be aware of the proper response procedures, should a fire affect the container storage area, Examples of potential response procedures are described below:

a) Isolate the hazard area and deny entry to unauthorized personnel.

b) Stay upwind; keep out of low areas.

c) Ventilate closed spaces before entering them.

d) Wear personal protective clothing

e) Evacuate a 1,000-foot radius area endangered by the gas.

A fire in the container storage area can best be extinguished by foam, water fog, or water spray (mist). It should be noted that CSA1 is equipped with fire doors and automated fire extinguishing system designed activate should a fire occur within the room.

If a fire in or near the paint waste shelter occurs, a dry chemical, carbon dioxide or foam will best extinguish the fire. It is suggested that the Fire Department responders the shelter and containers with water until well after the fire has been extinguished.

3.4.1 Fire Control Procedures by Waste Storage Unit

3.4.1.1 Container Storage Area Warehouse (CSA1) - permitted storage area within the main warehouse

A fire in the container storage area can best be extinguished by ABC Dry Chemical, foam, water fog, or water spray. It should be noted that CSA1 is equipped with fire doors and automated fire extinguishing system designed to go off should a fire occur within the room. All materials in CSA1 are containerized and stored on pallets.

Permitted Waste Streams – Containerized PWS, Paint Waste, Dry Cleaning Perchloroethylene Waste, and Immersion Cleaner.

A small fire can be assessed by Safety-Kleen personnel, and if deemed safe to do so, may be extinguished using a fire extinguisher. Should the automated fire extinguisher system initiate, Safety-Kleen personnel will fall back and allow the system to extinguish the fire.

If the situation warrants, the fire department will be contacted for assistance. Safety-Kleen personnel will follow the evacuation plan and await the fire department's arrival. Safety-Kleen personnel will provide details on inventory and information assistance as needed.

Other fire response procedures include:

a) Isolate the hazard area and deny entry to unauthorized personnel.

b) Stay upwind; keep out of low areas.

c) Ventilate closed spaces before entering them.

d) Wear personal protective clothing

e) Evacuate a 1,000-foot radius area endangered by the gas.

3.4.1.2 Container Storage Area Metal Shed (CSA2)

A fire in the container storage area can best be extinguished by ABC Dry Chemical, alcohol-resistant foam, water fog, or water spray (mist). All materials in CSA2 are containerized and stored on pallets.

<u>Permitted Waste Streams – Containerized PWS and Paint Wastes.</u>

A small fire can be assessed by Safety-Kleen personnel and, if deemed safe to do so, may be extinguished using a fire extinguisher. If the situation warrants, the fire department will be contacted for assistance. Safety-Kleen personnel will follow the evacuation plan and await the fire department's arrival. Safety-Kleen personnel will provide details on inventory and information assistance as needed.

If a fire occurs in or near the paint waste shelter, a dry chemical, carbon dioxide or foam will best extinguish the fire. It is suggested that the Fire Department responders cool the shelter and containers with water until well after the fire has been extinguished.

Other fire response procedures include:

a) Isolate the hazard area and deny entry to unauthorized personnel.

b) Stay upwind; keep out of low areas.

c) Ventilate closed spaces before entering them.

d) Wear personal protective clothing

e) Evacuate a 1,000-foot radius area endangered by the gas.

3.4.1.3 Return and Fill Drum Washing Area

A fire in the Return and Fill can best be extinguished with carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Permitted Waste Streams – All waste streams are mineral spirit based materials, these include Containerized PWS, Dumpster Sludge and Bulked PWS.

A small fire can be assessed by Safety-Kleen personnel and, if deemed safe to do so, may be extinguished using a fire extinguisher.

If the situation warrants, the fire department will be called in, Safety-Kleen personnel will follow the evacuation plan and await the fire department's arrival. Safety-Kleen personnel will provide details on inventory and information assistance as needed.

Other fire response procedures are described below:

a) Isolate the hazard area and deny entry to unauthorized personnel.

b) Stay upwind; keep out of low areas.

c) Ventilate closed spaces before entering them.

d) Wear personal protective clothing

e) Evacuate a 1,000-foot radius area endangered by the gas.

3.4.1.4 Bulk Storage Tank Farm and Corresponding Tanker Loading/Offloading Area

A fire in the Bulk Storage Tank Farm or the Tanker Loading Offloading area next to it can best be extinguished with carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Permitted Waste Streams –Bulked PWS (area also has a tank of product PWS).

A small fire can be assessed by Safety-Kleen personnel and, if deemed safe to do so, may be extinguished using a fire extinguisher. All pumps and valves should be shut off, if possible. Vehicles can be pulled clear of the area if safe to do so.

If the situation warrants, the fire department will be called in, Safety-Kleen personnel will follow the evacuation plan and await the fire department's arrival. Safety-Kleen personnel will provide details on inventory and information assistance as needed.

If a fire in or near the tank farm occurs, regular foam, water fog and water spray will best extinguish the fire. It is suggested that the fire department responders cool any tanks, trucks, pipelines and containers with water to insure the fire does not spread.

Other fire response procedures are described below:

a) Isolate the hazard area and deny entry to unauthorized personnel.

b) Stay upwind; keep out of low areas.

c) Ventilate closed spaces before entering them.

d) Wear personal protective clothing

e) Evacuate a 1,000-foot radius area endangered by the gas.

3.4.1.5 Container Truck Loading/Offloading

Trucks are loaded and unloaded in the concrete paved lot, typically away from any of the buildings. During this process palletized containers are either being loaded on to a truck, typically with a forklift, or containers are being offloaded from the truck and placed on pallets for storage or bulking. A fire could occur from an overheated engine, a spark or a chemical reaction. A fire during a container loading/offloading process can best be extinguished by ABC Dry Chemical, foam, water fog, or water spray.

Permitted Waste Streams – All containerized permitted waste streams could potentially be involved such as PWS, Paint Waste, DC Perchloroethylene Waste, DC Naphtha Waste and Immersion Cleaner. In addition, a variety of nonhazardous wastes and 10-Day transfer waste could be involved.

A small fire can be assessed by Safety-Kleen personnel and if deemed safe to do so, may be extinguished using a fire extinguisher. If possible, other containers or vehicles not involved with the fire can moved away from the problem containers.

If the situation warrants, the fire department will be called in, Safety-Kleen personnel will follow the evacuation plan and await the fire department's arrival. Safety-Kleen personnel will provide details on inventory and information assistance as needed.

Other fire response procedures are described below:

a) Isolate the hazard area and deny entry to unauthorized personnel.

b) Stay upwind; keep out of low areas.

c) Ventilate closed spaces before entering them.

d) Wear personal protective clothing

e) Evacuate a 1,000-foot radius area endangered by the gas.

4EVACUATION PLAN

Clearly marked exits exist in the warehouse and office area. Employees are trained to be aware of all potential escape routes. The site evacuation plan is shown in Exhibit G-4. Notice of evacuation will be made via the intercom system or by word of mouth. An evacuation is necessary when a release, fire, and/or explosion has occurred or has the potential to occur, or has the potential to generate irritating vapors, toxic vapors, or deplete oxygen. In addition, a release, fire, or explosion which has the potential to injure personnel through physical contact or by damaging structures will necessitate evacuation.

All guests and visitors are required to sign in at the main office at 6334 Supply Way. If an evacuation of the site is required, the guest book will be used to determine if there are any unaccounted for guests or visitors. The Emergency Coordinator (or acting alternate) will take a head count at the meeting area.

When an uncontrolled fire or release has occurred, all personnel are to be evacuated from the area and assemble North of Gowen Road, at the southeast corner of the Fire Training Field (as designated on Exhibit G-5, “rendezvous point”), to assure that all personnel are accounted for and out of the hazardous area. At the time of evacuation to a safe area, the fire department must be notified immediately.

5ARRANGEMENTS WITH EMERGENCY RESPONSE CONTRACTORS

The number to access a Qualified Emergency Responder is identified on the Emergency Information sheet (Exhibit G-2). This contractor will provide emergency assistance during a release and/or cleanup.

6IMPLEMENTATION SCHEDULE

Any discrepancies or deficiencies found during the routine inspection must be corrected expeditiously to insure that the problem does not lead to an environmental or human health hazard. The Branch General Manager has the overall responsibility to ensure that repairs determined necessary during a routine inspection are implemented. Where a hazard is imminent or an accident has already occurred, remedial action must be taken immediately. The Branch General Manager will consult with the corporate environmental and engineering staffs to design an implementation schedule for remedial action.

7POST-EMERGENCY EQUIPMENT MAINTENANCE

Following its use, non-disposable personal protective and response equipment owned by Safety-Kleen will be decontaminated with a soap and water solution and thoroughly rinsed. The emergency coordinator will visually inspect Safety-Kleen’s response equipment after decontamination for residual contamination, damage, excessive wear, and proper operation. If equipment shows signs of residual contamination, the emergency coordinator may request that the equipment be decontaminated again. If these procedures fail to decontaminate the particular item, the decision may be made to dispose of the item using the facility’s standard

handling, storing, and disposing procedures. If an emergency equipment item is damaged and cannot be repaired, the emergency coordinator will instruct the post-emergency maintenance personnel not to decontaminate the item and to dispose of the item using the proper procedures. The emergency coordinator will order replacement equipment for any disposed equipment and make arrangements to repair any inoperable equipment as soon as practicable.

8AVAILABILITY AND REVISION OF THE CONTINGENCY PLAN

This plan and all revisions to the plan are kept at the facility and regularly updated throughout the operating life of the facility. Copies of this document, and any revisions, are provided to local authorities and organizations listed on the Emergency Information sheet (Exhibit G-2) and they may be called upon to provide emergency services. In addition, this plan and all revisions to the plan are made readily available to employees working at the facility.

The plan is reviewed and updated, if necessary, whenever:

- The facility license is modified to allow new process wastes to be stored or treated, or applicable regulations are revised;
- The list or location of emergency equipment changes
- The facility changes in its design, construction, operation maintenance, or other circumstances in a way that:
- Increases the potential for fires, explosions, or releases of hazardous constituents, or
- Changes in the response necessary in an emergency.
- The names, addresses, or phone numbers of emergency coordinators change;
- The employee assigned to each emergency task changes; or
- The plan fails when implemented in an emergency

Modifications to the Contingency Plan will be submitted to the Idaho Department of Environmental Quality in accordance to IDAPA 58.01.05.012 [40 CFR 270.42].

CONTINGENCY PLAN QUICK REFERENCE GUIDE

Safety-Kleen Systems, Inc.
6334 SUPPLY WAY,
BOISE, IDAHO 83716
Office: (208) 363-7908
IDD981770498

Facility Contacts:

Primary Emergency coordinator	Darin Awes	Mobile Phone (24/7)	(208) 272-0487
Alternate Emergency coordinator	Nick Castro	Mobile Phone (24/7)	(208) 258-1565
Alternate Emergency coordinator	Jennifer Wiley	Mobile Phone (24/7)	(208) 867-4665

Note: This facility typically operates weekdays 7:00 AM – 5:00 PM

Hazardous Waste Information:

Name of Waste	Waste Codes/Hazards	Location Accumulated	Maximum Amount Present	Response Notes	Special Notes to Hospital/Treatment Personnel
Used Parts Washer Solvent 150 Bulked	D001, (Ignitability; flash point <140°F) D039 (Toxic, ppm levels) and Potentially D-Codes Listed in Note Below	Above Ground Storage Tank in Containment (Note: there is a second tank of 150 product)	12,000 Gallons	Media to use includes regular dry chemical, foam, water spray, and water fog. Combustible liquid and vapor. The vapor is heavier than air. Decomposition and combustion materials may be toxic. Burning may produce carbon monoxide and other organic compounds. Wear full protective firefighting gear including SCBA. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Stay away from the ends of tanks. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Stay upwind and keep out of low areas. Spills: Use foam on spills to minimize vapors. Keep out of water supplies and sewers. Absorb with earth, sand or other	Acute: May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. Delayed: May cause damage to central nervous system. Special treatment Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

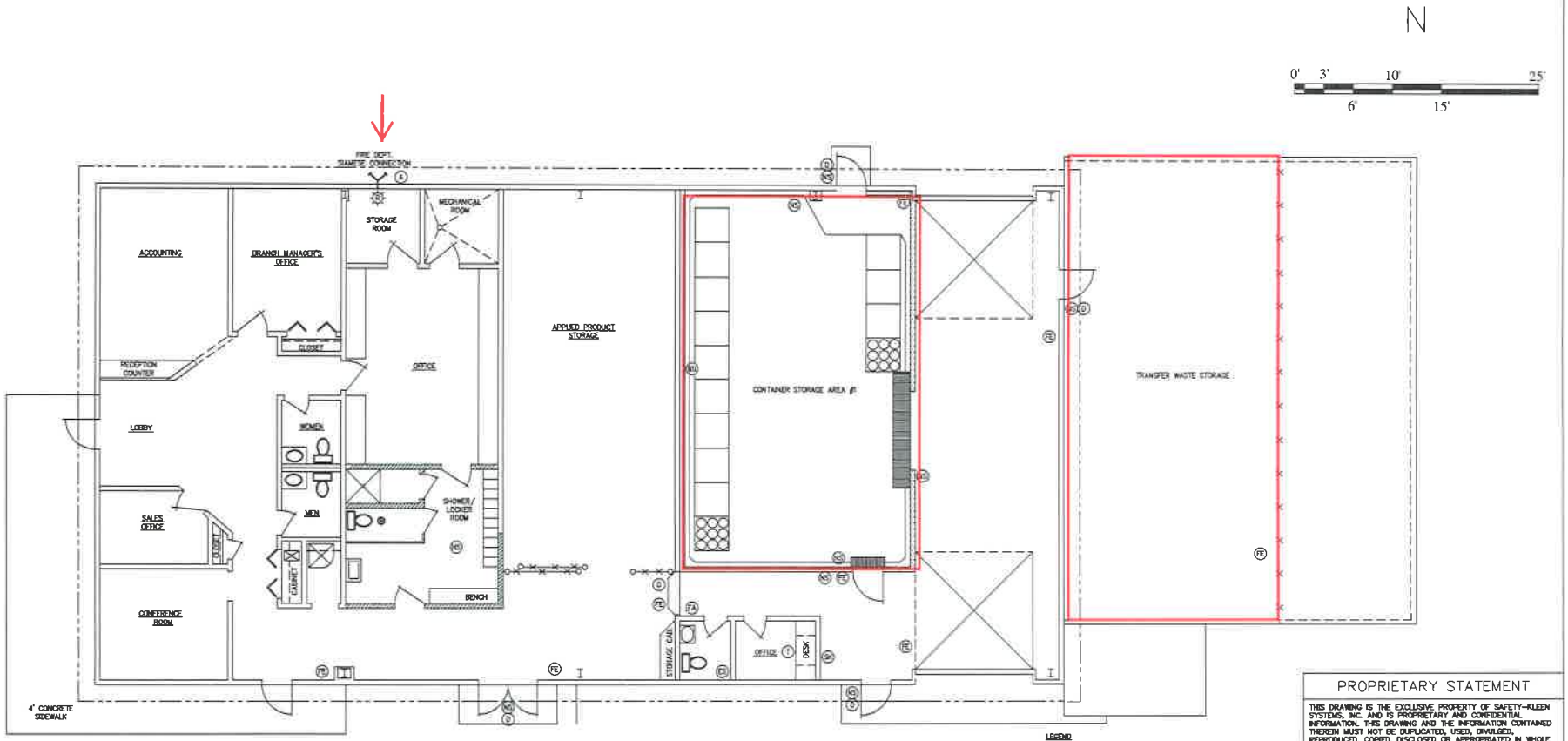
				noncombustible material and transfer to container. Use non-sparking tools. Large spills: Reduce vapors with water spray. Dike for later disposal.	
Parts Washer Solvent 150	D039 (Toxic) and Potentially D-Codes Listed in Note Below	Return and Fill Building	Varies – Waste received from offsite generators	Media to use includes Class B/C or Class A/B/C fire extinguisher, carbon dioxide, regular dry chemical, foam, water spray, and water fog. Combustible liquid and vapor. The vapor is heavier than air. Decomposition and combustion materials may be toxic. Burning may produce carbon monoxide and other organic compounds. Wear full protective firefighting gear including SCBA. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn. Stay upwind and keep out of low areas. Spills: Use foam on spills to minimize vapors. Keep out of water supplies and sewers. Absorb with earth, sand or other noncombustible material and transfer to container. Use non-sparking tools.	See above
Parts Washer Bottom Sludge	D001, (Ignitability; flash point <140°F) D039 (Toxic) and Potentially D-Codes Listed in Note Below	Return and Fill Area or CSA1	Typically < 4 55-gallon drums	See above	See above
Aqueous Parts Washer Solutions	Typically non-regulated, but may occasionally carry D-Codes Listed in Note Below	Transfer Area	Varies – Drums of waste received from offsite generators	Fire extinguisher media should be based on surrounding materials. Negligible fire hazard. Burning may produce oxides of carbon. Use water spray to keep fire-exposed materials cool.	Acute: May cause skin irritation. May cause eye irritation. May cause respiratory irritation. Delayed: Repeated exposure may cause skin dryness or cracking. Treat symptomatically and supportively.
Immersion Cleaner	D039 and Potentially D-Codes Listed in Note Below	CSA1 or Transfer Area	Varies – Drums of waste received from offsite generators, < 10 30-Gallon drums	Fire: Use Carbon dioxide, alcohol-resistant foam, dry chemical, water spray, water fog. Combustible liquid. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Heated containers may rupture or be thrown into the air. Decomposition and combustion materials	Acute: Fatal if inhaled, eye, skin, liver, nervous and respiratory system, spleen, and testes damage, blood system disorders, respiratory tract irritation, skin and respiratory sensitizer, aspiration hazard. Delayed: Cancer, reproductive effects, skin and respiratory sensitizer. Special

				may be toxic. Burning may produce nitrogen oxides, acid halides, carbon monoxide, and unidentified organic compounds. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn. Stay upwind and keep out of low areas. Dike for later disposal. A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies. Spills: Contain spill away from surface water and sewers. Sorb with compatible sorbent material and shovel with a clean, spark proof tool into a sealable container for disposal.	treatment: Treat symptomatically and supportively. Call 1-800-468-1760 for additional information.
Dry Cleaning Waste (Perchloroethylene)	F002, D039 and Potentially D-Codes Listed in Note Below	CSA1 or Transfer Area	Typically < 4 30-gallon drums	Fire: Product itself does not burn, but may decompose upon heating to produce phosgene, halogenated compounds, hydrogen chloride gas, carbon monoxide, and unidentified organic compounds. A positive-pressure, SCBA and full-body protective equipment are required for fire emergencies. Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Vapors will spread along the ground and collect in low or confined areas. Spills: Sorb with compatible sorbent material shovel into a sealable container for disposal.	Acute: Causes skin irritation, eye irritation, central nervous system damage, liver damage, and respiratory system damage. May cause central nervous system depression. Delayed: Causes liver damage, nervous system damage, and respiratory system damage. May cause mutagenic effects, cancer, reproductive effects, and kidney damage. Special Treatment: Treat symptomatically and supportively. Do not administer Adrenaline (epinephrine) or similar drugs following product overexposure. Increased sensitivity of the heart to such drugs may be caused by overexposure to product. Administration of gastric lavage and/or activated charcoal slurry may be considered. Treatment may vary with condition of victim and specifics of incident.
Paint Waste	D001 (Ignitability; flash point <140°F), F003, F005 (Methyl Ethyl Ketones, Acetone, MIBK), Toxicity	CSA1, Transfer Area or Flam Shed	Varies – Drums of waste received from offsite generators. Flam shed	Fire: Use Carbon dioxide, alcohol-resistant foam, dry chemical, water spray, water fog. Combustible liquid. If contact occurs, remove contaminated clothing & wash before reuse. If contact with skin, flush with soap and water. Get medical attention if irritation develops. If contact with eyes, flush with	If ingested, do not induce vomiting. If vomiting occurs, keep head lower than hips to prevent aspiration.

			max is 2700-gallons. CSA1 max 5620-gallons.	water-seek medical attention. If inhaled, move to fresh air and keep at rest-seek medical attention. A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies. Spills: Contain spill away from surface water and sewers. Sorb with compatible sorbent material and shovel with a clean, spark proof tool into a sealable container for disposal.	
Various Other Hazardous Wastes Received from Offsite Generators	D001 (Ignitability; flash point <140°F), D002 (Corrosives) Various Toxics Varies – Wastes Received from Offsite Generators	Transfer Area	Varies – Drums of waste received from offsite generators	If contact occurs, remove contaminated clothing & wash before reuse. If contact with skin, flush with soap and water. Get medical attention if irritation develops. If contact with eyes, flush with water-seek medical attention. If inhaled, move to fresh air and keep at rest-seek medical attention.	If ingested, do not induce vomiting. If vomiting occurs, keep head lower than hips to prevent aspiration.

NOTES: D-Codes: **Container Storage** – D001, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D038, D039, D040, D041, D042, and D043
Tank Storage – D001, D004, D005, D006, D007, D008, D009, D010, D011, D018, D021, D027, D028, D035, D039, and D040

Water Pressure – The Fire Department Connection on the north side of the warehouse has a static pressure between 65 – 75 lbs. psi.



LEGEND

- (T) TELEPHONE
- (EW) EYE WASH STATION
- (ES) EYE WASH & SHOWER
- (FE) FIRE EXTINGUISHER
- (FA) FIRST AID STATION
- (D) "DANGER" SIGN
- (NS) "NO SMOKING" SIGN
- (SK) SPILL KIT
- (A) ALARM BELL
- SPRINKLER RISER

F-3

NO.	DESCRIPTION	BY	CHK	APPR	DATE
B	REVISED FOR PERMIT	JEK	NC	NC	052814
A	REVISED FOR PERMIT	JEK	NC	NC	012813
0	NEW ISSUE FOR REVIEW	JEK	DDP	DDP	072808

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Solutions Companies

2005 West Broadway • Suite 210 • Columbia • MO 65203
• Phone: (573) 443-7100 • Fax: (573) 443-7161 •

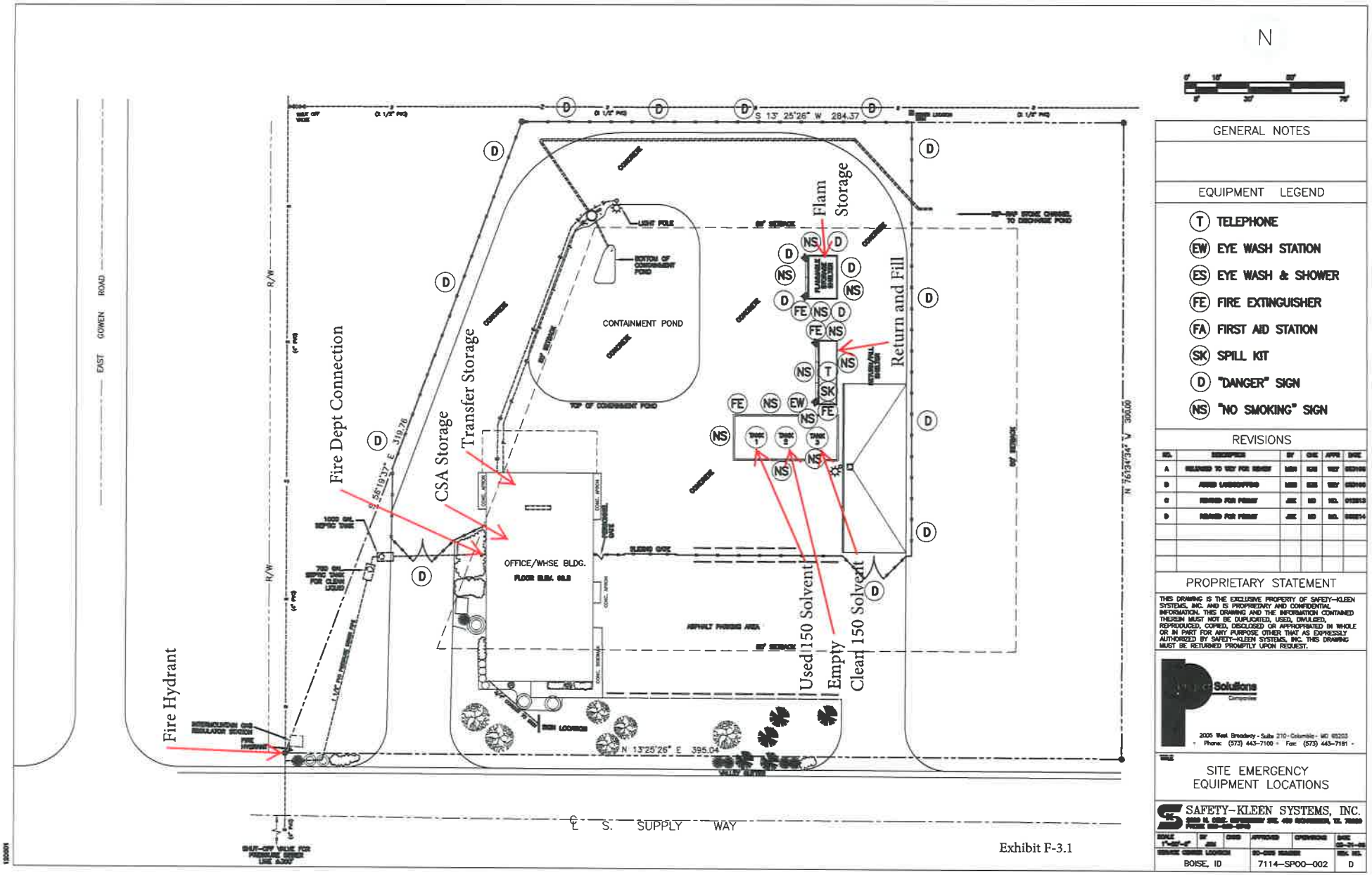
TITLE

OFFICE/WAREHOUSE EMERGENCY EQUIPMENT LOCATIONS

SAFETY-KLEEN SYSTEMS, INC.
2800 N. CENT. EXPRESSWAY STE. 400 RICHARDSON, TX. 75080
PHONE 800-669-7540

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
3/16"=1'	JEK	NC	NC	NC	1/28/13

SERVICE CENTER LOCATION	SD-DWG. NO.	REV. NO.
BOISE, ID.	7114-0800-002	B


N
GENERAL NOTES
EQUIPMENT LEGEND
T TELEPHONE
EW EYE WASH STATION
ES EYE WASH & SHOWER
FE FIRE EXTINGUISHER
FA FIRST AID STATION
SK SPILL KIT
D "DANGER" SIGN
NS "NO SMOKING" SIGN
REVISIONS
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SITE EMERGENCY EQUIPMENT LOCATIONS
SAFETY-KLEEN SYSTEMS, INC.
BOISE, ID
7114-SP00-002
D
Fire Hydrant
Fire Dept Connection
CSA Storage
Transfer Storage
Flam Storage
Return and Fill
Used 150 Solvent
Empty
Clean 150 Solvent
CONTAINMENT POND
OFFICE/WHSE BLDG.
EAST GOWEN ROAD
S. SUPPLY WAY
S 13° 25'26" W 284.37
N 13°25'26" E 395.04
N 76°34'34" W 300.00
S 58°19'37" E 319.76

Exhibit F-3.1

Google Maps

6334 Supply Way

Safety-Kleen Systems, Inc. Boise, ID

Site if off Gowan Rd., 1 mile west of I-84.

Street Map of SurroundingArea

Imagery ©2019 Google, Map data ©2019 Google 100 ft

Exhibit G-2

Emergency Information Sheet

SAFETY-KLEEN SYSTEMS, INC.
6334 SUPPLY WAY, BOISE, IDAHO 83716
EMERGENCY INFORMATION
March 20, 2019

A. FACILITY EMERGENCY COORDINATOR

NAME:	**Darin Awes**
HOME ADDRESSES:	**11110 W. Oneida Dr.**
	Boise, ID 83709
OFFICE:	**(208) 363-7920**
CELLULAR:	**(208) 272-0487**

ALTERNATE EMERGENCY COORDINATORS

	#1	#2
NAME:	**Dominick (Nick) Castro**	**Jennifer Wiley**
HOME ADDRESSES:	**3905 S. Yorktown Way**	**2056 Blue Spruce Ln.**
	Boise, Idaho 83706	**Boise, ID 83716**
OFFICE:	**(208) 363-7908**	**(208) 363-7908**
HOME	**714-322-8085**	
CELLULAR:	**(208) 258-1565**	**(208) 867-4665**

B. EMERGENCY NOTIFICATION TELEPHONE NUMBERS

a. **INTERNAL**

Safety-Kleen Incident Notification System	
24-Hour Emergency Number	(800) 468-1760
Safety-Kleen Environmental Compliance Manager	(530) 363-2632
Paging System	#6

b. **EXTERNAL**

National Response Center -24 Hr.	(800) 424-8802
Idaho Dept. of Environmental Quality	(800) 632-8000

c. **EMERGENCY TEAM TO BE NOTIFIED**

Boise Fire Department	911
Boise Police Department	911
Idaho State EMS Communication Center	(800) 632-8000
Saint Alphonsus Regional Medical Center - Boise	(208) 367-3221

d. **EMERGENCY RESPONSE CONTRACTOR**

Qualified Emergency Responder	(800) 468-1760

Exhibit G-3

Safety-Kleen Product Material Safety Data Sheets

Safety-Kleen Material Safety Data Sheets

G-3.1	Safety-Kleen Premium Solvent (150)
G-3.2	Safety-Kleen PD 680, Type II Solvent
G-3.3	Safety-Kleen Mil-PRF-680, Type II
G-3.4	Safety-Kleen Immersion Cleaner and Cold Parts Cleaner
G-3.5	Safety-Kleen Refined Perchloroethylene
G-3.6	Safety-Kleen Heavy Duty Lacquer Thinner
G-3.7	Safety-Kleen Multi-Use Lacquer Thinner
G-3.8	Safety-Kleen Heavy Duty 550 Cleaning Solvent
G-3.9	Safety-Kleen Premium Lacquer Thinner
G-3.10	Safety-Kleen Ultra Kleen Spray Equipment Solution
G-3.11	Safety-Kleen Clear Choice Cleaning Solvent

Material Safety Data Sheet

Material Name: SAFETY-KLEEN PREMIUM SOLVENT (VIRGIN AND RECYCLED) **ID: 82658**

* * * Section 1 - Chemical Product and Company Identification * * *

Product Code: 6605, 6616
Product Use: Cleaning and degreasing metal parts. If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.
Synonyms: Safety-Kleen Premium Gold Solvent. Parts Washer Solvent; Petroleum Distillates; Petroleum Naphtha; Naphtha, Solvent; Stoddard Solvent; Mineral Spirits.

Safety-Kleen Systems, Inc.
2600 North Central Expressway
Suite 400
Richardson, TX 75080

Phone: 1-800-669-5740
Emergency # 1-800-468-1760
www.safety-kleen.com

Issue Date
November 8, 2012
Supersedes Issue Date
January 20, 2012
Original Issue Date
January 26, 1995
PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW
Appearance
Liquid, clear, colorless to pale yellow, mild hydrocarbon odor.
Signal Word
WARNING!
Physical Hazards
Combustible liquid and vapor.
Health Hazards
May be harmful if inhaled. May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin. May be harmful if swallowed. Contains material that may cause central nervous system and kidney damage.
POTENTIAL HEALTH EFFECTS
Inhalation (Breathing)
High concentrations of vapor may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.
Eyes
May cause irritation.
Skin
May cause irritation. Not likely to be absorbed in harmful amounts.
Ingestion (Swallowing)
May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.
Medical Conditions Aggravated by Exposure
Individuals with pre-existing respiratory tract (nose, throat, and lungs), central nervous system, kidney, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic

Prolonged or repeated inhalation may cause toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated exposure may cause central nervous system and kidney damage. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, swelling (dermatitis) and or burns.

Cancer Information

No known carcinogenicity. For more information, see **SECTION 11: CARCINOGENICITY**. Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards

Product is not toxic to aquatic life. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS	Component	Percent
64742-47-8	Distillates (petroleum), hydrotreated light	100

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Stoddard solvent (8052-41-3).

* * * Section 4 - First Aid Measures * * *

Inhalation (Breathing)

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

Skin

Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists.

Ingestion (Swallowing)

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians

Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce carbon monoxide and unidentified organic compounds.

Conditions of Flammability

Heat, sparks, or flame.

Extinguishing Media

Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Protective Equipment For Firefighting

Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray. A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

NFPA Ratings: Health: 1 **Fire:** 2 **Reactivity:** 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Vapor explosion hazard indoors, outdoors, or in sewers. Vapors may travel to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire hazard. Heated containers may rupture or be thrown into the air. "Empty" containers may retain residue and can be dangerous. Products are not sensitive to mechanical impact. Products may be sensitive to static discharge, which could result in fire or explosion.

* * * Section 6 - Accidental Release Measures * * *

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke while using this product.

Shipping and Storing

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Distillates (petroleum), hydrotreated light (64742-47-8)

ACGIH:	100 ppm TWA (related to Stoddard solvent)
OSHA Final:	500 ppm TWA; 2900 mg/m3 TWA (related to Stoddard solvent)
OSHA Vacated:	100 ppm TWA; 525 mg/m3 TWA (related to Stoddard solvent)
NIOSH:	350 mg/m3 TWA (related to Stoddard solvent)
	1800 mg/m3 Ceiling (15 min, related to Stoddard solvent)

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Personal Protective Equipment: Respiratory

Use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Personal Protective Equipment: Eyes/Face

Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

Personal Protective Equipment: Skin

Where skin contact is likely, wear neoprene, nitrile, or equivalent protective gloves; use of natural rubber or equivalent gloves is not recommended.

To avoid prolonged or repeated contact with products where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, coveralls, long sleeve shirts, or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using these products should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Liquid, clear, colorless to pale yellow, mild hydrocarbon odor .	**pH:**	Not applicable.
Boiling Point:	350ºF (177ºC) (initial)	**Melting Point:**	-45ºF (-43ºC) (maximum)
Solubility (H2O):	Insoluble.	**Specific Gravity:**	0.77 to 0.82 at 60ºF (15.6ºC) (water = 1)
Density:	6.4 to 6.7 LB/US gal (770 to 800 g/l)	**Octanol/H2O Coeff.:**	Not available.
Evaporation Rate:	<0.1 (butyl acetate = 1)	**Molecular Weight:**	Not available.
Odor Threshold:	30 ppm (based on Stoddard Solvent)	**Auto Ignition:**	480ºF (249ºC) (minimum)
LFL:	0.7 VOL% (minimum)	**Flash Point:**	148ºF (64ºC) (minimum)
UFL:	5 VOL% (maximum)		
Vapor Pressure:	0.2 mm Hg at 68ºF (20ºC) 0.6 mm Hg at 100ºF (37ºC)		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures.

Incompatibility

Avoid acids, alkalies, oxidizing agents, reducing agents, or reactive halogens.

Reactivity

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Hazardous Decomposition Products

None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Avoid heat, sparks, or flame.

* * * Section 11 - Toxicological Information * * *

Toxicity Data

Component Analysis - LD50/LC50

Distillates (petroleum), hydrotreated light (64742-47-8)

Inhalation LC50 Rat >5.2 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Acute Effects

May be harmful if inhaled. May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin. May be harmful if swallowed. Contains material that may cause central nervous system and kidney damage. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Repeated Dose Effects

Prolonged contact may cause kidney or central nervous system damage.

Carcinogenicity

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Target Organ Effects

Product can irritate skin and eyes. Product can be aspirated into lungs.

Mutagenicity

Based on best current information, there is no known mutagenicity associated with this product.

Teratogenicity

Based on best current information, there is no known teratogenicity associated with this product.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A Static Acute Bioassay as per California Department of Fish and Game WPCL was done using fathead minnows and up to 750 ppm of the products in water. The material passed the bioassay.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Distillates (petroleum), hydrotreated light (64742-47-8)

Duration/Test/Species	Concentration/Conditions/Notes
96 Hr LC50 Pimephales promelas	45 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	2.2 mg/L [static]
96 Hr LC50 Oncorhynchus mykiss	2.4 mg/L [static]

Persistence/Degradability

Product is not expected to be readily biodegradable.

Bioaccumulation/Accumulation

Product is not expected to bioaccumulate.

Mobility in Environmental Media

Product is expected to have high soil mobility.

Other Adverse Effects

No information available for the product.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

US EPA Waste Number & Descriptions

Not regulated. Based on available data, this information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

128 Reference *.North American Emergency Response Guidebook*

DOT

Bulk Packages (>119 Gallons): Shipping Name: Combustible liquid, n.o.s. (petroleum naphtha) **UN/NA #:** NA1993. **Hazard Class:** Combustible liquid. **Packing Group:** III **Required Placards:** Class 3, NA1993

Non-bulk Packages (<120 Gallons): Shipping Name: Cleaning compounds (Petroleum naphtha) (Not US DOT regulated). **UN/NA #:** None. **Hazard Class:** None **Packing Group:** None **Required Label(s):** None

Shipping Name: Non-regulated goods.

TDG

Shipping Name: Not regulated as a dangerous good.

IATAInformation

No Classification Assigned.

IMDGInformation

No Classification Assigned.

* * * Section 15 - Regulatory Information * * *

Volatile Organic Compounds (As Regulated)

100 WT%; 6.4-6.7 LB/US gal; 770-800 g/l
As per 40 CFR Part 51.100(s)
VOC Vapor Pressure Approx 0.2 mmHg @20°C
Product may or may not be considered photochemically reactive (100% by weight). Consult your state or local air district regulations for location specific information.

SARA Sections 311/312

This product poses the following health hazards as defined in 40 CFR Part 370 and are subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):
Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA 302/304

Component Analysis

This product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313

This product does not contain "toxic" chemicals subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

Component Analysis

This product does not contain any "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

CERCLA

Component Analysis

This product does not contain any "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

TSCA

The component of this product is listed on, or is automatically included as "naturally occurring chemical substances" on, or is exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Distillates (petroleum), hydrotreated light	64742-47-8	Yes

State Regulations

This product may contain a detectable amount of benzene CAS 71-43-2,p-dichlorobenzene CAS 106-46-7, ethylbenzene CAS 100-41-4, and naphthalene CAS 91-20-3. WARNING: These chemicals are known to the State of California to cause cancer.

This product may contain a detectable amount of benzene CAS 71-43-2 and toluene CAS 108-88-3. WARNING: These chemicals are known to the State of California to cause birth defects or other reproductive harm.

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
Distillates (petroleum), hydrotreated light ([1]related to: Stoddard solvent)	64742-47-8	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]

Canadian Regulations

This product have been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Distillates (petroleum), hydrotreated light	64742-47-8	DSL

Canadian WHMIS Information

Class B3 - Combustible Liquid Class D2B - Irritating to eyes and skin.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Distillates (petroleum), hydrotreated light (64742-47-8) 1 % (related to Stoddard solvent)

Canadian Environmental Protection Act (CEPA)

The component of this product is listed on, or is automatically included as "substance occurring in nature" on, or is exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

* * * Section 16 - Other Information * * *

Label/Other Information

These products are United States Department of Agriculture (USDA) approved and ETL classified.

Revision Information

Product name, synonyms, supplier address.

Disclaimer

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplier to the user.

End of Sheet 82658

Material Safety Data Sheet

Material Name: SAFETY-KLEEN MILITARY PD680, TYPE II SOLVENT **ID: 82889**

* * * Section 1 - Chemical Product and Company Identification * * *

Product Code: 6638

Product Use: Cleaning and degreasing metal parts. This product meets Federal Commercial Item Description A-A-59601A for Dry Cleaning and Degreasing Solvent, PD680, Type II. If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

Synonyms: Parts Washer Solvent; Petroleum Distillates; Petroleum Naphtha; Naphtha, Solvent; Stoddard Solvent; Mineral Spirits

Safety-Kleen Systems, Inc.
2600 North Central Expressway
Suite 400
Richardson, TX 75080

Phone: 1-800-669-5740

Emergency # 1-800-468-1760
www.safety-kleen.com

Issue Date
August 21, 2013

Supersedes Issue Date
August 21, 2009

Original Issue Date
May 9, 2002

PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW

Appearance

Liquid, clear and colorless, mild hydrocarbon odor.

Signal Word

WARNING!

Physical Hazards

Combustible liquid and vapor.

Health Hazards

May be harmful if inhaled.
May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin.
May be harmful or fatal if swallowed.
Contains material that may cause liver, kidney, lung, central nervous system and/or brain damage.

POTENTIAL HEALTH EFFECTS

Inhalation (Breathing)

High concentrations of vapor may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.

Eyes

May cause irritation.

Skin

May cause irritation. Not likely to be absorbed in harmful amounts.

Ingestion (Swallowing)

May be harmful or fatal if swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**. Aspiration hazard: breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing respiratory tract (nose, throat, and lungs), central nervous system, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic

Prolonged or repeated inhalation may cause toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated exposure may cause liver, kidney, central nervous system and brain damage, based on animal test data. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

Cancer Information

No known carcinogenicity. For more information, see **SECTION 11: CARCINOGENICITY**.
Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards

Product is not expected to be toxic to fish. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
64742-88-7	Solvent naphtha (petroleum), medium aliphatic	100

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Stoddard solvent (8052-41-3).

* * * Section 4 - First Aid Measures * * *

Inhalation (Breathing)

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

Skin

Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists. If product is injected under pressure into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, a physician should immediately evaluate the individual as a medical emergency.

Ingestion (Swallowing)

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians

Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce carbon monoxide and unidentified organic compounds.

Conditions of Flammability

Heat, sparks or flame.

Extinguishing Media

Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Protective Equipment For Firefighting

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray.

NFPA Ratings: Health: 1 **Fire:** 2 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Vapor explosion hazard indoors, outdoors, or in sewers. Vapors may travel to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire hazard. Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

* * * Section 6 - Accidental Release Measures * * *

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from heat, sparks, or flame. Do not evaporate to dryness or distill, an explosion may occur. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke when using this product.

Shipping and Storing

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Solvent naphtha (petroleum), medium aliphatic (64742-88-7)

ACGIH:	100 ppm TWA (related to Stoddard solvent)
OSHA Final:	500 ppm TWA; 2900 mg/m3 TWA (related to Stoddard solvent)
OSHA Vacated:	100 ppm TWA; 525 mg/m3 TWA (related to Stoddard solvent)
NIOSH:	350 mg/m3 TWA (related to Stoddard solvent)
	1800 mg/m3 Ceiling (15 min, related to Stoddard solvent)

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Personal Protective Equipment: Respiratory

Use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Personal Protective Equipment: Eyes/Face

Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

Personal Protective Equipment: Skin

Where skin contact is likely, wear nitrile rubber, laminate (such as Ansell Edmont Barrier® or North Silver Shield/ 4H®) or equivalent protective gloves; use of polyvinyl chloride (PVC), natural rubber (latex) or equivalent gloves is not recommended.

To avoid prolonged or repeated contact with products where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, coveralls, long sleeve shirts, or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with the product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Liquid, clear and colorless, mild hydrocarbon odor	**pH:**	Not applicable.
Odor Threshold:	Not applicable.	**Boiling Point:**	367° to 405°F (186° to 207°C) (approximately)
Melting Point:	Not available	**Solubility (H2O):**	Insoluble.
Specific Gravity:	0.79 (water = 1) (approximately)	**Density:**	6.6 LB/US gal (790 g/l)
Octanol/H2O Coeff.:	Not available.	**Evaporation Rate:**	0.04 (butyl acetate = 1)
Molecular Weight:	158 (average)	**Auto Ignition Temperature:**	451ºF (233°C)
LFL:	1 VOL%	**Flash Point:**	142ºF (61ºC) (minimum) Tag Closed Cup
UFL:	7 VOL%	**Viscosity:**	Not available
Vapor Pressure:	<0.5 mm Hg at 68ºF (20ºC); approximately 1 mm Hg at 100°F	**Vapor Density:**	5.4 (air = 1)
Percent Volatile:	100 WT% As per 40 CFR Part 51.100(s)		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures.

Incompatibility

Avoid oxidizing agents.

Reactivity

Polymerization is not known to occur under normal temperature and pressures.

Hazardous Decomposition Products

None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Keep away from heat, ignition sources and incompatible materials.

* * * Section 11 - Toxicological Information * * *

Toxicity Data

Component Analysis - LD50/LC50

Solvent naphtha (petroleum), medium aliphatic (64742-88-7)

Inhalation LC50 Rat >5.28 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit 3000 mg/kg

Acute Effects

May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin. High concentrations of vapor or mist may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs) and may cause a mild burning sensation in the nose, throat, and lungs. High concentrations of vapor or mist and ingestion may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death. Breathing product into the lungs during ingestion or vomiting may cause lung damage and possible death.

Repeated Dose Effects

Based on best current information, there is no known human sensitization associated with this product.
Based on best current information, there is no known mutagenicity associated with this product.
Based on best current information, there is no known reproductive toxicity associated with this product.
Based on best current information, there is no known teratogenicity associated with this product.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

* * * Section 12 - Ecological Information * * *

Component Analysis - Ecotoxicity - Aquatic Toxicity

Solvent naphtha (petroleum), medium aliphatic (64742-88-7)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	800 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	450 mg/L	
48 Hr EC50 Daphnia magna	>100 mg/L	

Persistence/Degradability

No information available for the product.

Bioaccumulation/Accumulation

No information available for the product.

Mobility in Environmental Media

No information available for the product.

Other Adverse Effects

No information available for the product.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

128 Reference *.North American Emergency Response Guidebook*

DOT **Non-Bulk Packages (<120 Gallons)**

Shipping Name: Cleaning compounds (Petroleum naphtha)(Not US DOT regulated)
UN/NA #: None **Hazard Class:** None **Packing Group:** None **Required Label(s):** None
See (49 CFR 173.150(f))

Bulk Shipments (>119 gallons)

Shipping Name: Combustible liquid, n.o.s. (petroleum naphtha)
UN/NA #: NA1993 **Hazard Class:** Combustible liquid **Packing Group:** III **Required Label(s):** Class 3, NA1993

TDG Not regulated as a dangerous good.

IATA Information

No Classification Assigned.

IMDG Information

No Classification Assigned.

* * * Section 15 - Regulatory Information * * *

VOC (As Regulated)

100 WT%; 6.6 LB/US gal; 790 g/L As pre 40 CFR Part 51.100(s)
VOC Vapor Pressure: Approx 0.5 mm Hg @ 20°C
Product may or may not be considered photochemically reactive (100% by weight). Consult your state or local air district regulations for location specific information.

SARA Sections 311/312

This product poses the following health hazards as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):
Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA 302/304

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313

Component Analysis

This product does not contain any "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

CERCLA

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product does not contain any "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

TSCA

All the components of this product are listed on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Solvent naphtha (petroleum), medium aliphatic	64742-88-7	Yes

State Regulations

This product may contain a detectable amount of benzene (CAS 71-43-2), Ethylbenzene (CAS 100-41-4), and Naphthalene (CAS 91-20-3). WARNING: These chemicals are known to the State of California to cause cancer.
This product may contain a detectable amount of benzene CAS 71-43-2 and toluene CAS 108-88-3. WARNING: These chemicals are known to the State of California to cause birth defects or other reproductive harm.

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
Solvent naphtha (petroleum), medium aliphatic ([1]related to: Stoddard solvent)	64742-88-7	Yes[1]	Yes[1]	Yes[1]	Yes	Yes[1]

Canadian Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Solvent naphtha (petroleum), medium aliphatic	64742-88-7	DSL

Canadian WHMIS Information

Class B3 - Combustible Liquid Class D2B - Irritating to eyes and skin.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Solvent naphtha (petroleum), medium aliphatic (64742-88-7) 1 % (related to Stoddard solvent)

Canadian Environmental Protection Act (CEPA)

The components of this product are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

* * * Section 16 - Other Information * * *

Label/Other Information

Revision Information

Regulatory update, updated to ANSI Z400.1-2004 format. This MSDS has been revised in the following sections: Section 1 (Dates), Section 2 (Composition updated), Section 3 (switched to Emergency Overview), Section 4 (Phone Numbers), Section 5 (Fire Fields), Section 8 (Exposure Limits added), Section 11 (Toxicology fields updated), Section 12 (Ecotoxicity Information, fields updated), Section 16 (Revision Information).

Disclaimer

User assumes all risks incident to the use of this (these) product(s). To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either express or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the product(s) as supplied to the user.

End of Sheet 82889

Material Safety Data Sheet

Material Name: SAFETY-KLEEN MIL-PRF-680, TYPE II **ID: 82884**

* * * Section 1 - Chemical Product and Company Identification * * *

Product Code

14426

Product Use

Cleaning and degreasing metal parts. This product complies with the requirements of MIL-PRF-680 for Type II Degreasing Solvent. It is included on the MIL-PRF-680 Products List.

If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

Synonyms

Parts Washer Solvent; Petroleum Distillates; Petroleum Distillates; Petroleum Naphtha; Naphtha, Solvent; Stoddard Solvent; Odorless Mineral Spirits; High Flash Mineral Spirits; Synthetic Isoparrafinnic Hydrocarbon; ASTM-D235 Type IIC Mineral Spirits.

Safety-Kleen Systems, Inc.
2600 North Central Expressway
Suite 400
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Phone: 1-800-669-5740

Emergency # 1-800-468-1760
www.safety-kleen.com

Issue Date

February 3, 2014

Supersedes Issue Date

February 4, 2011

Original Issue Date

January 23, 2008

PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW

Appearance

Liquid, clear, colorless and odorless.

Signal Word

WARNING!

Physical Hazards

Combustible liquid and vapor.

Health Hazards

May be harmful if inhaled.

May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin.

May be harmful or fatal if swallowed.

Contains material that may cause lung and central nervous system damage.

POTENTIAL HEALTH EFFECTS

Inhalation (Breathing)

High concentrations of vapor may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death. May cause lung and central nervous system damage.

Eyes

May cause irritation.

Skin

May cause irritation. Not likely to be absorbed in harmful amounts.

Ingestion (Swallowing)

May be harmful or fatal if swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing respiratory tract (nose, throat, and lungs), central nervous system, kidneys, and eye and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic

Prolonged or repeated inhalation may cause toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated exposure may cause central nervous system damage. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

Cancer Information

No known carcinogenicity. For more information, see **SECTION 11: CARCINOGENICITY**.

Environmental Hazards

Product is not expected to be toxic to fish. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
64742-48-9	Naphtha (petroleum), hydrotreated heavy	100

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Stoddard solvent (8052-41-3).

* * * Section 4 - First Aid Measures * * *

Inhalation (Breathing)

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart for 15 minutes. Get medical attention.

Skin

Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists.

Ingestion (Swallowing)

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians

Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce carbon monoxide and unidentified organic compounds.

Conditions of Flammability

Heat, sparks, or flame.

Extinguishing Media

Carbon dioxide, regular foam, regular dry chemical, water spray, water fog

Protective Equipment For Firefighting

Keep storage containers cool with water spray. A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

NFPA Ratings: Health: 1 **Fire:** 2 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Vapor explosion hazard indoors, outdoors, or in sewers. Vapors may travel to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire hazard. Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

* * * Section 6 - Accidental Release Measures * * *

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

There may be specific regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION**.

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke while using this product.

Shipping and Storing

Keep container tightly closed. Keep cool. Store in a well-ventilated place. Store locked up. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Naphtha (petroleum), hydrotreated heavy (64742-48-9)

ACGIH:	100 ppm TWA (related to Stoddard solvent)
OSHA Final:	500 ppm TWA; 2900 mg/m3 TWA (related to Stoddard solvent)
OSHA Vacated:	100 ppm TWA; 525 mg/m3 TWA (related to Stoddard solvent)
NIOSH:	350 mg/m3 TWA (related to Stoddard solvent)
	1800 mg/m3 Ceiling (15 min, related to Stoddard solvent)

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Personal Protective Equipment: Respiratory

Use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Personal Protective Equipment: Eyes/Face

Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

Personal Protective Equipment: Skin

Where skin contact is likely, wear neoprene, nitrile, or equivalent protective gloves; use of natural rubber or equivalent gloves is not recommended. To avoid prolonged or repeated contact with products where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with the product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Liquid, clear, colorless and odorless.	**pH:**	Not applicable.
Odor Threshold:	30 ppm (based on Stoddard Solvent)	**Boiling Point:**	350º to 408°F (177°C)
Melting Point:	-45°F (-43°C) (maximum)	**Solubility (H2O):**	Insoluble.
Specific Gravity:	0.77 at 60°F (15.6°C) (water = 1)	**Density:**	6.4 LB/US gal (770 g/l)
Octanol/H2O Coeff.:	Not available.	**Evaporation Rate:**	less than 0.1 (butyl acetate = 1)
Molecular Weight:	Not available.	**Auto Ignition Temperature:**	480ºF (249°C) (approximately)
LFL:	0.7 VOL% (approximately)	**Flash Point:**	148ºF (64ºC) (minimum) Tag Closed Cup
UFL:	5 VOL% (approximately)	**Viscosity:**	Not available
Vapor Pressure:	0.2 mm Hg at 68ºF (20ºC) (approx) 0.6 mm Hg at 100ºF (37ºC) (approx)	**Vapor Density:**	5 (air = 1) (approximately)

Physical Properties: Additional Information

No information is available.

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures.

Incompatibility

Avoid acids, alkalies, oxidizing agents, reducing agents, or reactive halogens.

Reactivity

Polymerization is not known to occur under normal temperatures and pressures. Not reactive with water.

Hazardous Decomposition Products

None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Heat, sparks, or flame.

* * * Section 11 - Toxicological Information * * *

Toxicity Data

Component Analysis - LD50/LC50

Naphtha (petroleum), hydrotreated heavy (64742-48-9)

Dermal LD50 Rabbit >3160 mg/kg; Oral LD50 Rat >5000 mg/kg

Acute Effects

May be harmful if inhaled. May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin. May be harmful if swallowed. Contains material that may cause central nervous system and kidney damage. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Repeated Dose Effects

Prolonged contact may cause kidney or central nervous system damage.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Target Organ Effects

Product can irritate skin and eyes. Product can be aspirated into lungs.

Mutagenicity

Based on best current information, there is no known mutagenicity associated with this product.

Teratogenicity

Based on best current information, there is no known teratogenicity associated with this product.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A Static Acute Bioassay as per California Department of Fish and Game WPCL was done using fathead minnows and up to 750 ppm of the product in water. The material passed the bioassay.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Naphtha (petroleum), hydrotreated heavy (64742-48-9)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	2200 mg/L	

Persistence/Degradability

Product is not expected to be readily biodegradable.

Mobility in Environmental Media

Product is expected to have high soil mobility.

Other Adverse Effects

No additional information available.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

US EPA Waste Number & Descriptions

This product, if discarded, is not expected to be a characteristic or listed hazardous waste. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

128 Reference *.North American Emergency Response Guidebook*

DOT **Bulk Packages (>119 Gallons)**

Shipping Name: Combustible liquid, n.o.s. (petroleum naphtha)

UN/NA #: NA1993 **Hazard Class:** Combustible liquid **Packing Group:** III

Required Placards: Class 3, NA1993

See 49 CFR 173.150(f)(1-4)

Non-Bulk Packages (<120 Gallons)

Not regulated.

Required Placards: Class 3, NA 1993

TDG

Not regulated as dangerous goods.

IATA Information

Not regulated.

IMDG Information

Not regulated.

* * * Section 15 - Regulatory Information * * *

VOC (As Regulated)

100 WT%; 6.4 LB/US gal; 770 g/l As per 40 CFR Part 51.100(s).

VOC VAPOR PRESSURE: approximate 0.2 mm Hg @ 20°C

Product may or may not be considered photochemically reactive (100% by weight).

SARA Sections 311/312

This product poses the following health hazards as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):
Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA 302/304

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313

Component Analysis

This product does not contain any "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

CERCLA

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product does not contain any "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

TSCA

The component of this product is listed on the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Naphtha (petroleum), hydrotreated heavy	64742-48-9	Yes

State Regulations

This product may contain a detectable amount of benzene CAS 71-43-2, p-dichlorobenzene CAS 106-46-7, ethylbenzene CAS 100-41-4, and naphthalene CAS 91-20-3. WARNING: These chemicals are known to the State of California to cause cancer.

This product may contain a detectable amount of benzene CAS 71-43-2 and toluene CAS 108-88-3. WARNING: These chemicals are known to the State of California to cause birth defects or other reproductive harm.

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
Naphtha (petroleum), hydrotreated heavy ([1]related to: Stoddard solvent)	64742-48-9	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]

Canadian Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Naphtha (petroleum), hydrotreated heavy	64742-48-9	DSL

Canadian WHMIS Information

B3 D2B

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Naphtha (petroleum), hydrotreated heavy (64742-48-9) 1 % (related to Stoddard solvent)

Canadian Environmental Protection Act (CEPA)

The component of this product is listed on the Canadian Domestic Substances List (DSL).

* * * Section 16 - Other Information * * *

Label/Other Information

This product complies with the requirements of MIL-PRF-680 for Type II Degreasing Solvent. It is included on the MIL-PRF-680 Products List.

Revision Information

Reformat to OSHA HazCom 29 CFR 1910.1200 adoption of GHS Revision 3. Adjusted properties to match sheet 82658.

Disclaimer

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplier to the user.

End of Sheet 82884

Material Safety Data Sheet

Material Name: IMMERSION CLEANER AND COLD PARTS CLEANER **ID: 82411**

* * * Section 1 - Chemical Product and Company Identification * * *

Product Code: 50, 699, 6861, 9699

Product Use: For cleaning carburetors and metal parts. If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

THIS PRODUCT IS NOT SALE OR USE IN THE STATE OF CALIFORNIA

Synonyms: None.

Safety-Kleen Systems, Inc.
2600 North Central Expressway
Suite 400
Richardson, TX 75080

Phone: 1-800-669-5740

Emergency # 1-800-468-1760
www.safety-kleen.com

Issue Date

April 4, 2014

Supersedes Issue Date

June 26, 2013

Original Issue Date

December 1, 1989

PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW

Appearance

Clear, brown liquid

Signal Word

WARNING!

Physical Hazards

Combustible liquid and vapor.

Health Hazards

May be harmful if inhaled.
May burn eyes.
May burn skin.
May be harmful if absorbed through skin.
Harmful or fatal if swallowed.
May irritate the respiratory tract (nose, throat, and lungs).
Contains material which may cause birth defects.
Contains material which may cause cancer.
Contains material which may cause central nervous system, liver, kidney, lung, blood cell, eye, and skin damage.

POTENTIAL HEALTH EFFECTS

Inhalation (Breathing)

High concentrations of vapor or mist may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.

Eyes

This product is severely irritating to the eyes and may cause eye burns.

Skin

May cause irritation, swelling, blistering, and/or burns. Dipropylene glycol monomethyl ether and naphthalene may be absorbed through the skin and cause harm as noted under **INHALATION (BREATHING)**.

Ingestion (Swallowing)

This product may be harmful or fatal if swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**, and/or heart injury. Monoethanolamine may burn mouth, throat, esophagus, and stomach. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing liver, kidney, respiratory tract (nose, throat, and lungs), central nervous system, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic

Prolonged or repeated inhalation of monoethanolamine may cause inflammation and sores in the mouth; and bronchial and/or gastrointestinal disturbances. Prolonged or repeated inhalation of naphthalene may cause cataracts and/or corneal inflammation and sores. Prolonged or repeated exposure may have reproductive toxicity, teratogenic, or mutagenic effects. Prolonged or repeated inhalation may cause toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis); and/or burns. Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis); and/or burns. Prolonged or repeated exposure may cause central nervous system, liver, kidney, lung, blood cell, eye, and skin damage.

Cancer Information

This product contains naphthalene which can cause cancer. Risk of cancer depends on duration and level of exposure. For more information, see **SECTION 11: CARCINOGENICITY**.

Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards

Based upon components, product may be toxic to fish.; Based upon components, product may be toxic to fish. See **SECTION 12: ECOLOGICAL INFORMATION**.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
64742-94-5	Solvent naphtha (petroleum), heavy arom.	30-60
872-50-4	1-Methyl-2-pyrrolidone	10-30
34590-94-8	Dipropylene glycol monomethyl ether	7-13
112-80-1	Oleic acid	5-10
141-43-5	Ethanolamine	3-7
91-20-3	Naphthalene	3-6

* * * Section 4 - First Aid Measures * * *

Inhalation (Breathing)

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get immediate medical attention.

Skin

For skin contact, wash immediately with soap and water. Immediately remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Call a physician immediately.

Ingestion (Swallowing)

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians

Treat symptomatically and supportively. Increased sensitivity of the heart to Adrenaline (epinephrine) may be caused by overexposure to product. Administration of gastric lavage, if warranted, should be performed by qualified medical personnel. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce nitrogen oxides, acid halides, carbon monoxide and unidentified organic compounds.

Conditions of Flammability

Heat, sparks, or flame.

Extinguishing Media

Carbon dioxide, alcohol-resistant foam, dry chemical, water spray, or water fog.

Protective Equipment For Firefighting

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray.

NFPA Ratings: Health: 2 **Fire:** 2 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Vapor explosion hazard indoors, outdoors, or in sewers. Vapor may travel to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire hazard. Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Products are not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

* * * Section 6 - Accidental Release Measures * * *

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

There may be specific regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION**.

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke when using this product.

Shipping and Storing

Keep container tightly closed when not in use and during transport. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Dipropylene glycol monomethyl ether (34590-94-8)

ACGIH: 100 ppm TWA
150 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route

OSHA Final: 100 ppm TWA; 600 mg/m3 TWA
prevent or reduce skin absorption

OSHA Vacated: 100 ppm TWA; 600 mg/m3 TWA
150 ppm STEL; 900 mg/m3 STEL
Prevent or reduce skin absorption

NIOSH: 100 ppm TWA; 600 mg/m3 TWA
150 ppm STEL; 900 mg/m3 STEL
Potential for dermal absorption

Ethanolamine (141-43-5)

ACGIH: 3 ppm TWA
6 ppm STEL

OSHA Final: 3 ppm TWA; 6 mg/m3 TWA

OSHA Vacated: 3 ppm TWA; 8 mg/m3 TWA
6 ppm STEL; 15 mg/m3 STEL

NIOSH: 3 ppm TWA; 8 mg/m3 TWA
6 ppm STEL; 15 mg/m3 STEL

Naphthalene (91-20-3)

ACGIH: 10 ppm TWA
Skin - potential significant contribution to overall exposure by the cutaneous route

OSHA Final: 10 ppm TWA; 50 mg/m3 TWA

OSHA Vacated: 10 ppm TWA; 50 mg/m3 TWA
15 ppm STEL; 75 mg/m3 STEL

NIOSH: 10 ppm TWA; 50 mg/m3 TWA
15 ppm STEL; 75 mg/m3 STEL

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Personal Protective Equipment: Respiratory

Use NIOSH-certified, full-faced, air-purifying respiratory protective equipment with organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Personal Protective Equipment: Eyes/Face

Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

Personal Protective Equipment: Skin

Where skin contact is likely, use chemical impervious protective gloves (neoprene); use of natural rubber (latex) or equivalent gloves is not recommended.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Liquid, clear and brown.	**pH:**	11
Odor Threshold:	Not available.	**Boiling Point:**	340ºF (171ºC) (initial)
Melting Point:	< 10ºF (-12ºC)	**Solubility (H2O):**	Complete.
Specific Gravity:	0.95 (water = 1)	**Density:**	7.9 LB/US gal (950 g/l)
Octanol/H2O Coeff.:	Not available.	**Evaporation Rate:**	1 (butyl acetate = 1)
Molecular Weight:	Not available.	**Auto Ignition Temperature:**	829ºF (443ºC) (approximately)
LFL:	0.8 VOL% (approximately)	**Flash Point:**	>140ºF (60ºC) Tag Closed Cup
UFL:	7 VOL% (approximately)	**Viscosity:**	Not available
Vapor Pressure:	<0.4 mmHg at 68ºF (20ºC)		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures.

Incompatibility

Avoid acids, alkalies, oxidizing agents, reactive halogens, or reactive metals., Oleic acid can react with perchlorates or perchloric acid to form explosive products.

Reactivity

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Hazardous Decomposition Products

None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Avoid heat, sparks, or flame and contact with incompatible materials.

* * * Section 11 - Toxicological Information * * *

Toxicity Data

Component Analysis - LD50/LC50

Solvent naphtha (petroleum), heavy arom. (64742-94-5)

Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2 mL/kg; Inhalation LC50 Rat >590 mg/m3 4 h

1-Methyl-2-pyrrolidone (872-50-4)

Inhalation LC50 Rat 3.1 mg/L 4 h; Oral LD50 Rat 3598 mg/kg; Dermal LD50 Rabbit 8 g/kg

Dipropylene glycol monomethyl ether (34590-94-8)

Oral LD50 Rat 5230 mg/kg; Dermal LD50 Rabbit 9500 mg/kg

Ethanolamine (141-43-5)

Oral LD50 Rat 1720 mg/kg; Dermal LD50 Rabbit 1 mL/kg

Naphthalene (91-20-3)

Dermal LD50 Rabbit 1120 g/kg; Inhalation LC50 Rat >340 mg/m3 1 h

Acute Effects

May cause severe irritation or burns to the eyes and skin. Components may be absorbed through the skin in harmful amounts., Monoethanolamine may burn mouth, throat, esophagus, and stomach., Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death., High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs)., High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects.

Repeated Dose Effects

Monoethanolamine has demonstrated human effects of mutagenicity., Naphthalene has demonstrated animal effects of mutagenicity., N-Methyl-2-pyrrolidinone and oleic acid have demonstrated experimental effects of mutagenicity., Based on best current information, the other components listed in **SECTION 2** are not mutagens.
Monoethanolamine and naphthalene have demonstrated animal effects of teratogenicity., Based on best current information, the other components listed in **SECTION 2** are not teratogens.
Monoethanolamine and N-Methyl-2-pyrrolidinone have demonstrated experimental effects of reproductive toxicity., Based on best current information, the other components listed in **SECTION 2** are not reproductive toxicants., Also see **SECTION 15: CALIFORNIA**.,
Based on best current information, there are no known toxicologically synergistic products associated with this product.

Component Carcinogenicity

Naphthalene (91-20-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
OSHA: Present (select carcinogen)
NTP: Reasonably Anticipated To Be A Human Carcinogen (Suspect Carcinogen)
IARC: Monograph 82 [2002] (Group 2B (possibly carcinogenic to humans))

Target Organ Effects

Prolonged or repeated inhalation of monoethanolamine may cause inflammation and sores in the mouth; and bronchial and/or gastrointestinal disturbances. Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis); and/or burns., Prolonged or repeated exposure may cause central nervous system, liver, kidney, lung, blood cell, eye, and skin damage.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

Based upon components, this product may be toxic to aquatic life.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Solvent naphtha (petroleum), heavy arom. (64742-94-5)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	19 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	2.34 mg/L	
96 Hr LC50 Lepomis macrochirus	1740 mg/L [static]	
96 Hr LC50 Pimephales promelas	45 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	41 mg/L	
48 Hr EC50 Daphnia magna	0.95 mg/L	

1-Methyl-2-pyrrolidone (872-50-4)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Lepomis macrochirus	832 mg/L [static]	
96 Hr LC50 Pimephales promelas	1072 mg/L [static]	
96 Hr LC50 Poecilia reticulata	1400 mg/L [static]	
72 Hr EC50 Desmodesmus subspicatus	>500 mg/L	
48 Hr EC50 Daphnia magna	4897 mg/L	

Dipropylene glycol monomethyl ether (34590-94-8)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	>10000 mg/L [static]	
48 Hr LC50 Daphnia magna	1919 mg/L	

Oleic acid (112-80-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	205 mg/L [static]	

Ethanolamine (141-43-5)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	227 mg/L [flow-through]	
96 Hr LC50 Brachydanio rerio	3684 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	300 - 1000 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	114 - 196 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	>200 mg/L [flow-through]	
72 Hr EC50 Desmodesmus subspicatus	15 mg/L	
48 Hr EC50 Daphnia magna	65 mg/L	

Naphthalene (91-20-3)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	5.74 - 6.44 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	1.6 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	0.91 - 2.82 mg/L [static]	
96 Hr LC50 Pimephales promelas	1.99 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	31.0265 mg/L [static]	
48 Hr LC50 Daphnia magna	2.16 mg/L	
48 Hr EC50 Daphnia magna	1.96 mg/L [Flow through]	
48 Hr EC50 Daphnia magna	1.09 - 3.4 mg/L [Static]	

Persistence/Degradability

No information available for the product.

Bioaccumulation/Accumulation

No information available for the product.

Mobility in Environmental Media

No information available for the product.

Other Adverse Effects

No information available for the product.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

US EPA Waste Number & Descriptions

This product, if discarded, is not expected to be a characteristic or listed hazardous waste. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

153 Reference *.North American Emergency Response Guidebook*

DOT **Shipping Name:** Compounds, cleaning liquid (Contains: Ethanolamine)
UN/NA #: NA1760 **Hazard Class:** 8 **Packing Group:** III
Required Label(s): CORROSIVE

TDG **Shipping Name:** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (monoethanolamine)
UN/NA #: UN3267 **Hazard Class:** 8 **Packing Group:** III
Required Label(s): CORROSIVE

* * * Section 15 - Regulatory Information * * *

VOC (As Regulated)

100 WT%; 7.9 LB/US gal; 950 g/l
As per U.S EPA 40 CFR 51.100(s)
VOC VP <0.4mmHg @ 20°C
CONTAINS: Photochemical Reactive solvent 60% by volume

SARA Sections 311/312

This product poses the following health hazard(s) as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):
Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA 302/304

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313

Component Analysis

This product contains a "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

1-Methyl-2-pyrrolidone (872-50-4) 1.0 % de minimis concentration

Naphthalene (91-20-3) 0.1 % de minimis concentration

CERCLA

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product contains the following "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4 with the following reportable quantities (RQ):

Naphthalene (91-20-3) 100 lb final RQ; 45.4 kg final RQ

TSCA

All the components of this product are listed on, or are automatically included as "naturally occurring chemical substances" on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Solvent naphtha (petroleum), heavy arom.	64742-94-5	Yes
1-Methyl-2-pyrrolidone	872-50-4	Yes
Dipropylene glycol monomethyl ether	34590-94-8	Yes
Oleic acid	112-80-1	Yes
Ethanolamine	141-43-5	Yes
Naphthalene	91-20-3	Yes

State Regulations

THIS PRODUCT IS NOT FOR SALE OR USE IN THE STATE OF CALIFORNIA.

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
1-Methyl-2-pyrrolidone	872-50-4	No	Yes	No	Yes	Yes
Dipropylene glycol monomethyl ether	34590-94-8	Yes	Yes	Yes	Yes	Yes
Oleic acid	112-80-1	No	No	No	No	Yes
Ethanolamine	141-43-5	Yes	Yes	Yes	Yes	Yes
Naphthalene	91-20-3	Yes	Yes	Yes	Yes	Yes

Canadian Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Solvent naphtha (petroleum), heavy arom.	64742-94-5	DSL
1-Methyl-2-pyrrolidone	872-50-4	DSL
Dipropylene glycol monomethyl ether	34590-94-8	DSL
Oleic acid	112-80-1	DSL
Ethanolamine	141-43-5	DSL
Naphthalene	91-20-3	DSL

Canadian WHMIS Information

Class B3 - Combustible Liquid Class D2A - Chronic toxic effects. Class E - Corrosive

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Dipropylene glycol monomethyl ether (34590-94-8)	1 %
Oleic acid (112-80-1)	1 %
Ethanolamine (141-43-5)	1 %
Naphthalene (91-20-3)	1 %

Canadian Environmental Protection Act (CEPA)

All the components of this product are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

* * * Section 16 - Other Information * * *

Label/Other Information

Not available.

Revision Information

This MSDS has been revised in the following sections: Sections 1, 8m 11, 12, 14, and 15.

Disclaimer

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplier to the user.

End of Sheet 82411

Material Safety Data Sheet

Material Name: SAFETY-KLEEN REFINED PERCHLOROETHYLENE **ID: 82335**

* * * Section 1 - Chemical Product and Company Identification * * *

Product Code: 1021737

THIS PRODUCT IS NOT FOR SALE OR USE IN THE STATE OF CALIFORNIA.

Product Use: Cleaning agent

If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

Synonyms: Tetrachloroethylene; Tetrachloroethene; Perchloroethene; 1,1,2,2-Tetrachloroethylene

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Phone: 1-800-669-5740

Emergency # 1-800-468-1760
www.safety-kleen.com

Issue Date

December 17, 2012

Supersedes Issue Date

January 24, 2011

Original Issue Date

January 19, 2009

PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW

Appearance

Clear, colorless liquid, slight sweet odor.

Signal Word

WARNING!

Health Hazards

May be harmful if inhaled.

May be harmful if swallowed.

Causes skin, eye and respiratory (nose, throat, and lungs) irritation.

Suspect cancer hazard. Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.

Contains material which may cause liver, kidney, and central nervous system damage.

POTENTIAL HEALTH EFFECTS

Inhalation (Breathing)

High concentrations of vapor or mist may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). Inhalation may cause irritation, nausea, vomiting, chest pain, difficulty breathing, irregular heartbeat, headache, drowsiness, dizziness, disorientation, mood swings, loss of coordination, blurred vision, lung congestion, kidney damage, and liver damage.

Eyes

Causes eye irritation. Symptoms include itching, burning, redness and tearing.

Skin

Causes skin irritation. Not likely to be absorbed through the skin in harmful amounts.

Ingestion (Swallowing)

This product may be harmful if swallowed. May cause throat irritation, nausea, vomiting, central nervous system effects as noted under **INHALATION (BREATHING)**, unconsciousness, coma, and death.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing cardiovascular, liver, kidney, respiratory tract (nose, throat, and lungs), central nervous system, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic

Prolonged or repeated inhalation may cause toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

Cancer Information

This product contains perchloroethylene CAS 127-18-4 which may cause cancer if inhaled. Risk of cancer depends on duration and level of exposure. For more information, see **SECTION 11: CARCINOGENICITY.** Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards

Toxic to aquatic life. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS	Component	Percent
127-18-4	Ethene,tetrachloro-	96-99.5
64742-89-8	Solvent naphtha (petroleum), light aliphatic	0.5-4

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: F025-Hazardous wastes.

* * * Section 4 - First Aid Measures * * *

Inhalation (Breathing)

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

Skin

Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists. Wash contaminated clothing before reuse. Discard any shoes or clothing items that cannot be decontaminated.

Ingestion (Swallowing)

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians

Treat symptomatically and supportively. Do not administer Adrenaline (epinephrine) or similar drugs following product overexposure. Increased sensitivity of the heart to such drugs may be caused by overexposure to product. Administration of gastric lavage and/or activated charcoal slurry, if warranted, should be performed by qualified medical personnel. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Product itself does not burn, but may decompose upon heating to produce phosgene, halogenated compounds, hydrogen chloride gas, carbon monoxide, and unidentified organic compounds.

Conditions of Flammability

Product will not burn.

Extinguishing Media

Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Protective Equipment For Firefighting

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray.

NFPA Ratings: Health: 3 **Fire:** 0 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact or static discharge.

* * * Section 6 - Accidental Release Measures * * *

Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, spark proof tool into a sealable container for disposal.

Additionally, for large spills: Dike far ahead of liquid spill for collection and later disposal.

There may be specific federal regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION.**

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from sparks or flame. Use clean tools. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes.

Shipping and Storing

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Empty product containers may retain product residue and can be dangerous.

See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Ethene,tetrachloro- (127-18-4)

ACGIH:	25 ppm TWA
	100 ppm STEL
OSHA Final:	100 ppm TWA
	200 ppm Ceiling
OSHA Vacated:	25 ppm TWA; 170 mg/m3 TWA

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

Personal Protective Equipment: Respiratory

Use NIOSH-certified, air-supplied respirators (self-contained breathing apparatus or air-line) respiratory protective equipment when concentration of vapor or mist exceeds applicable exposure limits. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

Personal Protective Equipment: Eyes/Face

Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

Personal Protective Equipment: Skin

Where skin contact is likely, wear laminate or equivalent protective gloves; use of natural rubber (latex) or equivalent gloves is not recommended.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant face shield, boots, apron, whole body suits, or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Clear, colorless liquid slightly sweet odor	**pH:**	Not applicable
Boiling Point:	250ºF (121ºC)	**Melting Point:**	-2ºF (-19ºC)
Solubility (H2O):	Insoluble	**Specific Gravity:**	1.62 (water = 1)
Density:	13.5 LB/US gal (1620 g/l)	**Octanol/H2O Coeff.:**	2.53-2.88 @ 68ºF (20ºC)
Evaporation Rate:	2.8 (butyl acetate = 1)	**Molecular Weight:**	165.8
Odor Threshold:	50 ppm	**Auto Ignition Temperature:**	Not applicable
LFL:	Not applicable	**Flash Point:**	Not applicable
UFL:	Not applicable	**Vapor Density:**	5.2 (air = 1)
Vapor Pressure:	14 mm Hg at 68ºF (20ºC)	**Freezing Point:**	-2ºF (-19ºC)

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures. Avoid heat, sparks or flame when not in use.

Incompatibility

Avoid acids, alkalies, oxidizing agents, or reactive metals.

Reactivity

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Hazardous Decomposition Products

None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Avoid heat, sparks or flame when not in use.

* * * Section 11 - Toxicological Information * * *

Toxicity Data

Component Analysis - LD50/LC50

Ethene,tetrachloro- (127-18-4)

Inhalation LC50 Rat 4000 ppm 4 h; Oral LD50 Rat 2629 mg/kg; Dermal LD50 Mouse 2800 mg/kg

Solvent naphtha (petroleum), light aliphatic (64742-89-8)

Oral LD50 Mouse 5000 mg/kg; Dermal LD50 Rabbit 3000 mg/kg

Acute Effects

May be harmful if inhaled. Inhalation may cause irritation, nausea, vomiting, chest pain, difficulty breathing, irregular heartbeat, headache, drowsiness, dizziness, disorientation, mood swings, loss of coordination, blurred vision, lung congestion, kidney damage, and liver damage. Causes eye irritation. Symptoms include itching, burning, redness and tearing. Causes skin irritation. Not likely to be absorbed through the skin in harmful amounts. This product may be harmful if swallowed. Ingestion may cause throat irritation, nausea, vomiting, central nervous system effects, unconsciousness, coma, and death.

Repeated Dose Effects

Prolonged or repeated inhalation may cause toxic effects as noted under Acute Effects. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis). Based on best current information, there is no known human sensitization associated with this product. Perchloroethylene has demonstrated experimental effects of reproductive toxicity, teratogenicity and mutagenicity.

Component Carcinogenicity

Ethene,tetrachloro- (127-18-4)

ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
OSHA:	Present (select carcinogen)
NIOSH:	potential occupational carcinogen
NTP:	Reasonably Anticipated To Be A Human Carcinogen (Suspect Carcinogen)
IARC:	Monograph 106 [in preparation]; Monograph 63 [1995]; Supplement 7 [1987] (Group 2A (probably carcenogenic to humans))

Target Organ Effects

Contains material which may cause liver, kidney, and central nervous system damage.

Sensitization

Based on best current information, there is no known human sensitization associated with this product.

Mutagenicity

Perchloroethylene has demonstrated experimental effects of mutagenicity.

Reproductive Toxicity

Perchloroethylene has demonstrated animal effects of reproductive toxicity.

Teratogenicity

Perchloroethylene has demonstrated experimental effects of teratogenicity.

Toxicologically Synergistic Products

Based on best current information, there are no known toxicologically synergistic products associated with this product.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

Toxic to aquatic life.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Ethene,tetrachloro- (127-18-4)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	12.4 - 14.4 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	8.6 - 13.5 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	11.0 - 15.0 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	4.73 - 5.27 mg/L [flow-through]	
96 Hr EC50 Pseudokirchneriella subcapitata	>500 mg/L	

Solvent naphtha (petroleum), light aliphatic (64742-89-8)

Duration/Test/Species	Concentration/Conditions	Notes
72 Hr EC50 Pseudokirchneriella subcapitata	4700 mg/L	

Persistence/Degradability

Vapor-phase tetrachloroethylene will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals.

Volatilization from moist soil surfaces is expected to be an important fate process based upon a Henry's Law constant of 0.0177 atm-cu m/mole. Biodegradation is expected to occur slowly in soils under both aerobic and anaerobic conditions.

Volatilization from water surfaces is expected to be an important fate process based upon this compound's Henry's Law constant.

Direct photolysis is not expected to be an important environmental fate process since this compound only absorbs light weakly in the environmental UV spectrum.

Hydrolysis is not expected to be an important environmental fate process.

Bioaccumulation/Accumulation

Measured BCF values of 26-77 in fish suggest bioconcentration in aquatic organisms is low to moderate.

Mobility in Environmental Media

If released to air, a vapor pressure of 18.5 mm Hg at 25 deg C indicates tetrachloroethylene will exist solely as a vapor in the ambient atmosphere.

If released to soil, tetrachloroethylene is expected to have moderate mobility based upon Koc values in the range of 200-237.

If released into water, tetrachloroethylene is not expected to adsorb to suspended solids and sediment in water based upon the Koc data.

Other Adverse Effects

No additional information available.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

US EPA Waste Number & Descriptions

U210 Based on available data, this information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

160 Reference *.North American Emergency Response Guidebook*

DOT **Shipping Name:** Tetrachloroethylene
UN/NA #: UN1897 **Hazard Class:** 6.1 **Packing Group:** III
Additional Information: Marine Pollutant

TDG **Shipping Name:** Tetrachloroethylene
UN/NA #: UN1897 **Hazard Class:** 6.1 **Packing Group:** III
Additional Info.: Marine Pollutant

IATA Information

Shipping Name: Tetrachloroethylene
UN #: UN1897 **Hazard Class:** 6.1 **Packing Group:** III
Required Label(s): 6.1
Additional Info.: Marine Pollutant

IMDG Information

Shipping Name: Tetrachloroethylene
UN #: UN1897 **Hazard Class:** 6.1 **Packing Group:** III
Required Label(s): 6.1, P
Additional Info.: Marine Pollutant

* * * Section 15 - Regulatory Information * * *

Volatile Organic Compounds (As Regulated)

0 WT%; 0 LB/US gal; 0 g/l as per 40 CFR Part 51.100(s)

SARA Sections 311/312

This product poses the following health hazard(s) as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):
Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard

SARA 302/304

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313

Component Analysis

This product contains a "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

Ethene,tetrachloro- (127-18-4) 0.1 % de minimis concentration

CERCLA

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product contains the following "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4 with the following reportable quantities (RQ):

Ethene,tetrachloro- (127-18-4) 100 lb final RQ; 45.4 kg final RQ

TSCA

All the components of this product are listed on, or are automatically included as "naturally occurring chemical substances" on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Ethene,tetrachloro-	127-18-4	Yes
Solvent naphtha (petroleum), light aliphatic	64742-89-8	Yes

State Regulations

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
Ethene,tetrachloro-	127-18-4	Yes	Yes	Yes	Yes	Yes

California

THIS PRODUCT IS NOT FOR SALE OR USE IN THE STATE OF CALIFORNIA.

Component Marine Pollutants

This material contains one or more of the following chemicals required by US DOT to be identified as marine pollutants.

Component	CAS #	
Ethene,tetrachloro-	127-18-4	DOT regulated marine pollutant

Canadian Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Ethene,tetrachloro-	127-18-4	DSL
Solvent naphtha (petroleum), light aliphatic	64742-89-8	DSL

Canadian WHMIS Information

D1B,D2A,D2B

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Ethene,tetrachloro- (127-18-4) 1 %

Canadian Environmental Protection Act (CEPA)

All the components of this product are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

* * * Section 16 - Other Information * * *

Label/Other Information

SK81826

Revision Information

Addition of component to Section 3 and related sections.

Disclaimer

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplier to the user.

End of Sheet 82335

Material Safety Data Sheet

Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782 **ID: 82343**

* * * Section 1 - Chemical Product and Company Identification * * *

Product Code: 5820, 5825, 6782
Product Use: Paint gun cleaner. If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

THIS PRODUCT IS NOT FOR SALE OR USE IN THE STATE OF CALIFORNIA

Synonyms: None.

Phone: 1-800-669-5740

Safety-Kleen Systems, Inc.
2600 North Central Expressway, Suite 400
Richardson, TX 75080

Issue Date
October 18, 2013

Emergency # 1-800-468-1760
www.safety-kleen.com

Supersedes Issue Date
June 12, 2013

Original Issue Date
July 20, 1989

PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW

Appearance
Liquid, clear and colorless, solvent odor

Signal Word
DANGER!

Physical Hazards
Extremely flammable liquid and vapor. Vapor may cause flash fire.

Health Hazards
May be harmful, fatal or cause blindness if swallowed.
May be harmful if inhaled.
May be harmful if absorbed through the skin.
May irritate the respiratory tract (nose, throat, and lungs) and skin.
May be severely irritating to the eyes.
Contains material which may cause birth defects.
Contains material which may cause central nervous system damage.
Suspect cancer hazard. Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.

POTENTIAL HEALTH EFFECTS

Inhalation (Breathing)
High concentrations of vapor or mist may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.

Eyes
May be severely irritating to the eyes. May cause tearing, redness, swelling, burns, and eye damage.

Skin
May cause irritation. Toluene, n-butyl alcohol and methyl alcohol may be absorbed through the skin and cause harm as noted under **INHALATION (BREATHING)**.

Ingestion (Swallowing)
May be harmful or fatal if swallowed. Ingestion of methanol may cause blindness. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing respiratory tract (nose, throat, and lungs), cardiovascular, liver, kidney, central nervous system, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic

Prolonged or repeated inhalation may cause toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis). Prolonged or repeated inhalation may cause brain, liver, kidney, heart, and central nervous system damage. Prolonged or repeated inhalation or ingestion exposure may have reproductive toxicity and/or teratogenicity effects. Prolonged or repeated exposure may have mutagenic effects.

Cancer Information

This product contains ethyl benzene, methylene chloride, and perchloroethylene which may cause cancer. Risk of cancer depends on duration and level of exposure. For more information, see **SECTION 11: CARCINOGENICITY**.

Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards

Toxic to fish/plants. See **SECTION 12: ECOLOGICAL INFORMATION**.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
108-88-3	Toluene	30-60
78-93-3	Methyl ethyl ketone	0-60
107-87-9	Methyl propyl ketone	0-60
64741-89-5	C5 to C8 Aliphatic hydrocarbons	0-60
8030-30-6	C9 to C13 Aliphatic hydrocarbons	0-60
110-43-0	Methyl n-amyl ketone	0-60
100-41-4	Ethyl benzene	0-30
108-10-1	Methyl isobutyl ketone	0-30
67-64-1	Acetone	0-20
141-78-6	Ethyl acetate	0-17
763-69-9	Ethyl 3-ethoxypropanoate	0-17
108-21-4	Isopropyl acetate	0-17
108-65-6	Propylene glycol monomethyl ether acetate	0-17
110-19-0	Isobutyl acetate	0-17
123-86-4	n-Butyl acetate	0-17
1330-20-7	Xylenes (o-, m-, p- isomers)	0-15
67-63-0	Isopropyl alcohol	0-10
71-36-3	n-Butyl alcohol	0-10
75-65-0	tert-Butyl alcohol	0-10
64-17-5	Ethyl alcohol	0-10
67-56-1	Methyl alcohol	0-4
127-18-4	Perchloroethylene	0-1
71-55-6	1,1,1-Trichloroethane	0-1
75-09-2	Methylene chloride	0-1

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Butyl acetates.

* * * Section 4 - First Aid Measures * * *

Inhalation (Breathing)

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

Skin

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Seek medical attention.

Ingestion (Swallowing)

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-428-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians

Treat symptomatically and supportively. Increased sensitivity of the heart to Adrenaline (epinephrine) may be caused by overexposure to product. Administration of gastric lavage, if warranted, should be performed by qualified medical personnel. Treatment may vary with condition of victim and specifics of incident. Call 1-800-428-1760 for additional information.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce phosgene, chlorides, chloroacetylenes, formaldehyde, peracetic acid, carbon monoxide and unidentified organic compounds.

Conditions of Flammability

Heat, sparks, or flame.

Extinguishing Media

Carbon dioxide, alcohol-resistant foam, dry chemical, or water spray.

Protective Equipment For Firefighting

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray.

NFPA Ratings: Health: 2 **Fire:** 3 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Vapor explosion hazard indoors, outdoors, or in sewers. Vapors may travel to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire or explosion hazard. Heated containers may rupture, explode, or be thrown into the air. "Empty" containers may retain residue and can be dangerous. Products are not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

* * * Section 6 - Accidental Release Measures * * *

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal.

Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

There may be specific federal regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION.**

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring large quantities of product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke while using this product.

Shipping and Storing

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition; containers may explode and cause injury or death. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Toluene (108-88-3)

ACGIH:	20 ppm TWA
OSHA Final:	200 ppm TWA
	300 ppm Ceiling
OSHA Vacated:	100 ppm TWA; 375 mg/m3 TWA
	150 ppm STEL; 560 mg/m3 STEL
NIOSH:	100 ppm TWA; 375 mg/m3 TWA
	150 ppm STEL; 560 mg/m3 STEL

Methyl isobutyl ketone (108-10-1)

ACGIH:	20 ppm TWA
	75 ppm STEL
OSHA Final:	100 ppm TWA; 410 mg/m3 TWA
OSHA Vacated:	50 ppm TWA; 205 mg/m3 TWA
	75 ppm STEL; 300 mg/m3 STEL
NIOSH:	50 ppm TWA; 205 mg/m3 TWA
	75 ppm STEL; 300 mg/m3 STEL

Methyl propyl ketone (107-87-9)

ACGIH:	150 ppm STEL
OSHA Final:	200 ppm TWA; 700 mg/m3 TWA
OSHA Vacated:	200 ppm TWA; 700 mg/m3 TWA
	250 ppm STEL; 875 mg/m3 STEL
NIOSH:	150 ppm TWA; 530 mg/m3 TWA

Methyl n-amyl ketone (110-43-0)

ACGIH:	50 ppm TWA
OSHA Final:	100 ppm TWA; 465 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 465 mg/m3 TWA
NIOSH:	100 ppm TWA; 465 mg/m3 TWA

Methyl ethyl ketone (78-93-3)

ACGIH:	200 ppm TWA
	300 ppm STEL
OSHA Final:	200 ppm TWA; 590 mg/m3 TWA
OSHA Vacated:	200 ppm TWA; 590 mg/m3 TWA
	300 ppm STEL; 885 mg/m3 STEL
NIOSH:	200 ppm TWA; 590 mg/m3 TWA
	300 ppm STEL; 885 mg/m3 STEL

C9 to C13 Aliphatic hydrocarbons (8030-30-6)

OSHA Final:	100 ppm TWA; 400 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 400 mg/m3 TWA
NIOSH:	100 ppm TWA; 400 mg/m3 TWA

Ethyl benzene (100-41-4)

ACGIH:	20 ppm TWA
OSHA Final:	100 ppm TWA; 435 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 435 mg/m3 TWA 125 ppm STEL; 545 mg/m3 STEL
NIOSH:	100 ppm TWA; 435 mg/m3 TWA 125 ppm STEL; 545 mg/m3 STEL

Acetone (67-64-1)

ACGIH:	500 ppm TWA 750 ppm STEL
OSHA Final:	1000 ppm TWA; 2400 mg/m3 TWA
OSHA Vacated:	750 ppm TWA; 1800 mg/m3 TWA 2400 mg/m3 STEL (The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors); 1000 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m3 TWA

Ethyl acetate (141-78-6)

ACGIH:	400 ppm TWA
OSHA Final:	400 ppm TWA; 1400 mg/m3 TWA
OSHA Vacated:	400 ppm TWA; 1400 mg/m3 TWA
NIOSH:	400 ppm TWA; 1400 mg/m3 TWA

Isopropyl acetate (108-21-4)

ACGIH:	100 ppm TWA 200 ppm STEL
OSHA Final:	250 ppm TWA; 950 mg/m3 TWA
OSHA Vacated:	250 ppm TWA; 950 mg/m3 TWA 310 ppm STEL; 1185 mg/m3 STEL

Isobutyl acetate (110-19-0)

ACGIH:	150 ppm TWA
OSHA Final:	150 ppm TWA; 700 mg/m3 TWA
OSHA Vacated:	150 ppm TWA; 700 mg/m3 TWA
NIOSH:	150 ppm TWA; 700 mg/m3 TWA

n-Butyl acetate (123-86-4)

ACGIH:	150 ppm TWA 200 ppm STEL
OSHA Final:	150 ppm TWA; 710 mg/m3 TWA
OSHA Vacated:	150 ppm TWA; 710 mg/m3 TWA 200 ppm STEL; 950 mg/m3 STEL
NIOSH:	150 ppm TWA; 710 mg/m3 TWA 200 ppm STEL; 950 mg/m3 STEL

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH:	100 ppm TWA 150 ppm STEL
OSHA Final:	100 ppm TWA; 435 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 435 mg/m3 TWA 150 ppm STEL; 655 mg/m3 STEL

tert-Butyl alcohol (75-65-0)

ACGIH:	100 ppm TWA
OSHA Final:	100 ppm TWA; 300 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 300 mg/m3 TWA 150 ppm STEL; 450 mg/m3 STEL
NIOSH:	100 ppm TWA; 300 mg/m3 TWA 150 ppm STEL; 450 mg/m3 STEL

Isopropyl alcohol (67-63-0)

ACGIH: 200 ppm TWA
400 ppm STEL
OSHA Final: 400 ppm TWA; 980 mg/m3 TWA
OSHA Vacated: 400 ppm TWA; 980 mg/m3 TWA
500 ppm STEL; 1225 mg/m3 STEL
NIOSH: 400 ppm TWA; 980 mg/m3 TWA
500 ppm STEL; 1225 mg/m3 STEL

Ethyl alcohol (64-17-5)

ACGIH: 1000 ppm STEL
OSHA Final: 1000 ppm TWA; 1900 mg/m3 TWA
OSHA Vacated: 1000 ppm TWA; 1900 mg/m3 TWA
NIOSH: 1000 ppm TWA; 1900 mg/m3 TWA

n-Butyl alcohol (71-36-3)

ACGIH: 20 ppm TWA
OSHA Final: 100 ppm TWA; 300 mg/m3 TWA
OSHA Vacated: 50 ppm Ceiling; 150 mg/m3 Ceiling
Prevent or reduce skin absorption
NIOSH: 50 ppm Ceiling; 150 mg/m3 Ceiling
Potential for dermal absorption

Methyl alcohol (67-56-1)

ACGIH: 200 ppm TWA
250 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final: 200 ppm TWA; 260 mg/m3 TWA
OSHA Vacated: 200 ppm TWA; 260 mg/m3 TWA
250 ppm STEL; 325 mg/m3 STEL
Prevent or reduce skin absorption
NIOSH: 200 ppm TWA; 260 mg/m3 TWA
250 ppm STEL; 325 mg/m3 STEL
Potential for dermal absorption

1,1,1-Trichloroethane (71-55-6)

ACGIH: 350 ppm TWA
450 ppm STEL
OSHA Final: 350 ppm TWA; 1900 mg/m3 TWA
OSHA Vacated: 350 ppm TWA; 1900 mg/m3 TWA
450 ppm STEL; 2450 mg/m3 STEL
NIOSH: 350 ppm Ceiling (15 min); 1900 mg/m3 Ceiling (15 min)

Methylene chloride (75-09-2)

ACGIH: 50 ppm TWA
OSHA Final: 125 ppm STEL (See 29 CFR 1910.1052, 15 min); 12.5 ppm Action Level (See 29 CFR 1910.1052); 25 ppm TWA (See 29 CFR 1910.1052)
25 ppm TWA
125 ppm STEL (see 29 CFR 1910.1052)
OSHA Vacated: 500 ppm TWA
2000 ppm STEL (5 min in any 3 h)
1000 ppm Ceiling

Perchloroethylene (127-18-4)

ACGIH: 25 ppm TWA
100 ppm STEL
OSHA Final: 100 ppm TWA
200 ppm Ceiling
OSHA Vacated: 25 ppm TWA; 170 mg/m3 TWA

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Personal Protective Equipment: Respiratory

Use NIOSH air-certified, air-supplied respirators (self-contained breathing apparatus or air-line) respiratory protective equipment when concentration of methanol or methylene chloride may exceed applicable exposure limits. Otherwise, use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Personal Protective Equipment: Eyes/Face

Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

Personal Protective Equipment: Skin

Where skin contact is likely, wear chemical impervious protective gloves (chloroprene); use of natural rubber (latex), polyvinyl chloride (PVC), neoprene or equivalent gloves is not recommended.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Liquid, clear and colorless, solvent odor	**pH:**	Not applicable
Odor Threshold:	Not available.	**Boiling Point:**	133 to 342ºF (56 to 172ºC)
Melting Point:	Not available.	**Solubility (H2O):**	Slight.
Specific Gravity:	0.83 (water = 1) (approximately)	**Density:**	6.9 LB/US gal (830 g/L) (approximately)
Octanol/H2O Coeff.:	Not available.	**Evaporation Rate:**	3.7 (butyl acetate = 1) (based on a similar product)
Molecular Weight:	Not available.	**Auto Ignition Temperature:**	800ºF (427ºC)
LFL:	1 VOL% (approximately)	**Flash Point:**	less than 70ºF (21ºC) Tag Closed Cup
UFL:	13 VOL% (approximately)	**Viscosity:**	Not available
Vapor Pressure:	86 mm Hg at 68ºF (20ºC) 205 mmHg at 100ºF (38ºC)	**Flammability Class:**	Flammable
Vapor Density:	2.2 to 3.9 (air = 1) (approximately)	**Percent Volatile:**	80-100 WT% As per 40 CFR Part 51.100(s)

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures. Avoid heat, sparks, or flame.

Incompatibility

Avoid acids, alkalies, oxidizing agents, reducing agents, reactive halogens, or reactive metals.

Reactivity

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Hazardous Decomposition Products

None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Ignition sources and incompatible materials.

* * * Section 11 - Toxicological Information * * *

Toxicity Data

Component Analysis - LD50/LC50

Toluene (108-88-3)
Inhalation LC50 Rat 12.5 mg/L 4 h; Inhalation LC50 Rat >26700 ppm 1 h; Oral LD50 Rat 636 mg/kg; Dermal LD50 Rabbit 8390 mg/kg

Methyl isobutyl ketone (108-10-1)
Inhalation LC50 Rat 8.2 mg/L 4 h; Oral LD50 Rat 2080 mg/kg; Dermal LD50 Rabbit >16000 mg/kg

C5 to C8 Aliphatic hydrocarbons (64741-89-5)
Inhalation LC50 Rat 2.18 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >5 g/kg

Methyl ethyl ketone (78-93-3)
Inhalation LC50 Rat 23500 mg/m3 8 h

Ethyl benzene (100-41-4)
Inhalation LC50 Rat 17.2 mg/L 4 h; Oral LD50 Rat 3500 mg/kg; Dermal LD50 Rabbit 15354 mg/kg

Acetone (67-64-1)
Inhalation LC50 Rat 50100 mg/m3 8 h

Ethyl acetate (141-78-6)
Oral LD50 Rat 5620 mg/kg; Dermal LD50 Rabbit >20 mL/kg

Isopropyl acetate (108-21-4)
Oral LD50 Rat 6750 mg/kg; Inhalation LC50 Rat 50600 mg/m3 8 h; Dermal LD50 Rabbit >20 mL/kg

Isobutyl acetate (110-19-0)
Oral LD50 Rat 13400 mg/kg; Dermal LD50 Rabbit >17400 mg/kg

Ethyl 3-ethoxypropanoate (763-69-9)
Oral LD50 Rat 3200 mg/kg

Propylene glycol monomethyl ether acetate (108-65-6)
Dermal LD50 Rabbit >5 g/kg; Oral LD50 Rat 8532 mg/kg

n-Butyl acetate (123-86-4)
Dermal LD50 Rabbit >17600 mg/kg; Inhalation LC50 Rat 390 ppm 4 h

Xylenes (o-, m-, p- isomers) (1330-20-7)
Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg

tert-Butyl alcohol (75-65-0)
Oral LD50 Rat 2733 mg/kg; Dermal LD50 Rabbit >2 g/kg; Inhalation LC50 Rat >10000 ppm 4 h

Isopropyl alcohol (67-63-0)
Oral LD50 Rat 4396 mg/kg; Dermal LD50 Rabbit 12800 mg/kg; Inhalation LC50 Rat 16000 ppm 8 h

Ethyl alcohol (64-17-5)
Inhalation LC50 Rat 124.7 mg/L 4 h

n-Butyl alcohol (71-36-3)
Inhalation LC50 Rat 8000 ppm 4 h

Methyl alcohol (67-56-1)
Inhalation LC50 Rat 83.2 mg/L 4 h; Oral LD50 Rat 5628 mg/kg

1,1,1-Trichloroethane (71-55-6)
Oral LD50 Rat >2000 mg/kg; Dermal LD50 Rat >2000 mg/kg; Dermal LD50 Rabbit >15800 mg/kg; Inhalation LC50 Rat 18000 ppm 4 h

Methylene chloride (75-09-2)
Oral LD50 Rat >2000 mg/kg

Perchloroethylene (127-18-4)
Inhalation LC50 Rat 4000 ppm 4 h; Oral LD50 Rat 2629 mg/kg; Dermal LD50 Mouse 2800 mg/kg

Acute Effects

Harmful by inhalation, in contact with skin and if swallowed. May be fatal or cause blindness if ingested. R37/38 Irritating to respiratory system and skin. May be severely irritating to the eyes. High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects.

Repeated Dose Effects

Toluene, ethyl benzene, ethyl alcohol, isopropyl alcohol, methyl alcohol, xylene, 1,1,1-trichloroethane, methylene chloride and n-butyl alcohol have demonstrated experimental effects of mutagenicity. Perchloroethylene has demonstrated human effects of mutagenicity.

Based on best current information, the other components listed in **SECTION 2** are not mutagens.

Toluene, ethylbenzene, ethyl alcohol, isopropyl alcohol, methyl alcohol, perchloroethylene, and xylene have demonstrated animal effects of teragenicity.
Based on best current information, the other components listed in **SECTION 2** are not teratogens.

Toluene, ethyl benzene, methyl chloride, ethyl alcohol, xylene, perchloroethylene, isopropyl alcohol, n-butyl alcohol, and methyl ethyl ketone have demonstrated animal effects of reproductive toxicity. Based on best current information, the other components listed in **SECTION 2** are not reproductive toxicants.

Component Carcinogenicity

Toluene (108-88-3)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen
- **IARC:** Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Methyl isobutyl ketone (108-10-1)
- **ACGIH:** A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
- **OSHA:** Present (select carcinogen)
- **IARC:** Monograph 101 [2012] (Group 2B (possibly carcinogenic to humans))

Ethyl benzene (100-41-4)
- **ACGIH:** A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
- **OSHA:** Present (select carcinogen)
- **IARC:** Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

Acetone (67-64-1)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen

Xylenes (o-, m-, p- isomers) (1330-20-7)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen
- **IARC:** Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

tert-Butyl alcohol (75-65-0)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen

Isopropyl alcohol (67-63-0)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen
- **IARC:** Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977] (Group 3 (not classifiable))

Ethyl alcohol (64-17-5)
- **ACGIH:** A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
- **OSHA:** Present (select carcinogen)
- **IARC:** Monograph 100E [2012] (in alcoholic beverages); Monograph 96 [2010] (in alcoholic beverages) (Group 1 (carcinogenic to humans))

1,1,1-Trichloroethane (71-55-6)
- **ACGIH:** A4 - Not Classifiable as a Human Carcinogen
- **IARC:** Monograph 71 [1999]; Supplement 7 [1987]; Monograph 20 [1979] (Group 3 (not classifiable))

Methylene chloride (75-09-2)
- **ACGIH:** A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
- **OSHA:** 125 ppm STEL (See 29 CFR 1910.1052, 15 min); 12.5 ppm Action Level (See 29 CFR 1910.1052); 25 ppm TWA (See 29 CFR 1910.1052) (specifically regulated carcinogen) Present (select carcinogen)
- **NIOSH:** potential occupational carcinogen
- **NTP:** Reasonably Anticipated To Be A Human Carcinogen (Suspect Carcinogen)
- **IARC:** Monograph 71 [1999]; Supplement 7 [1987] (Group 2B (possibly carcinogenic to humans))

Perchloroethylene (127-18-4)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
OSHA: Present (select carcinogen)
NIOSH: potential occupational carcinogen
NTP: Reasonably Anticipated To Be A Human Carcinogen (Suspect Carcinogen)
IARC: Monograph 106 [in preparation]; Monograph 63 [1995]; Supplement 7 [1987] (Group 2A (probably carcenogenic to humans))

Target Organ Effects

Prolonged or repeated inhalation may cause brain, liver, kidney, heart, and central nervous system damage.

Sensitization

Based on best current information, there is no known human sensitization associated with this product.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

Toxic to fish/plants.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Toluene (108-88-3)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	15.22 - 19.05 mg/L [flow-through]	1 day old
96 Hr LC50 Pimephales promelas	12.6 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.89 - 7.81 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	14.1 - 17.16 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.8 mg/L [semi-static]	
96 Hr LC50 Lepomis macrochirus	11.0 - 15.0 mg/L [static]	
96 Hr LC50 Oryzias latipes	54 mg/L [static]	
96 Hr LC50 Poecilia reticulata	28.2 mg/L [semi-static]	
96 Hr LC50 Poecilia reticulata	50.87 - 70.34 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	>433 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	12.5 mg/L [static]	

Methyl isobutyl ketone (108-10-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	496 - 514 mg/L [flow-through]	
96 Hr EC50 Pseudokirchneriella subcapitata	400 mg/L	

Methyl propyl ketone (107-87-9)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	1190 - 1290 mg/L [flow-through]	

Methyl n-amyl ketone (110-43-0)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	126 - 137 mg/L [flow-through]	

C5 to C8 Aliphatic hydrocarbons (64741-89-5)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L	

Methyl ethyl ketone (78-93-3)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	3130 - 3320 mg/L [flow-through]	

C9 to C13 Aliphatic hydrocarbons (8030-30-6)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Lepomis macrochirus	9.2 mg/L [static]	
72 Hr EC50 Pseudokirchneriella subcapitata	4700 mg/L	

Ethyl benzene (100-41-4)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	11.0 - 18.0 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	4.2 mg/L [semi-static]	
96 Hr LC50 Pimephales promelas	7.55 - 11 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	32 mg/L [static]	
96 Hr LC50 Pimephales promelas	9.1 - 15.6 mg/L [static]	
96 Hr LC50 Poecilia reticulata	9.6 mg/L [static]	
72 Hr EC50 Pseudokirchneriella subcapitata	4.6 mg/L	
96 Hr EC50 Pseudokirchneriella subcapitata	>438 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	2.6 - 11.3 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	1.7 - 7.6 mg/L [static]	

Acetone (67-64-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L	
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	8300 mg/L	

Ethyl acetate (141-78-6)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	220 - 250 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	484 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	352 - 500 mg/L [semi-static]	
48 Hr EC50 Desmodesmus subspicatus	3300 mg/L	

Isobutyl acetate (110-19-0)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr LC50 Leuciscus idus melanotus	101 mg/L [static]	
48 Hr LC50 Leuciscus idus melanotus	101 - 123 mg/L [flow-through]	

Ethyl 3-ethoxypropanoate (763-69-9)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	62 mg/L [static]	

Propylene glycol monomethyl ether acetate (108-65-6)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	161 mg/L [static]	

n-Butyl acetate (123-86-4)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	17 - 19 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	100 mg/L [static]	
96 Hr LC50 Leuciscus idus	62 mg/L [static]	
72 Hr EC50 Desmodesmus subspicatus	674.7 mg/L	

Xylenes (o-, m-, p- isomers) (1330-20-7)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	13.4 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	2.661 - 4.093 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	13.5 - 17.3 mg/L	
96 Hr LC50 Lepomis macrochirus	13.1 - 16.5 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	19 mg/L	
96 Hr LC50 Lepomis macrochirus	7.711 - 9.591 mg/L [static]	
96 Hr LC50 Pimephales promelas	23.53 - 29.97 mg/L [static]	
96 Hr LC50 Cyprinus carpio	780 mg/L [semi-static]	
96 Hr LC50 Cyprinus carpio	>780 mg/L	
96 Hr LC50 Poecilia reticulata	30.26 - 40.75 mg/L [static]	

tert-Butyl alcohol (75-65-0)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	6130 - 6700 mg/L [flow-through]	
72 Hr EC50 Desmodesmus subspicatus	>1000 mg/L	

Isopropyl alcohol (67-63-0)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	9640 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	11130 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	>1400000 µg/L	
96 Hr EC50 Desmodesmus subspicatus	>1000 mg/L	
72 Hr EC50 Desmodesmus subspicatus	>1000 mg/L	

Ethyl alcohol (64-17-5)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	12.0 - 16.0 mL/L [static]	
96 Hr LC50 Pimephales promelas	>100 mg/L [static]	
96 Hr LC50 Pimephales promelas	13400 - 15100 mg/L [flow-through]	

n-Butyl alcohol (71-36-3)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	1730 - 1910 mg/L [static]	
96 Hr LC50 Pimephales promelas	1740 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	100000 - 500000 µg/L [static]	
96 Hr LC50 Pimephales promelas	1910000 µg/L [static]	
96 Hr EC50 Desmodesmus subspicatus	>500 mg/L	
72 Hr EC50 Desmodesmus subspicatus	>500 mg/L	

Methyl alcohol (67-56-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	28200 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	>100 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	19500 - 20700 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	18 - 20 mL/L [static]	
96 Hr LC50 Lepomis macrochirus	13500 - 17600 mg/L [flow-through]	

1,1,1-Trichloroethane (71-55-6)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	35.2 - 50.7 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	57 - 90 mg/L [static]	juvenile
96 Hr LC50 Cyprinus carpio	56 mg/L [flow-through]	
96 Hr LC50 Poecilia reticulata	52.9 mg/L [flow-through]	
96 Hr LC50 Poecilia reticulata	69.7 mg/L [static]	
96 Hr LC50 Pimephales promelas	91 - 126 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	46 - 59 mg/L [static]	
96 Hr EC50 Skeletonema costatum	>669 mg/L	
96 Hr EC50 Pseudokirchneriella subcapitata	>500 mg/L	

Methylene chloride (75-09-2)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	140.8 - 277.8 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	262 - 855 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	193 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	193 mg/L [flow-through]	
96 Hr EC50 Pseudokirchneriella subcapitata	>500 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	>500 mg/L	

Perchloroethylene (127-18-4)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	12.4 - 14.4 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	8.6 - 13.5 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	11.0 - 15.0 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	4.73 - 5.27 mg/L [flow-through]	
96 Hr EC50 Pseudokirchneriella subcapitata	>500 mg/L	

Persistence/Degradability

May cause long-term adverse effects in the aquatic environment.

Bioaccumulation/Accumulation

Product is not expected to bioaccumulate.

Mobility in Environmental Media

No information available.

Other Adverse Effects

No additional information available.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

US EPA Waste Number & Descriptions

D001, D018, D035, D039. Based on available data, this information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

128 Reference *.North American Emergency Response Guidebook*

DOT **Shipping Name:** Paint related material
UN/NA #: UN1263 **Hazard Class:** 3 **Packing Group:** II
Required Label(s): FLAMMABLE LIQUID

TDG **Shipping Name:** Paint related material
UN/NA #: UN1263 **Hazard Class:** 3 **Packing Group:** II
Required Label(s): FLAMMABLE LIQUID

IATA Information

No Classification Assigned.

IMDG Information

No Classification Assigned.

* * * Section 15 - Regulatory Information * * *

SARA Sections 311/312

This product poses the following health hazard(s) as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):
Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA 302/304

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313

Component Analysis

This product contains a "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

Toluene (108-88-3)	1.0 % de minimis concentration
Methyl isobutyl ketone (108-10-1)	1.0 % de minimis concentration
Ethyl benzene (100-41-4)	0.1 % de minimis concentration
Xylenes (o-, m-, p- isomers) (1330-20-7)	1.0 % de minimis concentration
tert-Butyl alcohol (75-65-0)	1.0 % de minimis concentration
Isopropyl alcohol (67-63-0)	1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)
n-Butyl alcohol (71-36-3)	1.0 % de minimis concentration
Methyl alcohol (67-56-1)	1.0 % de minimis concentration
1,1,1-Trichloroethane (71-55-6)	1.0 % de minimis concentration
Methylene chloride (75-09-2)	0.1 % de minimis concentration
Perchloroethylene (127-18-4)	0.1 % de minimis concentration

CERCLA

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product contains the following "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4 with the following reportable quantities (RQ):

Toluene (108-88-3)	1000 lb final RQ; 454 kg final RQ
Methyl isobutyl ketone (108-10-1)	5000 lb final RQ; 2270 kg final RQ
Methyl ethyl ketone (78-93-3)	5000 lb final RQ; 2270 kg final RQ
Ethyl benzene (100-41-4)	1000 lb final RQ; 454 kg final RQ
Acetone (67-64-1)	5000 lb final RQ; 2270 kg final RQ
Ethyl acetate (141-78-6)	5000 lb final RQ; 2270 kg final RQ
Isobutyl acetate (110-19-0)	5000 lb final RQ; 2270 kg final RQ
n-Butyl acetate (123-86-4)	5000 lb final RQ; 2270 kg final RQ
Xylenes (o-, m-, p- isomers) (1330-20-7)	100 lb final RQ; 45.4 kg final RQ
n-Butyl alcohol (71-36-3)	5000 lb final RQ; 2270 kg final RQ
Methyl alcohol (67-56-1)	5000 lb final RQ; 2270 kg final RQ
1,1,1-Trichloroethane (71-55-6)	1000 lb final RQ; 454 kg final RQ
Methylene chloride (75-09-2)	1000 lb final RQ; 454 kg final RQ
Perchloroethylene (127-18-4)	100 lb final RQ; 45.4 kg final RQ

TSCA

All the components of this product are listed on, or are automatically included as "naturally occurring chemical substances" on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Toluene	108-88-3	Yes
Methyl isobutyl ketone	108-10-1	Yes
Methyl propyl ketone	107-87-9	Yes
Methyl n-amyl ketone	110-43-0	Yes
C5 to C8 Aliphatic hydrocarbons	64741-89-5	Yes
Methyl ethyl ketone	78-93-3	Yes
C9 to C13 Aliphatic hydrocarbons	8030-30-6	Yes
Ethyl benzene	100-41-4	Yes
Acetone	67-64-1	Yes
Ethyl acetate	141-78-6	Yes
Isopropyl acetate	108-21-4	Yes
Isobutyl acetate	110-19-0	Yes
Ethyl 3-ethoxypropanoate	763-69-9	Yes
Propylene glycol monomethyl ether acetate	108-65-6	Yes
n-Butyl acetate	123-86-4	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes
tert-Butyl alcohol	75-65-0	Yes
Isopropyl alcohol	67-63-0	Yes
Ethyl alcohol	64-17-5	Yes
n-Butyl alcohol	71-36-3	Yes
Methyl alcohol	67-56-1	Yes
1,1,1-Trichloroethane	71-55-6	Yes
Methylene chloride	75-09-2	Yes
Perchloroethylene	127-18-4	Yes

State Regulations

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Methyl isobutyl ketone	108-10-1	Yes	Yes	Yes	Yes	Yes
Methyl propyl ketone	107-87-9	Yes	Yes	Yes	Yes	Yes
Methyl n-amyl ketone	110-43-0	Yes	Yes	Yes	Yes	Yes
C5 to C8 Aliphatic hydrocarbons	64741-89-5	No	Yes	No	No	No
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes
C9 to C13 Aliphatic hydrocarbons	8030-30-6	Yes	Yes	Yes	Yes	Yes
Ethyl benzene	100-41-4	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
Ethyl acetate	141-78-6	Yes	Yes	Yes	Yes	Yes
Isopropyl acetate	108-21-4	Yes	Yes	Yes	Yes	Yes
Isobutyl acetate	110-19-0	Yes	Yes	Yes	Yes	Yes
n-Butyl acetate	123-86-4	Yes	Yes	Yes	Yes	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes
tert-Butyl alcohol	75-65-0	Yes	Yes	Yes	Yes	Yes
Isopropyl alcohol	67-63-0	Yes	Yes	Yes	Yes	Yes
Ethyl alcohol	64-17-5	Yes	Yes	Yes	Yes	Yes
n-Butyl alcohol	71-36-3	Yes	Yes	Yes	Yes	Yes
Methyl alcohol	67-56-1	Yes	Yes	Yes	Yes	Yes
1,1,1-Trichloroethane	71-55-6	Yes	Yes	Yes	Yes	Yes
Methylene chloride	75-09-2	Yes	Yes	Yes	Yes	Yes
Perchloroethylene	127-18-4	Yes	Yes	Yes	Yes	Yes

Canadian Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Toluene	108-88-3	DSL
Methyl isobutyl ketone	108-10-1	DSL
Methyl propyl ketone	107-87-9	DSL
Methyl n-amyl ketone	110-43-0	DSL
C5 to C8 Aliphatic hydrocarbons	64741-89-5	DSL
Methyl ethyl ketone	78-93-3	DSL
C9 to C13 Aliphatic hydrocarbons	8030-30-6	DSL
Ethyl benzene	100-41-4	DSL
Acetone	67-64-1	DSL
Ethyl acetate	141-78-6	DSL
Isopropyl acetate	108-21-4	DSL
Isobutyl acetate	110-19-0	DSL
Ethyl 3-ethoxypropanoate	763-69-9	DSL
Propylene glycol monomethyl ether acetate	108-65-6	DSL
n-Butyl acetate	123-86-4	DSL
Xylenes (o-, m-, p- isomers)	1330-20-7	DSL
tert-Butyl alcohol	75-65-0	DSL
Isopropyl alcohol	67-63-0	DSL
Ethyl alcohol	64-17-5	DSL
n-Butyl alcohol	71-36-3	DSL
Methyl alcohol	67-56-1	DSL
1,1,1-Trichloroethane	71-55-6	DSL
Methylene chloride	75-09-2	DSL
Perchloroethylene	127-18-4	DSL

Canadian WHMIS Information

Class B2 - Flammable Liquid Class D1B - Contains a component that is acutely lethal. Class D2A - Contains component that may cause cancer. Class D2B - Irritating to eyes and skin.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Toluene (108-88-3)	1 %
Methyl isobutyl ketone (108-10-1)	1 %
Methyl propyl ketone (107-87-9)	1 %
Methyl n-amyl ketone (110-43-0)	1 %
Methyl ethyl ketone (78-93-3)	1 %
Ethyl benzene (100-41-4)	0.1 %
Acetone (67-64-1)	1 %
Ethyl acetate (141-78-6)	1 %
Isopropyl acetate (108-21-4)	1 %
Isobutyl acetate (110-19-0)	1 %
n-Butyl acetate (123-86-4)	1 %
tert-Butyl alcohol (75-65-0)	1 %
Isopropyl alcohol (67-63-0)	1 %
Ethyl alcohol (64-17-5)	0.1 %
n-Butyl alcohol (71-36-3)	1 %
Methyl alcohol (67-56-1)	1 %
1,1,1-Trichloroethane (71-55-6)	0.1 %
Methylene chloride (75-09-2)	0.1 %

Canadian Environmental Protection Act (CEPA)

All the components of this product are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

* * * Section 16 - Other Information * * *

Label/Other Information

Not available.

Revision Information

Update to Section 3, Composition.

Disclaimer

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplier to the user.

End of Sheet 82343

Material Safety Data Sheet

Material Name: MULTI-USE LACQUER THINNER **ID: 82410**

* * * Section 1 - Chemical Product and Company Identification * * *

Product Code: 6801, 16801
Product Use: Lacquer thinner.
If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

THIS PRODUCT IS NOT FOR SALE OR USE IN THE STATE OF CALIFORNIA.

Synonyms: None.

Safety-Kleen Systems, Inc.
2600 North Central Expressway
Suite 400
Richardson, Texas 75080

Phone: 1-800-669-5740

Emergency # 1-800-468-1760
www.safety-kleen.com

Issue Date
October 6, 2012
Supersedes Issue Date
October 6, 2009
Original Issue Date
July 20, 1989
PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW
Appearance
Liquid, clear and colorless, solvent odor
Signal Word
DANGER!
Physical Hazards
Extremely flammable liquid and vapor. Vapor may cause flash fire.
Health Hazards
May be harmful if inhaled.
May be harmful if absorbed through the skin.
May be harmful or fatal if swallowed.
May be severely irritating to eyes. May cause eye damage and/or blindness.
May irritate the respiratory tract (nose, throat, and lungs) and skin.
Contains material which may cause central nervous system damage.
POTENTIAL HEALTH EFFECTS
Inhalation (Breathing)
High concentrations of vapor or mist may be harmful if inhaled. High concentrations of methanol vapor or mist may cause blindness. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.

Eyes

May be severely irritating to the eyes. May cause tearing, redness, swelling, burns, and/or eye damage.

Skin

May cause irritation. Toluene and methyl alcohol may be absorbed through the skin and cause harm as noted under **INHALATION (BREATHING)**.

Ingestion (Swallowing)

May be harmful or fatal if swallowed. Swallowing methanol may cause blindness and/or death. May cause throat irritation, a burning sensation, abdominal spasms, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**. Aspiration Hazard: Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing respiratory tract (nose, throat, and lungs), cardiovascular, liver, kidney, central nervous system, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic

Prolonged or repeated inhalation may cause brain, liver, kidney, heart, and central nervous system damage; and toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis). Prolonged or repeated inhalation or ingestion exposure may have reproductive toxicity and/or teratogenicity effects.

Cancer Information

No known carcinogenicity. For more information, see **SECTION 11: CARCINOGENICITY**.
Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards

Toxic to fish. See **SECTION 12: ECOLOGICAL INFORMATION**.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS	Component	Percent
108-88-3	Toluene	0-50*
67-64-1	Acetone	10-30
64742-89-8	Solvent naphtha (petroleum), light aliphatic	0-35*
67-63-0	Isopropyl alcohol	2-15*
78-93-3	Methyl ethyl ketone	5-10
763-69-9	Ethyl 3-ethoxypropanoate	0-10*
110-19-0	Isobutyl acetate	0-10*
108-10-1	Methyl isobutyl ketone	2-5
67-56-1	Methyl alcohol	0-5*
1330-20-7	Xylenes (o-, m-, p- isomers)	0-5*

* Even though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of the product.

* * * Section 4 - First Aid Measures * * *

Inhalation (Breathing)

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

Skin

Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists.

Ingestion (Swallowing)

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians

Treat symptomatically and supportively. Increased sensitivity of the heart to Adrenaline (epinephrine) may be caused by overexposure to product. Administration of gastric lavage, if warranted, should be performed by qualified medical personnel. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce phosgene, chlorides, chloroacetylenes, formaldehyde, peracetic acid, carbon monoxide and unidentified organic compounds.

Conditions of Flammability

Heat, sparks, or flame.

Extinguishing Media

Carbon dioxide, alcohol-resistant foam, dry chemical, or water spray.

Protective Equipment For Firefighting

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray.

NFPA Ratings: Health: 2 **Fire:** 3 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Vapor explosion hazard indoors, outdoors, or in sewers. Vapors may travel to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire or explosion hazard. Heated containers may rupture, explode, or be thrown into the air. "Empty" containers may retain residue and can be dangerous. Products are not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

* * * Section 6 - Accidental Release Measures * * *

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal.

Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.
There may be specific federal regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION.**

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke while using this product.

Shipping and Storing

Keep container tightly closed when not in use and during transport. Store containers below 120°F (49°C) Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition; containers may explode and cause injury or death. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Toluene (108-88-3)

ACGIH:	20 ppm TWA
OSHA Final:	200 ppm TWA
	300 ppm Ceiling
OSHA Vacated:	100 ppm TWA; 375 mg/m3 TWA
	150 ppm STEL; 560 mg/m3 STEL
NIOSH:	100 ppm TWA; 375 mg/m3 TWA
	150 ppm STEL; 560 mg/m3 STEL

Acetone (67-64-1)

ACGIH:	500 ppm TWA
	750 ppm STEL
OSHA Final:	1000 ppm TWA; 2400 mg/m3 TWA
OSHA Vacated:	750 ppm TWA; 1800 mg/m3 TWA
	2400 mg/m3 STEL (The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors); 1000 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m3 TWA

Isopropyl alcohol (67-63-0)

ACGIH:	200 ppm TWA
	400 ppm STEL
OSHA Final:	400 ppm TWA; 980 mg/m3 TWA
OSHA Vacated:	400 ppm TWA; 980 mg/m3 TWA
	500 ppm STEL; 1225 mg/m3 STEL
NIOSH:	400 ppm TWA; 980 mg/m3 TWA
	500 ppm STEL; 1225 mg/m3 STEL

Methyl ethyl ketone (78-93-3)

ACGIH:	200 ppm TWA
	300 ppm STEL
OSHA Final:	200 ppm TWA; 590 mg/m3 TWA
OSHA Vacated:	200 ppm TWA; 590 mg/m3 TWA
	300 ppm STEL; 885 mg/m3 STEL
NIOSH:	200 ppm TWA; 590 mg/m3 TWA
	300 ppm STEL; 885 mg/m3 STEL

Isobutyl acetate (110-19-0)

ACGIH:	150 ppm TWA
OSHA Final:	150 ppm TWA; 700 mg/m3 TWA
OSHA Vacated:	150 ppm TWA; 700 mg/m3 TWA
NIOSH:	150 ppm TWA; 700 mg/m3 TWA

Methyl isobutyl ketone (108-10-1)

ACGIH:	20 ppm TWA
	75 ppm STEL
OSHA Final:	100 ppm TWA; 410 mg/m3 TWA
OSHA Vacated:	50 ppm TWA; 205 mg/m3 TWA
	75 ppm STEL; 300 mg/m3 STEL
NIOSH:	50 ppm TWA; 205 mg/m3 TWA
	75 ppm STEL; 300 mg/m3 STEL

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH:	100 ppm TWA
	150 ppm STEL
OSHA Final:	100 ppm TWA; 435 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 435 mg/m3 TWA
	150 ppm STEL; 655 mg/m3 STEL

Methyl alcohol (67-56-1)

ACGIH:	200 ppm TWA
	250 ppm STEL
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final:	200 ppm TWA; 260 mg/m3 TWA
OSHA Vacated:	200 ppm TWA; 260 mg/m3 TWA
	250 ppm STEL; 325 mg/m3 STEL
	Prevent or reduce skin absorption
NIOSH:	200 ppm TWA; 260 mg/m3 TWA
	250 ppm STEL; 325 mg/m3 STEL
	Potential for dermal absorption

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Personal Protective Equipment: Respiratory

Use NIOSH air-certified, air-supplied respirators (self-contained breathing apparatus or air-line) respiratory protective equipment when concentration of methanol may exceed applicable exposure limits. Otherwise, use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Personal Protective Equipment: Eyes/Face

Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

Personal Protective Equipment: Skin

Where skin contact is likely, wear laminate (Ansell Edmont Barrier®, North Silver Shield®, Safety 4 4h®) or equivalent protective gloves; use of natural rubber (latex), polyvinyl chloride (PVC), neoprene or equivalent gloves is not recommended.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Liquid, clear and colorless, solvent odor	**pH:**	Not applicable
Boiling Point:	56-172°C (133-342°F)	**Melting Point:**	Not available.
Solubility (H2O):	Slight.	**Specific Gravity:**	0.84 (water = 1)
Density:	7 LB/US gal (840 g/L)	**Octanol/H2O Coeff.:**	Log Pow = 2.73 (Based on toluene)
Evaporation Rate:	Not available.	**Molecular Weight:**	Not available.
Odor Threshold:	Not available.	**Auto Ignition:**	711ºF (377ºC) minimum (approximately)
LFL:	1 VOL% minimum (approximately)	**Flash Point:**	Less than 20ºF (-7ºC) Tag Closed Cup
UFL:	36 VOL% maximum (approximately)		
Vapor Pressure:	Not available.		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures.

Incompatibility

Avoid acids, alkalies, oxidizing agents, reducing agents, reactive halogens, or reactive metals.

Reactivity

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Hazardous Decomposition Products

None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Avoid heat, sparks, or flame.

* * * Section 11 - Toxicological Information * * *

Toxicity Data

Component Analysis - LD50/LC50

Toluene (108-88-3)

Inhalation LC50 Rat 12.5 mg/L 4 h; Inhalation LC50 Rat >26700 ppm 1 h; Oral LD50 Rat 636 mg/kg; Dermal LD50 Rabbit 8390 mg/kg; Dermal LD50 Rat 12124 mg/kg

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Solvent naphtha (petroleum), light aliphatic (64742-89-8)

Oral LD50 Mouse 5000 mg/kg; Dermal LD50 Rabbit 3000 mg/kg

Isopropyl alcohol (67-63-0)

Inhalation LC50 Rat 72.6 mg/L 4 h; Oral LD50 Rat 4396 mg/kg; Dermal LD50 Rat 12800 mg/kg; Dermal LD50 Rabbit 12870 mg/kg

Methyl ethyl ketone (78-93-3)

Inhalation LC50 Mouse 32 g/m3 4 h; Oral LD50 Rat 2737 mg/kg; Dermal LD50 Rabbit 6480 mg/kg

Ethyl 3-ethoxypropanoate (763-69-9)

Oral LD50 Rat 3200 mg/kg; Dermal LD50 Rabbit 10 mL/kg

Isobutyl acetate (110-19-0)

Oral LD50 Rat 13400 mg/kg; Dermal LD50 Rabbit >5000 mg/kg

Methyl isobutyl ketone (108-10-1)

Inhalation LC50 Rat 8.2 mg/L 4 h; Oral LD50 Rat 2080 mg/kg; Dermal LD50 Rabbit >16000 mg/kg

Xylenes (o-, m-, p- isomers) (1330-20-7)

Inhalation LC50 Rat 5000 ppm 4 h; Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg; Dermal LD50 Rabbit >1700 mg/kg

Methyl alcohol (67-56-1)

Inhalation LC50 Rat 83.2 mg/L 4 h; Inhalation LC50 Rat 64000 ppm 4 h; Oral LD50 Rat 5628 mg/kg; Dermal LD50 Rabbit 15800 mg/kg

Acute Effects

High concentrations of vapor may be harmful if inhaled. Acute exposure to high concentrations of methanol vapor or mist may cause blindness, respiratory tract irritation, vomiting, headaches, loss of coordination, numbness, and central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death. May be severely irritating to the eyes. May cause tearing, redness, swelling, burns, and/or eye damage. May cause skin irritation. Toluene and methyl alcohol may be absorbed through the skin and cause harm as noted for Inhalation. May be harmful or fatal if swallowed. Swallowing methanol may cause blindness and/or death. Aspiration hazard: breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Repeated Dose Effects

Prolonged or repeated inhalation may cause brain, liver, kidney, heart, and central nervous system damage and toxic effects as noted for Acute Inhalation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis). Prolonged or repeated inhalation or ingestion exposure may have reproductive toxicity or teratogenic effects.

Component Carcinogenicity

Toluene (108-88-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Acetone (67-64-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Isopropyl alcohol (67-63-0)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977] (Group 3 (not classifiable))

Methyl isobutyl ketone (108-10-1)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
OSHA: Present (select carcinogen)
IARC: Monograph 101 [2012] (Group 2B (possibly carcinogenic to humans))

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Sensitization

Based on current information, there is no known human sensitization associated with this product.

Mutagenicity

Toluene, isopropyl alcohol, methyl alcohol, acetone and xylene have demonstrated experimental effects of mutagenicity.

Based on best current information, the other components listed in **SECTION 2** are not mutagens.

Reproductive Toxicity

Toluene, xylene, isopropyl alcohol, and acetone have demonstrated animal effects of reproductive toxicity.

Teratogenicity

Toluene, methyl ethyl ketone, acetone, methyl isobutyl ketone, isopropyl alcohol, methyl alcohol and xylene have demonstrated animal effects of teragenicity.

Based on best current information, the other components listed in **SECTION 2** are not teratogens.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

Toxic to aquatic life.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Toluene (108-88-3)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	15.22-19.05 mg/L [flow-through]	1 day old
96 Hr LC50 Pimephales promelas	12.6 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.89-7.81 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	14.1-17.16 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.8 mg/L [semi-static]	
96 Hr LC50 Lepomis macrochirus	11.0-15.0 mg/L [static]	
96 Hr LC50 Oryzias latipes	54 mg/L [static]	
96 Hr LC50 Poecilia reticulata	28.2 mg/L [semi-static]	
96 Hr LC50 Poecilia reticulata	50.87-70.34 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	>433 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	12.5 mg/L [static]	

Acetone (67-64-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L	
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	8300 mg/L	

Solvent naphtha (petroleum), light aliphatic (64742-89-8)

Duration/Test/Species	Concentration/Conditions	Notes
72 Hr EC50 Pseudokirchneriella subcapitata	4700 mg/L	

Isopropyl alcohol (67-63-0)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	9640 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	11130 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	>1400000 µg/L	
96 Hr EC50 Desmodesmus subspicatus	>1000 mg/L	
72 Hr EC50 Desmodesmus subspicatus	>1000 mg/L	

Methyl ethyl ketone (78-93-3)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	3130-3320 mg/L [flow-through]	

Ethyl 3-ethoxypropanoate (763-69-9)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	62 mg/L [static]	

Isobutyl acetate (110-19-0)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr LC50 Leuciscus idus melanotus	101 mg/L [static]	
48 Hr LC50 Leuciscus idus melanotus	101-123 mg/L [flow-through]	

Methyl isobutyl ketone (108-10-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	496-514 mg/L [flow-through]	
96 Hr EC50 Pseudokirchneriella subcapitata	400 mg/L	

Xylenes (o-, m-, p- isomers) (1330-20-7)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	13.4 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	2.661-4.093 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	13.5-17.3 mg/L	
96 Hr LC50 Lepomis macrochirus	13.1-16.5 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	19 mg/L	
96 Hr LC50 Lepomis macrochirus	7.711-9.591 mg/L [static]	
96 Hr LC50 Pimephales promelas	23.53-29.97 mg/L [static]	
96 Hr LC50 Cyprinus carpio	780 mg/L [semi-static]	
96 Hr LC50 Cyprinus carpio	>780 mg/L	
96 Hr LC50 Poecilia reticulata	30.26-40.75 mg/L [static]	

Methyl alcohol (67-56-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	28200 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	>100 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	19500 - 20700 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	18 - 20 mL/L [static]	
96 Hr LC50 Lepomis macrochirus	13500 - 17600 mg/L [flow-through]	

Persistence/Degradability

No additional information available.

Bioaccumulation/Accumulation

No information available for the product.

Mobility in Environmental Media

No information available.

Other Adverse Effects

No information available for the product.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

US EPA Waste Number & Descriptions

D001, D035 Based on available data, this information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

127 Reference *.North American Emergency Response Guidebook*

DOT **Shipping Name:** Paint related material
UN/NA #: UN1263 **Hazard Class:** 3 **Packing Group:** II
Required Label(s): FLAMMABLE LIQUID

TDG **Shipping Name:** PAINT RELATED MATERIAL
UN/NA #: UN1263 **Hazard Class:** 3 **Packing Group:** II
Required Label(s): FLAMMABLE LIQUID

IATA Information

No Classification Assigned.

IMDG Information

No Classification Assigned.

* * * Section 15 - Regulatory Information * * *

VOC (As Regulated)

70 to 85 WT%; 5 to 6 LB/US gal (590 to 720 g/l)
As per 40 CFR Part 51.100(s).

SARA Sections 311/312

This product poses the following health hazards as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):
Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA 302/304

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313

This product does contain "toxic" chemical(s) subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

Component Analysis

This product does contain a "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

COMPONENT	SARA THRESHOLD
Toluene (108-88-3)	1.0 % de minimis concentration
Isopropyl alcohol (67-63-0)	1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)
Methyl isobutyl ketone (108-10-1)	1.0 % de minimis concentration
Xylenes (o-, m-, p- isomers) (1330-20-7)	1.0 % de minimis concentration
Methyl alcohol (67-56-1)	1.0 % de minimis concentration

CERCLA

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product contains the following "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4 with the following reportable quantities (RQ):

COMPONENT	CERCLA RQ
Toluene (108-88-3)	1000 lb final RQ; 454 kg final RQ
Acetone (67-64-1)	5000 lb final RQ; 2270 kg final RQ
Methyl ethyl ketone (78-93-3)	5000 lb final RQ; 2270 kg final RQ
Isobutyl acetate (110-19-0)	5000 lb final RQ; 2270 kg final RQ
Methyl isobutyl ketone (108-10-1)	5000 lb final RQ; 2270 kg final RQ
Xylenes (o-, m-, p- isomers) (1330-20-7)	100 lb final RQ; 45.4 kg final RQ
Methyl alcohol (67-56-1)	5000 lb final RQ; 2270 kg final RQ

TSCA

All the components of this product are listed on, or are automatically included as "naturally occurring chemical substances" on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Toluene	108-88-3	Yes
Acetone	67-64-1	Yes
Solvent naphtha (petroleum), light aliphatic	64742-89-8	Yes
Isopropyl alcohol	67-63-0	Yes
Methyl ethyl ketone	78-93-3	Yes
Ethyl 3-ethoxypropanoate	763-69-9	Yes
Isobutyl acetate	110-19-0	Yes
Methyl isobutyl ketone	108-10-1	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes
Methyl alcohol	67-56-1	Yes

State Regulations

THIS PRODUCT IS NOT FOR SALE OR USE IN THE STATE OF CALIFORNIA.

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA

Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
Isopropyl alcohol	67-63-0	Yes	Yes	Yes	Yes	Yes
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes
Isobutyl acetate	110-19-0	Yes	Yes	Yes	Yes	Yes
Methyl isobutyl ketone	108-10-1	Yes	Yes	Yes	Yes	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes
Methyl alcohol	67-56-1	Yes	Yes	Yes	Yes	Yes

Canadian Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Toluene	108-88-3	DSL
Acetone	67-64-1	DSL
Solvent naphtha (petroleum), light aliphatic	64742-89-8	DSL
Isopropyl alcohol	67-63-0	DSL
Methyl ethyl ketone	78-93-3	DSL
Ethyl 3-ethoxypropanoate	763-69-9	DSL
Isobutyl acetate	110-19-0	DSL
Methyl isobutyl ketone	108-10-1	DSL
Xylenes (o-, m-, p- isomers)	1330-20-7	DSL
Methyl alcohol	67-56-1	DSL

Canadian WHMIS Information

B2, D1A, D2A, D2B

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Toluene (108-88-3) 1 %
Acetone (67-64-1) 1 %
Isopropyl alcohol (67-63-0) 1 %
Methyl ethyl ketone (78-93-3) 1 %
Isobutyl acetate (110-19-0) 1 %
Methyl isobutyl ketone (108-10-1) 1 %
Methyl alcohol (67-56-1) 1 %

Canadian Environmental Protection Act (CEPA)

All the components of this product are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

* * * Section 16 - Other Information * * *

Label/Other Information

Not available.

Revision Information

This MSDS has been revised in the following sections: Sections 1, 8, 11, 12, 15.

Disclaimer

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplier to the user.

Material Safety Data Sheet

Material Name: HEAVY DUTY 550 CLEANING SOLVENT **ID: 82509**

* * * Section 1 - Chemical Product and Company Identification * * *

Part Number: 6864, 585821, 585826

Product Use: For cleaning coating equipment. If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

THIS PRODUCT IS NOT FOR SALE OR USE IN THE STATE OF CALIFORNIA.

Synonyms: None.

Safety-Kleen Systems, Inc.
200 North Central Expressway
Suite 400
Richardson, TX 75080

Phone: 1-800-669-5740

Emergency # 1-800-468-1760
www.safety-kleen.com

Issue Date

December 13, 2013

Supersedes Issue Date

June 19, 2007

Original Issue Date

August 2, 2005

PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW

Appearance

Liquid, clear and colorless, solvent odor.

Signal Word

DANGER!

Physical Hazards

Extremely flammable liquid and vapor. Vapor may cause flash fire.

Health Hazards

May be harmful if inhaled
May be harmful if swallowed.
May be harmful if absorbed through skin.
May irritate the respiratory tract (nose, throat, and lungs), and skin.
May be severely irritationg to eyes.
Suspect cancer hazard. Contains material (maximum 20 WT%) which may cause cancer. Risk of cancer depends on duration and level of exposure.
Contains material which may cause liver, kidney, and central nervous system damage and/or death.

POTENTIAL HEALTH EFFECTS

Inhalation (Breathing)

High concentrations of vapor or mist may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. High concentrations of vapor or mist may cause liver or kidney damage. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.

Eyes

May be severely irritating to the eyes. Symptoms include itching, burning, redness and tearing.

Skin

May cause irritation leading to dermatitis or blistering. Toluene, n-butyl alcohol and methyl alcohol may be absorbed through the skin and cause harm as noted under **INHALATION (BREATHING)**.

Ingestion (Swallowing)

May be harmful if swallowed. May cause throat irritation, nausea, vomiting, diarrhea, and central nervous system effects as noted under **INHALATION (BREATHING)**. Aspiration hazard: breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Medical Conditions Aggravated by Exposure

Chronic respiratory or skin conditions may temporarily worsen from exposure to this product.

Chronic

Prolonged or repeated inhalation may cause heart, liver, central nervous system, and kidney damage; and/or toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis); eye damage, and/or burns. Prolonged or repeated skin contact may cause drying, cracking, redness, itching, swelling (dermatitis); and/or blistering. Prolonged or repeated exposure may cause reproductive toxicity and/or birth defects. Reports have associated prolonged or repeated occupational exposure to these types of solvents with permanent brain and central nervous system damage.

Cancer Information

This product contains ethyl benzene which may cause cancer. Risk of cancer depends on duration and level of exposure. For more information, see **SECTION 11: CARCINOGENICITY**.

Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards

Based upon components, this product may be harmful to aquatic life.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
67-64-1	Acetone	40-80*
108-88-3	Toluene	15-50*
78-93-3	Methyl ethyl ketone	3-20*
100-41-4	Ethyl benzene	0-20*
64741-89-5	C5 to C8 Aliphatic hydrocarbons	0-15*
8030-30-6	C9 to C13 Aliphatic Hydrocarbons	0-15*
123-86-4	n-Butyl acetate	0-15*
110-19-0	Isobutyl acetate	0-15*
1330-20-7	Xylenes (o-, m-, p- isomers)	0-10*
108-10-1	Methylisobutyl ketone	0-10*
67-63-0	Isopropyl alcohol	0-10*
107-87-9	Methylpropyl ketone	0-5*
108-21-4	Isopropyl acetate	0-5*
108-65-6	Propylene glycol monomethyl ether acetate	0-5*
110-43-0	2-Heptanone	0-5*
64-17-5	Ethyl alcohol	0-5*
71-36-3	n-Butyl alcohol	0-5*
75-65-0	tert-Butyl alcohol	0-5*
763-69-9	Ethyl 3-ethoxypropanoate	0-5*
141-78-6	Ethylacetate	0-5*
67-56-1	Methyl alcohol	0-4*

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Ketones, liquid, n.o.s..

* Even though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of the product.

* * * Section 4 - First Aid Measures * * *

Inhalation (Breathing)

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

Skin

Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists.

Ingestion (Swallowing)

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians

Treat symptomatically and supportively. Increased sensitivity of the heart to Adrenaline (epinephrine) may be caused by overexposure to product. Administration of gastric lavage, if warranted, should be performed by qualified medical personnel. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Decomposition and combustion materials may be toxic., Burning may produce formaldehyde, peracetic acid, carbon monoxide, and unidentified organic compounds.

Conditions of Flammability

Heat, sparks, or flame.

Extinguishing Media

Media to use includes water spray, carbon dioxide, dry chemical or alcohol-resistant foam.

Protective Equipment For Firefighting

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray.

NFPA Ratings: Health: 2 **Fire:** 3 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Vapor explosion hazard indoors, outdoors, or in sewers. Vapor may travel to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire or explosion hazard. Heated containers may rupture, explode, or be thrown into the air. "Empty" containers may retain residue and can be dangerous. Products are not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

* * * Section 6 - Accidental Release Measures * * *

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

There may be specific regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION**.

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke when using this product.

Shipping and Storing

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition; containers may explode and cause injury or death. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Acetone (67-64-1)

ACGIH:	500 ppm TWA
	750 ppm STEL
OSHA Final:	1000 ppm TWA; 2400 mg/m3 TWA
OSHA Vacated:	750 ppm TWA; 1800 mg/m3 TWA
	2400 mg/m3 STEL (The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors); 1000 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m3 TWA

Toluene (108-88-3)

ACGIH:	20 ppm TWA
OSHA Final:	200 ppm TWA
	300 ppm Ceiling
OSHA Vacated:	100 ppm TWA; 375 mg/m3 TWA
	150 ppm STEL; 560 mg/m3 STEL
NIOSH:	100 ppm TWA; 375 mg/m3 TWA
	150 ppm STEL; 560 mg/m3 STEL

Methyl ethyl ketone (78-93-3)

ACGIH:	200 ppm TWA
	300 ppm STEL
OSHA Final:	200 ppm TWA; 590 mg/m3 TWA
OSHA Vacated:	200 ppm TWA; 590 mg/m3 TWA
	300 ppm STEL; 885 mg/m3 STEL
NIOSH:	200 ppm TWA; 590 mg/m3 TWA
	300 ppm STEL; 885 mg/m3 STEL

Ethyl benzene (100-41-4)

ACGIH:	20 ppm TWA
OSHA Final:	100 ppm TWA; 435 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 435 mg/m3 TWA
	125 ppm STEL; 545 mg/m3 STEL
NIOSH:	100 ppm TWA; 435 mg/m3 TWA
	125 ppm STEL; 545 mg/m3 STEL

Isobutyl acetate (110-19-0)

ACGIH:	150 ppm TWA
OSHA Final:	150 ppm TWA; 700 mg/m3 TWA
OSHA Vacated:	150 ppm TWA; 700 mg/m3 TWA
NIOSH:	150 ppm TWA; 700 mg/m3 TWA

n-Butyl acetate (123-86-4)

ACGIH:	150 ppm TWA
	200 ppm STEL
OSHA Final:	150 ppm TWA; 710 mg/m3 TWA
OSHA Vacated:	150 ppm TWA; 710 mg/m3 TWA
	200 ppm STEL; 950 mg/m3 STEL
NIOSH:	150 ppm TWA; 710 mg/m3 TWA
	200 ppm STEL; 950 mg/m3 STEL

C9 to C13 Aliphatic Hydrocarbons (8030-30-6)

OSHA Final:	100 ppm TWA; 400 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 400 mg/m3 TWA
NIOSH:	100 ppm TWA; 400 mg/m3 TWA

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH:	100 ppm TWA
	150 ppm STEL
OSHA Final:	100 ppm TWA; 435 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 435 mg/m3 TWA
	150 ppm STEL; 655 mg/m3 STEL

Methylisobutyl ketone (108-10-1)

ACGIH:	20 ppm TWA
	75 ppm STEL
OSHA Final:	100 ppm TWA; 410 mg/m3 TWA
OSHA Vacated:	50 ppm TWA; 205 mg/m3 TWA
	75 ppm STEL; 300 mg/m3 STEL
NIOSH:	50 ppm TWA; 205 mg/m3 TWA
	75 ppm STEL; 300 mg/m3 STEL

Isopropyl alcohol (67-63-0)

ACGIH:	200 ppm TWA
	400 ppm STEL
OSHA Final:	400 ppm TWA; 980 mg/m3 TWA
OSHA Vacated:	400 ppm TWA; 980 mg/m3 TWA
	500 ppm STEL; 1225 mg/m3 STEL
NIOSH:	400 ppm TWA; 980 mg/m3 TWA
	500 ppm STEL; 1225 mg/m3 STEL

Ethyl alcohol (64-17-5)

ACGIH:	1000 ppm STEL
OSHA Final:	1000 ppm TWA; 1900 mg/m3 TWA
OSHA Vacated:	1000 ppm TWA; 1900 mg/m3 TWA
NIOSH:	1000 ppm TWA; 1900 mg/m3 TWA

Isopropyl acetate (108-21-4)

ACGIH:	100 ppm TWA
	200 ppm STEL
OSHA Final:	250 ppm TWA; 950 mg/m3 TWA
OSHA Vacated:	250 ppm TWA; 950 mg/m3 TWA
	310 ppm STEL; 1185 mg/m3 STEL

2-Heptanone (110-43-0)

ACGIH:	50 ppm TWA
OSHA Final:	100 ppm TWA; 465 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 465 mg/m3 TWA
NIOSH:	100 ppm TWA; 465 mg/m3 TWA

n-Butyl alcohol (71-36-3)

ACGIH:	20 ppm TWA
OSHA Final:	100 ppm TWA; 300 mg/m3 TWA
OSHA Vacated:	50 ppm Ceiling; 150 mg/m3 Ceiling
	Prevent or reduce skin absorption
NIOSH:	50 ppm Ceiling; 150 mg/m3 Ceiling
	Potential for dermal absorption

tert-Butyl alcohol (75-65-0)

ACGIH:	100 ppm TWA
OSHA Final:	100 ppm TWA; 300 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 300 mg/m3 TWA
	150 ppm STEL; 450 mg/m3 STEL
NIOSH:	100 ppm TWA; 300 mg/m3 TWA
	150 ppm STEL; 450 mg/m3 STEL

Methylpropyl ketone (107-87-9)

ACGIH:	150 ppm STEL
OSHA Final:	200 ppm TWA; 700 mg/m3 TWA
OSHA Vacated:	200 ppm TWA; 700 mg/m3 TWA
	250 ppm STEL; 875 mg/m3 STEL
NIOSH:	150 ppm TWA; 530 mg/m3 TWA

Ethylacetate (141-78-6)

ACGIH:	400 ppm TWA
OSHA Final:	400 ppm TWA; 1400 mg/m3 TWA
OSHA Vacated:	400 ppm TWA; 1400 mg/m3 TWA
NIOSH:	400 ppm TWA; 1400 mg/m3 TWA

Methyl alcohol (67-56-1)

ACGIH:	200 ppm TWA
	250 ppm STEL
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final:	200 ppm TWA; 260 mg/m3 TWA
OSHA Vacated:	200 ppm TWA; 260 mg/m3 TWA
	250 ppm STEL; 325 mg/m3 STEL
	Prevent or reduce skin absorption
NIOSH:	200 ppm TWA; 260 mg/m3 TWA
	250 ppm STEL; 325 mg/m3 STEL
	Potential for dermal absorption

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Personal Protective Equipment: Respiratory

Use NIOSH-certified, full-face respirators (self-contained breathing apparatus or air-line) respiratory protective equipment when concentrations of vapor or mist exceeds applicable exposure limits. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Personal Protective Equipment: Eyes/Face

Wearing chemical goggles is recommended. Contact lenses may be worn with eye protection.

Personal Protective Equipment: Skin

Where skin contact is likely, wear polyvinyl alcohol (PVA), laminate (Ansell Edmont Barrier®, North Silver Shield®, Safety 4 4h®) or equivalent protective gloves; use of natural rubber (latex), polyvinyl chloride (PVC), neoprene or equivalent gloves is not recommended.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Liquid, clear and colorless	**Odor:**	Solvent
Physical State:	Liquid	**pH:**	Not applicable.
Boiling Point:	133ºF (56.2ºC) initial (approximately)	**Melting Point:**	Not available.
Solubility (H2O):	Slight.	**Specific Gravity:**	0.82 (water =1) (approximately)
Density:	6.8 lb/US gal (820 g/L) (approximately)	**Octanol/H2O Coeff.:**	Not available.
Evaporation Rate:	Not available.	**Molecular Weight:**	Not available.
Odor Threshold:	Not available.	**Auto Ignition Temperature:**	800°F (427°C) (approximately)
LFL:	1 VOL % (approximately)	**Flash Point:**	0ºF (-18ºC) (minimum, based on Acetone)
UFL:	13 VOL% (approximately)	**Flash Point Method:**	Tag Closed Cup
Vapor Density:	>1 (air = 1)	**Vapor Pressure:**	108 mmHg @ 68°F (20°C) (approximately)

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures.

Incompatibility

Avoid acids, alkalies, oxidizing agents, reducing agents, reactive halogens, or reactive metals.

Reactivity

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Hazardous Decomposition Products

None under normal temperatures and pressures., See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Avoid heat, sparks, or flame.

* * * Section 11 - Toxicological Information * * *

Toxicity Data

Component Analysis - LD50/LC50

Acetone (67-64-1)
Inhalation LC50 Rat 50100 mg/m3 8 h
Methyl ethyl ketone (78-93-3)
Inhalation LC50 Rat 23500 mg/m3 8 h
Ethyl benzene (100-41-4)
Inhalation LC50 Rat 17.2 mg/L 4 h; Oral LD50 Rat 3500 mg/kg; Dermal LD50 Rabbit 15354 mg/kg
C5 to C8 Aliphatic hydrocarbons (64741-89-5)
Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >5 g/kg; Inhalation LC50 Rat 2.18 mg/L 4 h
Isobutyl acetate (110-19-0)
Dermal LD50 Rabbit >17400 mg/kg; Oral LD50 Rat 13400 mg/kg
n-Butyl acetate (123-86-4)
Inhalation LC50 Rat 390 ppm 4 h; Dermal LD50 Rabbit >17600 mg/kg
Xylenes (o-, m-, p- isomers) (1330-20-7)
Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg
Methylisobutyl ketone (108-10-1)
Inhalation LC50 Rat 8.2 mg/L 4 h; Dermal LD50 Rabbit >16000 mg/kg; Oral LD50 Rat 2080 mg/kg
Isopropyl alcohol (67-63-0)
Oral LD50 Rat 4396 mg/kg; Dermal LD50 Rabbit 12800 mg/kg; Inhalation LC50 Rat 16000 ppm 8 h

Ethyl alcohol (64-17-5)
Inhalation LC50 Rat 124.7 mg/L 4 h
Isopropyl acetate (108-21-4)
Inhalation LC50 Rat 50600 mg/m3 8 h; Dermal LD50 Rabbit >20 mL/kg; Oral LD50 Rat 6750 mg/kg
Propylene glycol monomethyl ether acetate (108-65-6)
Dermal LD50 Rabbit >5 g/kg; Oral LD50 Rat 8532 mg/kg
n-Butyl alcohol (71-36-3)
Inhalation LC50 Rat 8000 ppm 4 h
tert-Butyl alcohol (75-65-0)
Oral LD50 Rat 2733 mg/kg; Dermal LD50 Rabbit >2 g/kg; Inhalation LC50 Rat >10000 ppm 4 h
Ethyl 3-ethoxypropanoate (763-69-9)
Oral LD50 Rat 3200 mg/kg
Ethylacetate (141-78-6)
Dermal LD50 Rabbit >20 mL/kg; Oral LD50 Rat 5620 mg/kg
Methyl alcohol (67-56-1)
Oral LD50 Rat 5628 mg/kg; Inhalation LC50 Rat 83.2 mg/L 4 h

Acute Effects

No additional information available.

Component Carcinogenicity

Acetone (67-64-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Toluene (108-88-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Ethyl benzene (100-41-4)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
OSHA: Present (select carcinogen)
IARC: Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Methylisobutyl ketone (108-10-1)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
OSHA: Present (select carcinogen)
IARC: Monograph 101 [2012] (Group 2B (possibly carcinogenic to humans))

Isopropyl alcohol (67-63-0)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977] (Group 3 (not classifiable))

Ethyl alcohol (64-17-5)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
OSHA: Present (select carcinogen)
IARC: Monograph 100E [2012] (in alcoholic beverages); Monograph 96 [2010] (in alcoholic beverages) (Group 1 (carcinogenic to humans))

tert-Butyl alcohol (75-65-0)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Target Organ Effects

Contains material which may cause liver, kidney, and central nervous system damage.

Sensitization

Based on best current information, there is no known human sensitization associated with this product.

Mutagenicity

Toluene, xylene, ethyl benzene, ethyl alcohol, isopropyl alcohol, methyl alcohol, ethyl acetate and acetone have demonstrated experimental effects of mutagenicity. Ethanol has demonstrated animal effects of mutagenicity.

Based on best current information, the other components listed in **SECTION 2** are not mutagens.

Reproductive Toxicity

Ethyl benzene has caused birth defects, affected fertility and been fetotoxic below the TLV in animals. Toluene, ethyl alcohol, methyl ethyl ketone, n-butyl acetate, isopropyl alcohol, methyl alcohol and n-butyl alcohol has demonstrated animal effects of reproductive toxicity.

Teratogenicity

Ethyl benzene has demonstrated animal effects of teratogenicity. Toluene, ethyl alcohol, methyl ethyl ketone, n-butyl acetate ,isopropyl alcohol, methyl alcohol and n-butyl alcohol have demonstrated experimental effects of teratogenicity.

Based on best current information, the other components listed in **SECTION 2** are not teratogens.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

Based upon components, this product may be harmful to aquatic life.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Acetone (67-64-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L	
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	8300 mg/L	
48 Hr EC50 Daphnia magna	10294 - 17704 mg/L [Static]	
48 Hr EC50 Daphnia magna	12600 - 12700 mg/L	

Toluene (108-88-3)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	15.22 - 19.05 mg/L [flow-through]	1 day old
96 Hr LC50 Pimephales promelas	12.6 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.89 - 7.81 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	14.1 - 17.16 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.8 mg/L [semi-static]	
96 Hr LC50 Lepomis macrochirus	11.0 - 15.0 mg/L [static]	
96 Hr LC50 Oryzias latipes	54 mg/L [static]	
96 Hr LC50 Poecilia reticulata	28.2 mg/L [semi-static]	
96 Hr LC50 Poecilia reticulata	50.87 - 70.34 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	>433 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	12.5 mg/L [static]	
48 Hr EC50 Daphnia magna	5.46 - 9.83 mg/L [Static]	
48 Hr EC50 Daphnia magna	11.5 mg/L	

Methyl ethyl ketone (78-93-3)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	3130 - 3320 mg/L [flow-through]	
48 Hr EC50 Daphnia magna	>520 mg/L	
48 Hr EC50 Daphnia magna	5091 mg/L	
48 Hr EC50 Daphnia magna	4025 - 6440 mg/L [Static]	

Ethyl benzene (100-41-4)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	11.0 - 18.0 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	4.2 mg/L [semi-static]	
96 Hr LC50 Pimephales promelas	7.55 - 11 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	32 mg/L [static]	
96 Hr LC50 Pimephales promelas	9.1 - 15.6 mg/L [static]	
96 Hr LC50 Poecilia reticulata	9.6 mg/L [static]	
72 Hr EC50 Pseudokirchneriella subcapitata	4.6 mg/L	
96 Hr EC50 Pseudokirchneriella subcapitata	>438 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	2.6 - 11.3 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	1.7 - 7.6 mg/L [static]	
48 Hr EC50 Daphnia magna	1.8 - 2.4 mg/L	

C5 to C8 Aliphatic hydrocarbons (64741-89-5)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L	
48 Hr EC50 Daphnia magna	>1000 mg/L	

n-Butyl acetate (123-86-4)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Lepomis macrochirus	100 mg/L [static]	
96 Hr LC50 Pimephales promelas	17 - 19 mg/L [flow-through]	
72 Hr EC50 Desmodesmus subspicatus	674.7 mg/L	

C9 to C13 Aliphatic Hydrocarbons (8030-30-6)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Lepomis macrochirus	9.2 mg/L [static]	
72 Hr EC50 Pseudokirchneriella subcapitata	4700 mg/L	

Xylenes (o-, m-, p- isomers) (1330-20-7)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	13.4 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	2.661 - 4.093 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	13.5 - 17.3 mg/L	
96 Hr LC50 Lepomis macrochirus	13.1 - 16.5 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	19 mg/L	
96 Hr LC50 Lepomis macrochirus	7.711 - 9.591 mg/L [static]	
96 Hr LC50 Pimephales promelas	23.53 - 29.97 mg/L [static]	
96 Hr LC50 Cyprinus carpio	780 mg/L [semi-static]	
96 Hr LC50 Cyprinus carpio	>780 mg/L	
96 Hr LC50 Poecilia reticulata	30.26 - 40.75 mg/L [static]	
48 Hr EC50 water flea	3.82 mg/L	
48 Hr LC50 Gammarus lacustris	0.6 mg/L	

Methylisobutyl ketone (108-10-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	496 - 514 mg/L [flow-through]	
96 Hr EC50 Pseudokirchneriella subcapitata	400 mg/L	
48 Hr EC50 Daphnia magna	170 mg/L	

Isopropyl alcohol (67-63-0)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	9640 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	11130 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	>1400000 µg/L	
96 Hr EC50 Desmodesmus subspicatus	>1000 mg/L	
72 Hr EC50 Desmodesmus subspicatus	>1000 mg/L	
48 Hr EC50 Daphnia magna	13299 mg/L	

Ethyl alcohol (64-17-5)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	12.0 - 16.0 mL/L [static]	
96 Hr LC50 Pimephales promelas	>100 mg/L [static]	
96 Hr LC50 Pimephales promelas	13400 - 15100 mg/L [flow-through]	
48 Hr LC50 Daphnia magna	9268 - 14221 mg/L	
48 Hr EC50 Daphnia magna	2 mg/L [Static]	

2-Heptanone (110-43-0)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	126 - 137 mg/L [flow-through]	

Propylene glycol monomethyl ether acetate (108-65-6)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	161 mg/L [static]	
48 Hr EC50 Daphnia magna	>500 mg/L	

n-Butyl alcohol (71-36-3)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	1730 - 1910 mg/L [static]	
96 Hr LC50 Pimephales promelas	1740 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	100000 - 500000 µg/L [static]	
96 Hr LC50 Pimephales promelas	1910000 µg/L [static]	
96 Hr EC50 Desmodesmus subspicatus	>500 mg/L	
72 Hr EC50 Desmodesmus subspicatus	>500 mg/L	
48 Hr EC50 Daphnia magna	1983 mg/L	
48 Hr EC50 Daphnia magna	1897 - 2072 mg/L [Static]	

tert-Butyl alcohol (75-65-0)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	6130 - 6700 mg/L [flow-through]	
72 Hr EC50 Desmodesmus subspicatus	>1000 mg/L	
48 Hr EC50 Daphnia magna	933 mg/L	
48 Hr EC50 Daphnia magna	4607 - 6577 mg/L [Static]	

Ethyl 3-ethoxypropanoate (763-69-9)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	62 mg/L [static]	
48 Hr EC50 Daphnia magna	970 mg/L	

Methylpropyl ketone (107-87-9)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	1190 - 1290 mg/L [flow-through]	

Ethylacetate (141-78-6)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	220 - 250 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	484 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	352 - 500 mg/L [semi-static]	
48 Hr EC50 Daphnia magna	560 mg/L [Static]	

Methyl alcohol (67-56-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	28200 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	>100 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	19500 - 20700 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	18 - 20 mL/L [static]	
96 Hr LC50 Lepomis macrochirus	13500 - 17600 mg/L [flow-through]	

Persistence/Degradability

No information available.

Bioaccumulation/Accumulation

No information available.

Mobility in Environmental Media

No information available.

Other Adverse Effects

No additional information available.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

US EPA Waste Number & Descriptions

If discarded, this product is considered a RCRA ignitable waste, D001 and must be managed in accordance with 40 CFR Part 261. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

128 Reference *.North American Emergency Response Guidebook*

DOT **Shipping Name:** Paint related material
UN/NA #: UN1263 **Hazard Class:** 3 **Packing Group:** II
Required Label(s): FLAMMABLE LIQUID

TDG **Shipping Name:** PAINT RELATED MATERIAL
UN/NA #: UN1263 **Hazard Class:** 3 **Packing Group:** II
Required Label(s): FLAMMABLE LIQUID

IATA Information

No Classification Assigned.

IMDG Information

No Classification Assigned.

* * * Section 15 - Regulatory Information * * *

VOC (As Regulated)

60 WT%; 4 lb/US gallon; 500g/L (maximum)
As per 40 CFR Part 51.100(s).

SARA Sections 311/312

This product poses the following health hazards as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):
Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA 302/304

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313

Component Analysis

This product contains a "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

Toluene (108-88-3)	1.0 % de minimis concentration
Ethyl benzene (100-41-4)	0.1 % de minimis concentration
Xylenes (o-, m-, p- isomers) (1330-20-7)	1.0 % de minimis concentration
Methylisobutyl ketone (108-10-1)	1.0 % de minimis concentration
Isopropyl alcohol (67-63-0)	1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)
n-Butyl alcohol (71-36-3)	1.0 % de minimis concentration
tert-Butyl alcohol (75-65-0)	1.0 % de minimis concentration
Methyl alcohol (67-56-1)	1.0 % de minimis concentration

CERCLA

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product contains the following "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4 with the following reportable quantities (RQ):

Acetone (67-64-1)	5000 lb final RQ; 2270 kg final RQ
Toluene (108-88-3)	1000 lb final RQ; 454 kg final RQ
Methyl ethyl ketone (78-93-3)	5000 lb final RQ; 2270 kg final RQ
Ethyl benzene (100-41-4)	1000 lb final RQ; 454 kg final RQ
Isobutyl acetate (110-19-0)	5000 lb final RQ; 2270 kg final RQ
n-Butyl acetate (123-86-4)	5000 lb final RQ; 2270 kg final RQ
Xylenes (o-, m-, p- isomers) (1330-20-7)	100 lb final RQ; 45.4 kg final RQ
Methylisobutyl ketone (108-10-1)	5000 lb final RQ; 2270 kg final RQ
n-Butyl alcohol (71-36-3)	5000 lb final RQ; 2270 kg final RQ
Ethylacetate (141-78-6)	5000 lb final RQ; 2270 kg final RQ
Methyl alcohol (67-56-1)	5000 lb final RQ; 2270 kg final RQ

TSCA

All the components of these products are listed on, or are automatically included as "naturally occurring chemical substances" on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Acetone	67-64-1	Yes
Toluene	108-88-3	Yes
Methyl ethyl ketone	78-93-3	Yes
Ethyl benzene	100-41-4	Yes
C5 to C8 Aliphatic hydrocarbons	64741-89-5	Yes
Isobutyl acetate	110-19-0	Yes
n-Butyl acetate	123-86-4	Yes
C9 to C13 Aliphatic Hydrocarbons	8030-30-6	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes
Methylisobutyl ketone	108-10-1	Yes
Isopropyl alcohol	67-63-0	Yes
Ethyl alcohol	64-17-5	Yes
Isopropyl acetate	108-21-4	Yes
2-Heptanone	110-43-0	Yes
Propylene glycol monomethyl ether acetate	108-65-6	Yes
n-Butyl alcohol	71-36-3	Yes
tert-Butyl alcohol	75-65-0	Yes
Ethyl 3-ethoxypropanoate	763-69-9	Yes
Methylpropyl ketone	107-87-9	Yes
Ethylacetate	141-78-6	Yes
Methyl alcohol	67-56-1	Yes

State Regulations

THIS PRODUCT IS NOT FOR SALE OR USE IN THE STATE OF CALIFORNIA.

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes
Ethyl benzene	100-41-4	Yes	Yes	Yes	Yes	Yes
C5 to C8 Aliphatic hydrocarbons	64741-89-5	No	Yes	No	No	No
Isobutyl acetate	110-19-0	Yes	Yes	Yes	Yes	Yes
n-Butyl acetate	123-86-4	Yes	Yes	Yes	Yes	Yes
C9 to C13 Aliphatic Hydrocarbons	8030-30-6	Yes	Yes	Yes	Yes	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes
Methylisobutyl ketone	108-10-1	Yes	Yes	Yes	Yes	Yes
Isopropyl alcohol	67-63-0	Yes	Yes	Yes	Yes	Yes
Ethyl alcohol	64-17-5	Yes	Yes	Yes	Yes	Yes
Isopropyl acetate	108-21-4	Yes	Yes	Yes	Yes	Yes
2-Heptanone	110-43-0	Yes	Yes	Yes	Yes	Yes
n-Butyl alcohol	71-36-3	Yes	Yes	Yes	Yes	Yes
tert-Butyl alcohol	75-65-0	Yes	Yes	Yes	Yes	Yes
Methylpropyl ketone	107-87-9	Yes	Yes	Yes	Yes	Yes
Ethylacetate	141-78-6	Yes	Yes	Yes	Yes	Yes
Methyl alcohol	67-56-1	Yes	Yes	Yes	Yes	Yes

Canadian Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Acetone	67-64-1	DSL
Toluene	108-88-3	DSL
Methyl ethyl ketone	78-93-3	DSL
Ethyl benzene	100-41-4	DSL
C5 to C8 Aliphatic hydrocarbons	64741-89-5	DSL
Isobutyl acetate	110-19-0	DSL
n-Butyl acetate	123-86-4	DSL
C9 to C13 Aliphatic Hydrocarbons	8030-30-6	DSL
Xylenes (o-, m-, p- isomers)	1330-20-7	DSL
Methylisobutyl ketone	108-10-1	DSL
Isopropyl alcohol	67-63-0	DSL
Ethyl alcohol	64-17-5	DSL
Isopropyl acetate	108-21-4	DSL
2-Heptanone	110-43-0	DSL
Propylene glycol monomethyl ether acetate	108-65-6	DSL
n-Butyl alcohol	71-36-3	DSL
tert-Butyl alcohol	75-65-0	DSL
Ethyl 3-ethoxypropanoate	763-69-9	DSL
Methylpropyl ketone	107-87-9	DSL
Ethylacetate	141-78-6	DSL
Methyl alcohol	67-56-1	DSL

Canadian WHMIS Information

Class B2 - Flammable Liquid Class D1B - Contains a component that is acutely lethal. Class D2A - Contains component that may cause cancer. Class D2B - Irritating to eyes and skin.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Acetone (67-64-1)	1 %
Toluene (108-88-3)	1 %
Methyl ethyl ketone (78-93-3)	1 %
Ethyl benzene (100-41-4)	0.1 %
Isobutyl acetate (110-19-0)	1 %
n-Butyl acetate (123-86-4)	1 %
Methylisobutyl ketone (108-10-1)	1 %
Isopropyl alcohol (67-63-0)	1 %
Ethyl alcohol (64-17-5)	0.1 %
Isopropyl acetate (108-21-4)	1 %
2-Heptanone (110-43-0)	1 %
n-Butyl alcohol (71-36-3)	1 %
tert-Butyl alcohol (75-65-0)	1 %
Methylpropyl ketone (107-87-9)	1 %
Ethylacetate (141-78-6)	1 %
Methyl alcohol (67-56-1)	1 %

Canadian Environmental Protection Act (CEPA)

All the components of these products are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

* * * Section 16 - Other Information * * *

Label/Other Information

Not available.

Revision Information

3 year regulatory update. This MSDS has been revised in the following sections: 1, 2, 3, 5, 8, 10, 11, 12, 15, 16.

Disclaimer

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplier to the user.

End of Sheet 82509

Material Safety Data Sheet

Material Name: PREMIUM LACQUER THINNER **ID: 82688**

* * * Section 1 - Chemical Product and Company Identification * * *

Product Code: 6770

Product Use: Lacquer thinner. If these products are used in combination with other products, refer to the Material Safety Data Sheet for those products.

Synonyms: Not available

Safety-Kleen Systems, Inc.
2600 North Central Expressway
Suite 400
Richardson, TX 75080

Phone: 1-800-669-5740

Emergency # 1-800-468-1760
www.safety-kleen.com

Issue Date

January 9, 2014

Supersedes Issue Date

January 6, 2011

Original Issue Date

December 4, 2008

PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW

Appearance

Clear, colorless liquid, solvent odor.

Signal Word

DANGER!

Physical Hazards

Extremely flammable liquid and vapor. Vapor may cause flash fire.

Health Hazards

May be harmful if inhaled or swallowed.
May be harmful if absorbed through skin.
Swallowing methanol may cause blindness and death.
May irritate the respiratory tract (nose, throat, and lungs), and skin.
Contains material which can cause eye, liver, kidney and central nervous system damage.

POTENTIAL HEALTH EFFECTS

Inhalation (Breathing)

High concentrations of vapor or mist may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.

Eyes

May cause irritation. High concentrations of vapor or mist may cause blurred vision or other eye damage

Skin

May cause irritation, drying, cracking, redness, itching, and/or swelling (dermatitis). Toluene and methanol may be absorbed through the skin and cause harm as noted under **INHALATION (BREATHING).**

Ingestion (Swallowing)

This product may be harmful or fatal if swallowed. Swallowing methanol may cause blindness. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**. Aspiration hazard: breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing cardiovascular, liver, kidney, respiratory tract (nose, throat, and lungs), central nervous system, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic

Prolonged or repeated inhalation may cause toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis). Prolonged or repeated inhalation or ingestion may cause toxic eye, liver, kidney, or central nervous system damage. Prolonged or repeated inhalation or ingestion exposure may have reproductive toxicity, mutagenicity, and/or teratogenicity effects.

Cancer Information

No known carcinogenicity. For more information, see **SECTION 11: CARCINOGENICITY**.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
108-88-3	Toluene	41-86*
67-64-1	Acetone	1-33*
67-56-1	Methyl alcohol	2-47*

*Even though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of the product.

* * * Section 4 - First Aid Measures * * *

Inhalation (Breathing)

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

Skin

Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists. Wash contaminated clothing before reuse. Discard any shoes or clothing items that cannot be decontaminated.

Ingestion (Swallowing)

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians

Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce oxides of carbon and unidentified organic compounds.

Conditions of Flammability

Heat, sparks, or flame.

Extinguishing Media

Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

Protective Equipment For Firefighting

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray.

NFPA Ratings: Health: 2 **Fire:** 3 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Vapor explosion hazard indoors, outdoors, or in sewers. Vapor may travel to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire or explosion hazard. Heated containers may rupture, explode, or be thrown into the air. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

* * * Section 6 - Accidental Release Measures * * *

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

There may be specific federal regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION.**

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke while using this product.

Shipping and Storing

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Toluene (108-88-3)

ACGIH: 20 ppm TWA
OSHA Final: 200 ppm TWA
300 ppm Ceiling
OSHA Vacated: 100 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL
NIOSH: 100 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL

Acetone (67-64-1)

ACGIH: 500 ppm TWA
750 ppm STEL
OSHA Final: 1000 ppm TWA; 2400 mg/m3 TWA
OSHA Vacated: 750 ppm TWA; 1800 mg/m3 TWA
2400 mg/m3 STEL (The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors); 1000 ppm STEL
NIOSH: 250 ppm TWA; 590 mg/m3 TWA

Methyl alcohol (67-56-1)

ACGIH: 200 ppm TWA
250 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final: 200 ppm TWA; 260 mg/m3 TWA
OSHA Vacated: 200 ppm TWA; 260 mg/m3 TWA
250 ppm STEL; 325 mg/m3 STEL
Prevent or reduce skin absorption
NIOSH: 200 ppm TWA; 260 mg/m3 TWA
250 ppm STEL; 325 mg/m3 STEL
Potential for dermal absorption

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Personal Protective Equipment: Respiratory

Use NIOSH-certified, air-supplied respirators (self-contained breathing apparatus or air-line) respiratory protective equipment when concentration of vapor or mist exceeds applicable exposure limits. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

Personal Protective Equipment: Eyes/Face

Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

Personal Protective Equipment: Skin

Wear chemical resistant (impervious) gloves.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Liquid, clear and colorless. Solvent odor	**pH:**	Not applicable
Boiling Point:	133 to 232ºF (56 to 111ºC)	**Melting Point:**	-137ºF (-94ºC) (maximum)
Solubility (H2O):	Not available	**Specific Gravity:**	0.847 (water = 1)
Density:	7.1 LB/US gal (847 g/l)	**Octanol/H2O Coeff.:**	Log Pow = 2.7
Evaporation Rate:	6 (butyl acetate = 1) (maximum)	**Molecular Weight:**	92.1 (toluene), 58.1 (acetone), 32.0 (methanol)
Odor Threshold:	10 ppm (minimum)	**Auto Ignition Temperature:**	725°F (385°C) (minimum)
LFL:	1.2 VOL%	**Flash Point:**	-4ºF (20ºC)
UFL:	36.0 VOL%	**Vapor Pressure:**	68 mm Hg at 68ºF (20ºC) (approximately) VOC vapor pressure < 45 mm Hg at 68°F (20°C)
Vapor Density:	3.14 (air = 1)	**Flammability Class:**	Flammable
Freezing Point:	-137ºF (-94ºC) (maximum)		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures.

Incompatibility

Avoid acids, alkalies, oxidizing agents, reactive halogens, or reactive metals.

Reactivity

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Hazardous Decomposition Products

None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Avoid heat, sparks, or flame.

* * * Section 11 - Toxicological Information * * *

Toxicity Data

Component Analysis - LD50/LC50

Toluene (108-88-3)

Dermal LD50 Rabbit 8390 mg/kg; Inhalation LC50 Rat 12.5 mg/L 4 h; Oral LD50 Rat 636 mg/kg

Acetone (67-64-1)

Inhalation LC50 Rat 50100 mg/m3 8 h

Methyl alcohol (67-56-1)

Inhalation LC50 Rat 83.2 mg/L 4 h; Oral LD50 Rat 5628 mg/kg

Acute Effects

High concentrations of vapor or mist may be harmful if inhaled., High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs), cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects., Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death., May cause eye irritation., High concentrations of vapor or mist may cause blurred vision or other eye damage., May cause skin irritation, drying, cracking, redness, itching, and/or swelling (dermatitis). Toluene and methanol may be absorbed through the skin and cause harm as noted for inhalation., May be harmful or fatal if swallowed. Swallowing methanol may cause blindness., May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under inhalation., Aspiration hazard: breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Repeated Dose Effects

Prolonged or repeated inhalation may cause toxic effects., Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis)., Prolonged or repeated inhalation or ingestion may cause toxic eye, liver, kidney, or central nervous system damage., Prolonged or repeated inhalation or ingestion exposure may have reproductive toxicity, mutagenicity, and/or teratogenicity effects.

Methanol has demonstrated human effects of mutagenicity., Acetone has demonstrated experimental effects of mutagenicity.

Toluene has demonstrated human effects of teratogenicity.

Toluene and methanol have demonstrated animal effects of reproductive toxicity.

Based on best current information, there is no known human sensitization associated with this product.

Component Carcinogenicity

Toluene (108-88-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Acetone (67-64-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Target Organ Effects

Contains material which can cause eye, liver, kidney, reproductive and central nervous system damage.

Sensitization

Based on best current information, there is no known human sensitization associated with this product.

Mutagenicity

Methanol has demonstrated human effects of mutagenicity.

Acetone has demonstrated experimental effects of mutagenicity.

Based on best current information, the other components listed in **SECTION 3** are not mutagens.

Reproductive Toxicity

Toluene and methanol have demonstrated animal effects of reproductive toxicity.

Based on best current information, the other components listed in **SECTION 3** are not a teratogens.

Teratogenicity

Toluene has demonstrated human effects of teratogenicity.

Based on best current information, the other components listed in **SECTION 3** are not teratogens.

Toxicologically Synergistic Products

Based on best current information, there are no known toxicologically synergistic products associated with this product.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

May be harmful to fish.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Toluene (108-88-3)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	15.22 - 19.05 mg/L [flow-through]	1 day old
96 Hr LC50 Pimephales promelas	12.6 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.89 - 7.81 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	14.1 - 17.16 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.8 mg/L [semi-static]	
96 Hr LC50 Lepomis macrochirus	11.0 - 15.0 mg/L [static]	
96 Hr LC50 Oryzias latipes	54 mg/L [static]	
96 Hr LC50 Poecilia reticulata	28.2 mg/L [semi-static]	
96 Hr LC50 Poecilia reticulata	50.87 - 70.34 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	>433 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	12.5 mg/L [static]	
48 Hr EC50 Daphnia magna	5.46 - 9.83 mg/L [Static]	
48 Hr EC50 Daphnia magna	11.5 mg/L	

Acetone (67-64-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L	
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	8300 mg/L	
48 Hr EC50 Daphnia magna	10294 - 17704 mg/L [Static]	
48 Hr EC50 Daphnia magna	12600 - 12700 mg/L	

Methyl alcohol (67-56-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	28200 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	>100 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	19500 - 20700 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	18 - 20 mL/L [static]	
96 Hr LC50 Lepomis macrochirus	13500 - 17600 mg/L [flow-through]	

Persistence/Degradability

No information available for the product.

Bioaccumulation/Accumulation

No information available for the product.

Mobility in Environmental Media

No information available for the product.

Other Adverse Effects

No information available for the product.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

127

Reference .*North American Emergency Response Guidebook*

DOT **Shipping Name:** Paint related material

UN/NA #: UN1263 **Hazard Class:** 3 **Packing Group:** II

TDG **Shipping Name:** Paint Related Material

UN/NA #: UN1263 **Hazard Class:** 3 **Packing Group:** II

IATA Information

No Classification Assigned.

IMDG Information

No Classification Assigned.

* * * Section 15 - Regulatory Information * * *

Volatile Organic Compounds (As Regulated)

77-99 WT%; 5.5-7.0 LB/US gal; 652-839 g/L; As per 40 CFR Part 51.100(s)

Contains photochemically reactive solvent.

SARA Sections 311/312

This product poses the following health hazards as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):

Immediate (Acute) Health Hazard

Delayed (Chronic) Health Hazard

Fire Hazard

SARA 302/304

Component Analysis

This product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313

Component Analysis

This product contains a "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

Toluene (108-88-3)	1.0 % de minimis concentration
Methyl alcohol (67-56-1)	1.0 % de minimis concentration

CERCLA

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product contains the following "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4 with the following reportable quantities (RQ):

Toluene (108-88-3)	1000 lb final RQ; 454 kg final RQ
Acetone (67-64-1)	5000 lb final RQ; 2270 kg final RQ
Methyl alcohol (67-56-1)	5000 lb final RQ; 2270 kg final RQ

TSCA

All the components of this product are listed on, or are automatically included as "naturally occurring chemical substances" on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Toluene	108-88-3	Yes
Acetone	67-64-1	Yes
Methyl alcohol	67-56-1	Yes

State Regulations

This product is not for sale or use in the State of California.

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
Methyl alcohol	67-56-1	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Canadian Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Toluene	108-88-3	DSL
Acetone	67-64-1	DSL
Methyl alcohol	67-56-1	DSL

Canadian WHMIS Information

B2, D2A, D2B

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Toluene (108-88-3)	1 %
Acetone (67-64-1)	1 %
Methyl alcohol (67-56-1)	1 %

Canadian Environmental Protection Act (CEPA)

All the components of this product are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

* * * Section 16 - Other Information * * *

Label/Other Information

Not available.

Revision Information

Regulatory update. Revised format (Sections 2 and 3 switched). Section 1 (Address changed, Revision dates), Section 5 (Fire fields), Section 8 (Added exposure limits), Section 11 (Toxicology fields), Section 12 (Component Ecotoxicity), Section 16 (Revision).

Disclaimer

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplier to the user.

End of Sheet 82688

Material Safety Data Sheet

Material Name: Ultra Kleen Spray Equipment Solution **ID: 820016**

* * * Section 1 - Chemical Product and Company Identification * * *

Product Code: 5110, 5111, 5112, 5113, 6827
Product Use: Solvent applications, coating operations. If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

THIS PRODUCT IS NOT FOR SALE OR USE IN THE STATE OF CALIFORNIA.

Synonyms: None.

Safety-Kleen Systems, Inc.
2600 North Central Expressway
Suite 400
Richardson, TX 75080

Phone: 1-800-669-5740

Emergency # 1-800-468-1760
www.safety-kleen.com

Issue Date
November 15, 2011
Supersedes Issue Date
June 11, 2010
Original Issue Date
December 14, 2006
PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW
Appearance
Liquid, clear, colorless to pale yellow, moderate odor.
Signal Word
DANGER!
Physical Hazards
Extremely flammable liquid and vapor. Vapor may cause flash fire.
Health Hazards
May be harmful if inhaled. May be harmful if absorbed through skin. May irritate the respiratory tract (nose, throat, and lungs), and skin. May be harmful if swallowed. May be severely irritating to the eyes. Suspect cancer hazard. Contains material (less than 15 weight %) which may cause cancer. Risk of cancer depends on duration and level of exposure. Contains material which may cause birth defects. Contains material which may cause central nervous system damage.
POTENTIAL HEALTH EFFECTS
Inhalation (Breathing)
High concentrations of vapor or mist may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.
Eyes
May be severely irritating to the eyes.
Skin
May cause irritation. Toluene, n-butyl alcohol, 1-propanol, and methyl alcohol may be absorbed through the skin and cause harm as noted under **INHALATION (BREATHING)**.
Ingestion (Swallowing)
May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.
Medical Conditions Aggravated by Exposure
Individuals with pre-existing respiratory tract (nose, throat, and lungs), central nervous system, liver, kidney, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic

Prolonged or repeated inhalation may cause toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis). Prolonged or repeated inhalation may cause kidney, liver, eye, skin and central nervous system damage. Prolonged or repeated exposure may have reproductive toxicity or teratogenic effects.

Cancer Information

This product contains ethyl benzene which may cause cancer. Risk of cancer depends on duration and level of exposure. For more information, see **SECTION 11: CARCINOGENICITY**.

Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards

Toxic to aquatic life.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS	Component	Percent
108-88-3	Toluene	15-65
67-64-1	Acetone	10-55
110-19-0	Isobutyl acetate	0-40
67-56-1	Methyl alcohol	0-20
123-86-4	n-Butyl acetate	0-20
64741-41-9	C9 to C13 aliphatic hydrocarbons	0-20
64741-42-0	Naphtha, petroleum, full-range straight-run	0-20
1330-20-7	Xylenes (o-, m-, p- isomers)	0-15
78-93-3	Methyl ethyl ketone	0-15
71-36-3	n-Butyl alcohol	0-10
108-10-1	Methylisobutyl ketone	0-5
64-17-5	Ethyl alcohol	0-5
108-21-4	Isopropyl acetate	0-5
109-60-4	n-Propyl acetate	0-5
141-78-6	Ethylacetate	0-5
67-63-0	Isopropyl alcohol	0-5
100-41-4	Ethyl benzene	0-5
71-23-8	n-Propyl alcohol	0-5
108-65-6	Propylene glycol monomethyl ether acetate	0-5
763-69-9	Ethyl 3-ethoxypropanoate	0-1

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Ketones, liquid, n.o.s., Butyl acetates.

These ranges represent the actual range which varies with each batch of the product.

* * * Section 4 - First Aid Measures * * *

Inhalation (Breathing)

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

Skin

Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists.

Ingestion (Swallowing)

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians

Treat symptomatically and supportively. Increased sensitivity of the heart to Adrenaline (epinephrine) may be caused by overexposure to product. Administration of gastric lavage, if warranted, should be performed by qualified medical personnel. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce carbon monoxide and unidentified organic compounds.

Conditions of Flammability

Heat, sparks, or flame.

Extinguishing Media

Carbon dioxide, alcohol-resistant foam, dry chemical, water spray, or water fog.

Protective Equipment For Firefighting

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray.

NFPA Ratings: Health: 2 **Fire:** 3 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Vapor explosion hazard indoors, outdoors, or in sewers. Vapor may travel to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire or explosion hazard. Heated containers may rupture, explode, or be thrown into the air. "Empty" containers may retain residue and can be dangerous. Products are not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

* * * Section 6 - Accidental Release Measures * * *

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

There may be specific regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION**.

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke when using this product.

Shipping and Storing

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition; containers may explode and cause injury or death. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Toluene (108-88-3)

ACGIH: 20 ppm TWA
OSHA Final: 200 ppm TWA
300 ppm Ceiling
OSHA Vacated: 100 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL
NIOSH: 100 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL

Acetone (67-64-1)

ACGIH: 500 ppm TWA
750 ppm STEL
OSHA Final: 1000 ppm TWA; 2400 mg/m3 TWA
OSHA Vacated: 750 ppm TWA; 1800 mg/m3 TWA
2400 mg/m3 STEL (The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors); 1000 ppm STEL
NIOSH: 250 ppm TWA; 590 mg/m3 TWA

Isobutyl acetate (110-19-0)

ACGIH: 150 ppm TWA
OSHA Final: 150 ppm TWA; 700 mg/m3 TWA
OSHA Vacated: 150 ppm TWA; 700 mg/m3 TWA
NIOSH: 150 ppm TWA; 700 mg/m3 TWA

Methyl alcohol (67-56-1)

ACGIH: 200 ppm TWA
250 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA Final: 200 ppm TWA; 260 mg/m3 TWA
OSHA Vacated: 200 ppm TWA; 260 mg/m3 TWA
250 ppm STEL; 325 mg/m3 STEL
Prevent or reduce skin absorption
NIOSH: 200 ppm TWA; 260 mg/m3 TWA
250 ppm STEL; 325 mg/m3 STEL
Potential for dermal absorption

n-Butyl acetate (123-86-4)

ACGIH: 150 ppm TWA
200 ppm STEL
OSHA Final: 150 ppm TWA; 710 mg/m3 TWA
OSHA Vacated: 150 ppm TWA; 710 mg/m3 TWA
200 ppm STEL; 950 mg/m3 STEL
NIOSH: 150 ppm TWA; 710 mg/m3 TWA
200 ppm STEL; 950 mg/m3 STEL

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: 100 ppm TWA
150 ppm STEL
OSHA Final: 100 ppm TWA; 435 mg/m3 TWA
OSHA Vacated: 100 ppm TWA; 435 mg/m3 TWA
150 ppm STEL; 655 mg/m3 STEL

Methyl ethyl ketone (78-93-3)

ACGIH: 200 ppm TWA
300 ppm STEL
OSHA Final: 200 ppm TWA; 590 mg/m3 TWA
OSHA Vacated: 200 ppm TWA; 590 mg/m3 TWA
300 ppm STEL; 885 mg/m3 STEL
NIOSH: 200 ppm TWA; 590 mg/m3 TWA
300 ppm STEL; 885 mg/m3 STEL

n-Butyl alcohol (71-36-3)

ACGIH: 20 ppm TWA
OSHA Final: 100 ppm TWA; 300 mg/m3 TWA
OSHA Vacated: 50 ppm Ceiling; 150 mg/m3 Ceiling
Prevent or reduce skin absorption
NIOSH: 50 ppm Ceiling; 150 mg/m3 Ceiling
Potential for dermal absorption

Methylisobutyl ketone (108-10-1)

ACGIH: 20 ppm TWA
75 ppm STEL
OSHA Final: 100 ppm TWA; 410 mg/m3 TWA
OSHA Vacated: 50 ppm TWA; 205 mg/m3 TWA
75 ppm STEL; 300 mg/m3 STEL
NIOSH: 50 ppm TWA; 205 mg/m3 TWA
75 ppm STEL; 300 mg/m3 STEL

Ethyl alcohol (64-17-5)

ACGIH: 1000 ppm STEL
OSHA Final: 1000 ppm TWA; 1900 mg/m3 TWA
OSHA Vacated: 1000 ppm TWA; 1900 mg/m3 TWA
NIOSH: 1000 ppm TWA; 1900 mg/m3 TWA

Isopropyl acetate (108-21-4)

ACGIH: 100 ppm TWA
200 ppm STEL
OSHA Final: 250 ppm TWA; 950 mg/m3 TWA
OSHA Vacated: 250 ppm TWA; 950 mg/m3 TWA
310 ppm STEL; 1185 mg/m3 STEL

n-Propyl acetate (109-60-4)

ACGIH: 200 ppm TWA
250 ppm STEL
OSHA Final: 200 ppm TWA; 840 mg/m3 TWA
OSHA Vacated: 200 ppm TWA; 840 mg/m3 TWA
250 ppm STEL; 1050 mg/m3 STEL
NIOSH: 200 ppm TWA; 840 mg/m3 TWA
250 ppm STEL; 1050 mg/m3 STEL

Ethylacetate (141-78-6)

ACGIH: 400 ppm TWA
OSHA Final: 400 ppm TWA; 1400 mg/m3 TWA
OSHA Vacated: 400 ppm TWA; 1400 mg/m3 TWA
NIOSH: 400 ppm TWA; 1400 mg/m3 TWA

Isopropyl alcohol (67-63-0)

ACGIH:	200 ppm TWA 400 ppm STEL
OSHA Final:	400 ppm TWA; 980 mg/m3 TWA
OSHA Vacated:	400 ppm TWA; 980 mg/m3 TWA 500 ppm STEL; 1225 mg/m3 STEL
NIOSH:	400 ppm TWA; 980 mg/m3 TWA 500 ppm STEL; 1225 mg/m3 STEL

Ethyl benzene (100-41-4)

ACGIH:	20 ppm TWA
OSHA Final:	100 ppm TWA; 435 mg/m3 TWA
OSHA Vacated:	100 ppm TWA; 435 mg/m3 TWA 125 ppm STEL; 545 mg/m3 STEL
NIOSH:	100 ppm TWA; 435 mg/m3 TWA 125 ppm STEL; 545 mg/m3 STEL

n-Propyl alcohol (71-23-8)

ACGIH:	100 ppm TWA
OSHA Final:	200 ppm TWA; 500 mg/m3 TWA
OSHA Vacated:	200 ppm TWA; 500 mg/m3 TWA 250 ppm STEL; 625 mg/m3 STEL
NIOSH:	200 ppm TWA; 500 mg/m3 TWA 250 ppm STEL; 625 mg/m3 STEL Potential for dermal absorption

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Personal Protective Equipment: Respiratory

Use NIOSH-certified, air-purifying respirators with N-, P-, or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air-purifying respirators is limited. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Personal Protective Equipment: Eyes/Face

Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

Personal Protective Equipment: Skin

Where skin contact is likely, wear lchemical impervious protective gloves; use of natural rubber (latex) or equivalent gloves is not recommended.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Liquid, clear, colorless to pale yellow, moderate odor.	**Odor:**	Mild odor
Physical State:	Liquid	**pH:**	Not applicable
Boiling Point:	104 to 400˚F (40 to 200˚C)	**Melting Point:**	Not available
Solubility (H2O):	Slightly soluble.	**Specific Gravity:**	0.8-0.9 (water = 1) (approx)
Density:	6.7-7.5 LB/US gal (800-900 g/L) (approx)	**Octanol/H2O Coeff.:**	Not available.
Evaporation Rate:	27.5 (butyl acetate = 1)(max)	**Molecular Weight:**	58-165
Odor Threshold:	Not available	**Auto Ignition:**	500˚F (260˚C)
LFL:	Not available	**Flash Point:**	0˚F (-18˚C) (Tag Closed Cup)
UFL:	Not available	**Vapor Density:**	2.0-5.0 (air = 1)
Vapor Pressure:	400 mmHG @ 104˚F (40˚C)(max) 180 mmHg @ 68˚F (20˚C)(max)	**Freezing Point:**	Less than -50˚F (-46˚C)

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures. Avoid heat, sparks, or flame.

Incompatibility

Avoid acids, alkalies, oxidizing agents, reducing agents, reactive halogens, or reactive metals.

Reactivity

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Hazardous Decomposition Products

None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Avoid heat, sparks, or flame and incompatible materials.

* * * Section 11 - Toxicological Information * * *

Component Analysis - LD50/LC50

Toluene (108-88-3)

Inhalation LC50 Rat 12.5 mg/L 4 h; Inhalation LC50 Rat >26700 ppm 1 h; Oral LD50 Rat 636 mg/kg; Dermal LD50 Rabbit 8390 mg/kg; Dermal LD50 Rat 12124 mg/kg

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Isobutyl acetate (110-19-0)

Oral LD50 Rat 13400 mg/kg; Dermal LD50 Rabbit >5000 mg/kg

Methyl alcohol (67-56-1)

Inhalation LC50 Rat 83.2 mg/L 4 h; Inhalation LC50 Rat 64000 ppm 4 h; Oral LD50 Rat 5628 mg/kg; Dermal LD50 Rabbit 15800 mg/kg

n-Butyl acetate (123-86-4)

Inhalation LC50 Rat 390 ppm 4 h; Oral LD50 Rat 10768 mg/kg; Dermal LD50 Rabbit >17600 mg/kg

Xylenes (o-, m-, p- isomers) (1330-20-7)

Inhalation LC50 Rat 5000 ppm 4 h; Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg; Dermal LD50 Rabbit >1700 mg/kg

Methyl ethyl ketone (78-93-3)

Inhalation LC50 Mouse 32 g/m3 4 h; Oral LD50 Rat 2737 mg/kg; Dermal LD50 Rabbit 6480 mg/kg

n-Butyl alcohol (71-36-3)

Inhalation LC50 Rat >17.7 mg/L 4 h; Inhalation LC50 Rat 8000 ppm 4 h; Oral LD50 Rat 790 mg/kg; Dermal LD50 Rabbit 3400 mg/kg

Methylisobutyl ketone (108-10-1)
Inhalation LC50 Rat 8.2 mg/L 4 h; Oral LD50 Rat 2080 mg/kg; Dermal LD50 Rabbit >16000 mg/kg
Ethyl alcohol (64-17-5)
Oral LD50 Rat 7060 mg/kg; Inhalation LC50 Rat 124.7 mg/L 4 h
Isopropyl acetate (108-21-4)
Oral LD50 Rat 6750 mg/kg; Dermal LD50 Rabbit >20000 mg/kg
n-Propyl acetate (109-60-4)
Oral LD50 Rat 9370 mg/kg; Dermal LD50 Rabbit >17760 mg/kg
Ethylacetate (141-78-6)
Oral LD50 Rat 5620 mg/kg; Dermal LD50 Rabbit >20 mL/kg; Dermal LD50 Rabbit >18000 mg/kg
Isopropyl alcohol (67-63-0)
Inhalation LC50 Rat 72.6 mg/L 4 h; Oral LD50 Rat 4396 mg/kg; Dermal LD50 Rat 12800 mg/kg; Dermal LD50 Rabbit 12870 mg/kg
Ethyl benzene (100-41-4)
Inhalation LC50 Rat 17.2 mg/L 4 h; Oral LD50 Rat 3500 mg/kg; Dermal LD50 Rabbit 15354 mg/kg
n-Propyl alcohol (71-23-8)
Inhalation LC50 Rat >13548 ppm 4 h; Oral LD50 Rat 1870 mg/kg
Propylene glycol monomethyl ether acetate (108-65-6)
Oral LD50 Rat 8532 mg/kg; Dermal LD50 Rabbit >5000 mg/kg
Ethyl 3-ethoxypropanoate (763-69-9)
Oral LD50 Rat 3200 mg/kg; Dermal LD50 Rabbit 10 mL/kg
Naphtha, petroleum, full-range straight-run (64741-42-0)
Inhalation LC50 Rat >5.04 mg/L 4 h; Oral LD50 Rat >7000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

Acute Effects

Harmful by inhalation, in contact with skin and if swallowed. Irritating to respiratory system and skin. May be severely irritating to the eyes. High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects.

Repeated Dose Effects

Toluene, ethylbenzene, isopropyl alcohol, ethyl alcohol, methyl alcohol, xylene, iso-butyl alcohol, n-butyl alcohol and 1-propanol have demonstrated experimental effects of mutagenicity.
Toluene, ethylbenzene, ethyl alcohol, methyl ethyl ketone, acetone, isoproproyl alcohol, methyl alcohol, 1-propanol and xylene have demonstrated animal effects of teratogenicity.
Toluene, ethylbenzene, xylene, isopropyl alcohol, ethyl alcohol, n-butyl alcohol, acetone and methyl ethyl ketone have demonstrated animal effects of reproductive toxicity.

Carcinogenicity

Ethyl benzene is categorized by ACGIH as an animal carcinogen (A3). Ethyl benzene is categorized by IARC as possibly carcinogenic to humans (Group 2B).
Based on best current information for the other components listed in **SECTION 2**, there is no known carcinogenicity as categorized by ACGIH A1 or A2 substances; as categorized by IARC Group 1, Group 2A, or Group 2B agents; or as listed by NTP as either known carcinogens or substances for which there is limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals.
Also see **SECTION 3: CANCER INFORMATION** and **SECTION 15: CALIFORNIA**.

Component Carcinogenicity

Toluene (108-88-3)
ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Acetone (67-64-1)
ACGIH: A4 - Not Classifiable as a Human Carcinogen

Xylenes (o-, m-, p- isomers) (1330-20-7)
ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

Methylisobutyl ketone (108-10-1)
ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Ethyl alcohol (64-17-5)
ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
OSHA: Present (select carcinogen)
IARC: Monograph 100E [in preparation] (in alcoholic beverages); Monograph 96 [2010] (in alcoholic beverages) (Group 1 (carcinogenic to humans))

Isopropyl alcohol (67-63-0)
ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977] (Group 3 (not classifiable))

Ethyl benzene (100-41-4)
ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
OSHA: Present (select carcinogen)
IARC: Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

n-Propyl alcohol (71-23-8)
ACGIH: A4 - Not Classifiable as a Human Carcinogen

Target Organ Effects

Prolonged or repeated inhalation may cause kidney, liver, eye, skin and central nervous system damage.

Sensitization

Based on best current information, there is no known human sensitization associated with this product.

* * * Section 12 Ecological Information * * *

Ecotoxicity

Based upon components, this product is expected to be toxic to aquatic life.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Toluene (108-88-3)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	15.22-19.05 mg/L [flow-through]	1 day old
96 Hr LC50 Pimephales promelas	12.6 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.89-7.81 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	14.1-17.16 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.8 mg/L [semi-static]	
96 Hr LC50 Lepomis macrochirus	11.0-15.0 mg/L [static]	
96 Hr LC50 Oryzias latipes	54 mg/L [static]	
96 Hr LC50 Poecilia reticulata	28.2 mg/L [semi-static]	
96 Hr LC50 Poecilia reticulata	50.87-70.34 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	>433 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	12.5 mg/L [static]	

Acetone (67-64-1)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L	
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	8300 mg/L	

Isobutyl acetate (110-19-0)

Duration/Test/Species	Concentration/Conditions/Notes	
48 Hr LC50 Leuciscus idus melanotus	101 mg/L [static]	
48 Hr LC50 Leuciscus idus melanotus	101-123 mg/L [flow-through]	

Methyl alcohol (67-56-1)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	28200 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	>100 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	19500 - 20700 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	18 - 20 mL/L [static]	
96 Hr LC50 Lepomis macrochirus	13500 - 17600 mg/L [flow-through]	

n-Butyl acetate (123-86-4)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	17-19 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	100 mg/L [static]	
96 Hr LC50 Leuciscus idus	62 mg/L [static]	
72 Hr EC50 Desmodesmus subspicatus	674.7 mg/L	

Xylenes (o-, m-, p- isomers) (1330-20-7)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	13.4 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	2.661-4.093 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	13.5-17.3 mg/L	
96 Hr LC50 Lepomis macrochirus	13.1-16.5 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	19 mg/L	
96 Hr LC50 Lepomis macrochirus	7.711-9.591 mg/L [static]	
96 Hr LC50 Pimephales promelas	23.53-29.97 mg/L [static]	
96 Hr LC50 Cyprinus carpio	780 mg/L [semi-static]	
96 Hr LC50 Cyprinus carpio	>780 mg/L	
96 Hr LC50 Poecilia reticulata	30.26-40.75 mg/L [static]	

Methyl ethyl ketone (78-93-3)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	3130-3320 mg/L [flow-through]	

n-Butyl alcohol (71-36-3)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	1730-1910 mg/L [static]	
96 Hr LC50 Pimephales promelas	1740 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	100000-500000 µg/L [static]	
96 Hr LC50 Pimephales promelas	1910000 µg/L [static]	
96 Hr EC50 Desmodesmus subspicatus	>500 mg/L	
72 Hr EC50 Desmodesmus subspicatus	>500 mg/L	

Methylisobutyl ketone (108-10-1)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	496-514 mg/L [flow-through]	
96 Hr EC50 Pseudokirchneriella subcapitata	400 mg/L	

Ethyl alcohol (64-17-5)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Oncorhynchus mykiss	12.0 - 16.0 mL/L [static]	
96 Hr LC50 Pimephales promelas	>100 mg/L [static]	
96 Hr LC50 Pimephales promelas	13400 - 15100 mg/L [flow-through]	

n-Propyl acetate (109-60-4)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	56-64 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	56-64 mg/L [static]	

Ethylacetate (141-78-6)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	220-250 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	484 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	352-500 mg/L [semi-static]	
48 Hr EC50 Desmodesmus subspicatus	3300 mg/L	

Isopropyl alcohol (67-63-0)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	9640 mg/L [flow-through]	
96 Hr LC50 Pimephales promelas	11130 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	>1400000 µg/L	
96 Hr EC50 Desmodesmus subspicatus	>1000 mg/L	
72 Hr EC50 Desmodesmus subspicatus	>1000 mg/L	

Ethyl benzene (100-41-4)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Oncorhynchus mykiss	11.0-18.0 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	4.2 mg/L [semi-static]	
96 Hr LC50 Pimephales promelas	7.55-11 mg/L [flow-through]	
96 Hr LC50 Lepomis macrochirus	32 mg/L [static]	
96 Hr LC50 Pimephales promelas	9.1-15.6 mg/L [static]	
96 Hr LC50 Poecilia reticulata	9.6 mg/L [static]	
72 Hr EC50 Pseudokirchneriella subcapitata	4.6 mg/L	
96 Hr EC50 Pseudokirchneriella subcapitata	>438 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	2.6 - 11.3 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	1.7 - 7.6 mg/L [static]	

n-Propyl alcohol (71-23-8)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	4480 mg/L [flow-through]	

Propylene glycol monomethyl ether acetate (108-65-6)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	161 mg/L [static]	

Ethyl 3-ethoxypropanoate (763-69-9)

Duration/Test/Species	Concentration/Conditions/Notes	
96 Hr LC50 Pimephales promelas	62 mg/L [static]	

Naphtha, petroleum, full-range straight-run (64741-42-0)

Duration/Test/Species	Concentration/Conditions/Notes	
72 Hr EC50 Pseudokirchneriella subcapitata	4700 mg/L	

C9 to C13 aliphatic hydrocarbons (64741-41-9)

Duration/Test/Species	Concentration/Conditions/Notes	
72 Hr EC50 Pseudokirchneriella subcapitata	4700 mg/L	

Persistence/Degradability
May cause long-term adverse effects in the aquatic environment.
Bioaccumulation/Accumulation
Product is not expected to bioaccumulate.
Mobility in Environmental Media
Not available.
Other Adverse Effects
No additional information available.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

US EPA Waste Number & Descriptions

If discarded, this product is considered a RCRA ignitable waste, D001. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

128 Reference *.North American Emergency Response Guidebook*

DOT

Shipping Name: Paint related material
UN/NA #: UN1263 **Hazard Class:** 3 **Packing Group:** II
Required Label(s): FLAMMABLE LIQUID

TDG

Shipping Name: PAINT RELATED MATERIAL
UN/NA #: UN1263 **Hazard Class:** 3 **Packing Group:** II
Required Label(s): FLAMMABLE LIQUID

* * * Section 15 Regulatory Information * * *

Volatile Organic Compounds (As Regulated)

70-85 WT%; 5 to 6 LB/US gal (590-720 g/L)
As per 40 CFR Part 51.100(s)

SARA Sections 311/312

This poses the following health hazards as defined in 40 CFR Part 370 and is subject to the requirements of Section 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):

Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA 302/304

Component Analysis

Based on the ingredients listed in SECTION 2, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313
This product does contain "toxic" chemicals subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

Component Analysis
This product does contain a "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

Toluene (108-88-3)	1.0 % de minimis concentration
Xylenes (o-, m-, p- isomers) (1330-20-7)	1.0 % de minimis concentration
Methylisobutyl ketone (108-10-1)	1.0 % de minimis concentration
Methyl alcohol (67-56-1)	1.0 % de minimis concentration
Isopropyl alcohol (67-63-0)	1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)
Ethyl benzene (100-41-4)	0.1 % de minimis concentration
n-Butyl alcohol (71-36-3)	1.0 % de minimis concentration

CERCLA
Based on the ingredients listed in SECTION 2, this product contains the following "hazardous substances" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4 with the following reportable quantities (RQ):

Component Analysis
This product contains the following "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4 with the following reportable quantities (RQ):

Toluene (108-88-3)	1000 lb final RQ; 454 kg final RQ
Xylenes (o-, m-, p- isomers) (1330-20-7)	100 lb final RQ; 45.4 kg final RQ
Acetone (67-64-1)	5000 lb final RQ; 2270 kg final RQ
Methyl ethyl ketone (78-93-3)	5000 lb final RQ; 2270 kg final RQ
Methylisobutyl ketone (108-10-1)	5000 lb final RQ; 2270 kg final RQ
Methyl alcohol (67-56-1)	5000 lb final RQ; 2270 kg final RQ
Ethylacetate (141-78-6)	5000 lb final RQ; 2270 kg final RQ
Isobutyl acetate (110-19-0)	5000 lb final RQ; 2270 kg final RQ
n-Butyl acetate (123-86-4)	5000 lb final RQ; 2270 kg final RQ
Ethyl benzene (100-41-4)	1000 lb final RQ; 454 kg final RQ
n-Butyl alcohol (71-36-3)	5000 lb final RQ; 2270 kg final RQ

TSCA
All the components of this product are listed on, or are automatically included as "naturally occurring chemical substances" on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS	TSCA
Toluene	108-88-3	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes

Acetone	67-64-1	Yes
Methyl ethyl ketone	78-93-3	Yes
Methylisobutyl ketone	108-10-1	Yes
Methyl alcohol	67-56-1	Yes
Isopropyl acetate	108-21-4	Yes
Ethylacetate	141-78-6	Yes
n-Propyl acetate	109-60-4	Yes
Isopropyl alcohol	67-63-0	Yes
Isobutyl acetate	110-19-0	Yes
n-Butyl acetate	123-86-4	Yes
Ethyl benzene	100-41-4	Yes
Propylene glycol monomethyl ether acetate	108-65-6	Yes
Ethyl alcohol	64-17-5	Yes
n-Propyl alcohol	71-23-8	Yes
n-Butyl alcohol	71-36-3	Yes
Ethyl 3-ethoxypropanoate	763-69-9	Yes
Naphtha, petroleum, full-range straight-run	64741-42-0	Yes
C9 to C13 aliphatic hydrocarbons	64741-41-9	Yes

California

THIS PRODUCT IS NOT FOR SALE OR USE IN THE STATE OF CALIFORNIA.

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	RI
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes
Methylisobutyl ketone	108-10-1	Yes	Yes	Yes	Yes	Yes
Methyl alcohol	67-56-1	Yes	Yes	Yes	Yes	Yes
Isopropyl acetate	108-21-4	Yes	Yes	Yes	Yes	Yes
Ethylacetate	141-78-6	Yes	Yes	Yes	Yes	Yes
n-Propyl acetate	109-60-4	Yes	Yes	Yes	Yes	Yes
Isopropyl alcohol	67-63-0	Yes	Yes	Yes	Yes	Yes

Isobutyl acetate	110-19-0	Yes	Yes	Yes	Yes	Yes
n-Butyl acetate	123-86-4	Yes	Yes	Yes	Yes	Yes
Ethyl benzene	100-41-4	Yes	Yes	Yes	Yes	Yes
Ethyl alcohol	64-17-5	Yes	Yes	Yes	Yes	Yes
n-Propyl alcohol	71-23-8	Yes	Yes	Yes	Yes	Yes
n-Butyl alcohol	71-36-3	Yes	Yes	Yes	Yes	Yes

Canadian Regulations
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.
Component Analysis

Component	CAS	CAN
Toluene	108-88-3	DSL
Xylenes (o-, m-, p- isomers)	1330-20-7	DSL
Acetone	67-64-1	DSL
Methyl ethyl ketone	78-93-3	DSL
Methylisobutyl ketone	108-10-1	DSL
Methyl alcohol	67-56-1	DSL
Isopropyl acetate	108-21-4	DSL
Ethylacetate	141-78-6	DSL
n-Propyl acetate	109-60-4	DSL
Isopropyl alcohol	67-63-0	DSL
Isobutyl acetate	110-19-0	DSL
n-Butyl acetate	123-86-4	DSL
Ethyl benzene	100-41-4	DSL
Propylene glycol monomethyl ether acetate	108-65-6	DSL
Ethyl alcohol	64-17-5	DSL
n-Propyl alcohol	71-23-8	DSL
n-Butyl alcohol	71-36-3	DSL
Ethyl 3-ethoxypropanoate	763-69-9	DSL
Naphtha, petroleum, full-range straight-run	64741-42-0	DSL
C9 to C13 aliphatic hydrocarbons	64741-41-9	DSL

Canadian WHMIS Information

Class B2 - Flammable Liquid Class D1B - Contains a component that is acutely lethal. Class D2A - Contains component that may cause cancer. Class D2B - Irritating to eyes and skin.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Toluene (108-88-3)	1%
Acetone (67-64-1)	1%
Methyl ethyl ketone (78-93-3)	1%
Methylisobutyl ketone (108-10-1)	1%
Methyl alcohol (67-56-1)	1%
Isopropyl acetate (108-21-4)	1%
Ethylacetate (141-78-6)	1%
n-Propyl acetate (109-60-4)	1%
Isopropyl alcohol (67-63-0)	1%
Isobutyl acetate (110-19-0)	1%
n-Butyl acetate (123-86-4)	1%
Ethyl benzene (100-41-4)	0.1%
Ethyl alcohol (64-17-5)	0.1%
n-Propyl alcohol (71-23-8)	1%
n-Butyl alcohol (71-36-3)	1%

Canadian Environmental Protection Act (CEPA)

All the components of this product are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

* * * Section 16 - Other Information * * *

Label/Other Information

Not available.

Revision Information

This MSDS has been revised in the following sections:
Section 3, Product Composition and related information. New MSDS format.
11/21/13 – added VOC information.

Disclaimer

User assumes all risks incident to the use of this (these) product(s). To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either express or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the product(s) as supplied to the user.

Material Safety Data Sheet

Material Name: Clear Choice Cleaning Solvent **ID: 82730**

* * * Section 1 - Chemical Product and Company Identification * * *

Product Code: 6882, 5120, 5125

Product Use: Supplied with Safety-Kleen's Spray Gun & Equipment Cleaner. If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

Synonyms: Acetone, 2-Propanone; Dimethylformaldehyde; Dimethyl Ketone; Beta-Ketopropane; Methyl Ketone; Propanonene; Pyroacetic Ether

Safety-Kleen Systems, Inc.
2600 North Central Expressway
Suite 400
Richardson, TX 75080

Phone: 1-800-669-5740

Emergency # 1-800-468-1760
www.safety-kleen.com

Issue Date:
April 1, 2013

Supersedes Issue Date
December 21, 2012

Original Issue Date
January 27, 1998

PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW

Appearance
Liquid; clear and colorless; sweet odor.

Signal Word
DANGER!

Physical Hazards
Extremely flammable liquid and vapor.
Vapor may cause flash fire.

Health Hazards
May be harmful if inhaled.
May be harmful if swallowed.
May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin.
Contains material, which may cause birth defects.
Contains material, which may cause eye, liver, kidney, blood and central nervous system damage.

POTENTIAL HEALTH EFFECTS

Inhalation (Breathing)
High concentrations of vapor or mist may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Acute Overexposure may cause rapid central nervous system depression, sudden collapse, coma and/ or death.

Eyes
This product may cause irritation, stinging, and/ or eye damage.

Skin

This product may cause irritation, redness, and/ or swelling.

Ingestion (Swallowing)

This product may be harmful if it is swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**. Aspiration hazard: Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Medical Conditions Aggravated by Exposure

Individuals with pre-existing liver, kidney, respiratory tract (nose, throat, and lungs), central nervous system, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

Chronic

Prolonged or repeated inhalation may cause toxic effects as noted under **INHALATION (BREATHING)**; liver, kidney, blood, and/ or central nervous system damage. Prolonged or repeated contact may cause reproductive toxicity or birth defects. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis) and/ or damage. Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis). Repeated ingestion may cause toxic effects as noted under **INGESTION (SWALLOWING)**; liver, kidney, blood, and/ or central nervous system damage.

Cancer Information

No known carcinogenicity. For more information, see **SECTION 11: CARCINOGENICITY**.

Environmental Hazards

Harmful to aquatic life. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS	Component	Percent
67-64-1	Acetone	100

* * * Section 4 - First Aid Measures * * *

Inhalation (Breathing)

If inhaled, immediately remove the affected person to fresh air. If the affected person is not breathing, apply artificial respiration. Call a physician if symptoms develop or persist.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

Skin

Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists.

Ingestion (Swallowing)

Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Notes to Physicians

Treat symptomatically and supportively.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce carbon monoxide and unidentified organic compounds.

Conditions of Flammability

Heat, sparks, or flame.

Extinguishing Media

Carbon dioxide, alcohol-resistant foam, dry chemical, water spray, or water fog.

Protective Equipment For Firefighting

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray.

NFPA Ratings: Health: 1 **Fire:** 3 **Reactivity:** 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Vapor explosion hazard indoors, outdoors, or in sewers. Vapor may travel to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire or explosion hazard. Heated containers may rupture, explode, or be thrown into the air. "Empty" containers may retain residue and can be dangerous. Products are not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

* * * Section 6 - Accidental Release Measures * * *

Eliminate all ignition sources. Do not touch or walk through the spilled product. Stop the leak if you can do it without risk. Wear appropriate protective equipment and provide engineering controls as specified in **Section 8: Exposure Controls/ Personal Protection**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate the area and avoid inhalation of vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain the spill away from surface waters and sewers. Contain the spill as a liquid for possible recovery, or absorb with an inert absorbent material and shovel with a clean, spark proof tool into a sealable container for proper disposal.

For Large Spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike the area far ahead of liquid spill for collection and proper disposal.

Follow all specific regulatory reporting requirements associated with spills, leaks or releases of this product. Also see **Section 15: Regulatory Information**.

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools and explosion-proof equipment. When transferring large volumes of product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke when using this product.

Shipping and Storing

Keep container tightly closed when not in use and during transport. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition; containers may explode and cause injury or death. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Acetone (67-64-1)

ACGIH:	500 ppm TWA 750 ppm STEL
OSHA Final:	1000 ppm TWA; 2400 mg/m3 TWA
OSHA Vacated:	750 ppm TWA; 1800 mg/m3 TWA 2400 mg/m3 STEL (The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors); 1000 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m3 TWA

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

Personal Protective Equipment: Respiratory

Use NIOSH-certified, air-purifying respirators with organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air-purifying respirators is limited. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Personal Protective Equipment: Eyes/Face

Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

Personal Protective Equipment: Skin

Where skin contact is likely, wear chemical impervious protective gloves (butyl); use of natural rubber (latex), polyvinyl chloride (PVC), neoprene, or equivalent gloves is not recommended.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant face shield, boots, apron, whole body suits, or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using these products should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Clear and colorless Sweet	**pH:**	Not Applicable
		Melting Point:	Not Applicable
Boiling Point:	133 °F (56 °C)	**Specific Gravity:**	0.79 (water=1)
Solubility (H2O):	Complete	**Octanol/H2O Coeff.:**	Log Pow= -0.24
Density:	6.6 lb/ US gal (790 g/L)	**Molecular Weight:**	58.1
Evaporation Rate:	6 (butyl acetate = 1)	**Auto Ignition Temperature:**	869 °F (465 °C)
Odor Threshold:	20 ppm	**Flash Point:**	-4 °F (-20 °C)
LFL:	2.5 Vol %	**Flash Point Method:**	Closed Cup
UFL:	13 Vol %		
Vapor Pressure:	180 mmHg at 68 °F (20 °C)		
Freezing Point:	-139 °F (-95 °C)		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures.

Incompatibility

Substances that are not compatible with ordinary organic compounds (such as strong oxidizers) will not be compatible with this product.

Reactivity

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Hazardous Decomposition Products

None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Avoid heat, sparks, or flame when not in use.

* * * Section 11 - Toxicological Information * * *

Toxicity Data

Component Analysis - LD50/LC50

Acetone (67-64-1)

Oral LD50 Rat 5800 mg/kg

Acute Effects

High concentrations of vapor or mist may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs), may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Acute overexposure may cause rapid central nervous system depression, sudden collapse, coma and/ or death. This product may cause eye irritation, stinging, and/ or eye damage. This product may cause skin irritation, redness, and/ or swelling. This product may be harmful if it is swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted for inhalation. Aspiration hazard: Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

Repeated Dose Effects

Prolonged or repeated inhalation may cause toxic effects as noted for inhalation; liver, kidney, blood, and/ or central nervous system damage. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis) and/ or damage. Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

Acetone has demonstrated experimental effects of mutagenicity, reproductive toxicity and teratogenicity.

Component Carcinogenicity

Acetone (67-64-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Target Organ Effects

Repeated ingestion may cause toxic effects as noted under **INGESTION (SWALLOWING)**; liver, kidney, blood, and/ or central nervous system damage.

Mutagenicity

Acetone has demonstrated experimental effects of mutagenicity.

Teratogenicity

Acetone has demonstrated animal effects of teratogenicity.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

This product is harmful to aquatic life.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Acetone (67-64-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L	
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L [static]	
96 Hr LC50 Lepomis macrochirus	8300 mg/L	

Persistence/Degradability

No additional information available.

Bioaccumulation/Accumulation

No additional information available.

Mobility in Environmental Media

No additional information available.

Other Adverse Effects

No additional information available.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

US EPA Waste Number & Descriptions

D001, U002

Based on available data, this information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

127

Reference .*North American Emergency Response Guidebook*

DOT **Shipping Name:** Acetone

UN/NA #: UN1090 **Hazard Class:** 3 **Packing Group:** II

Required Label(s): Flammable Liquid

Additional Information: RQ = 5000lbs

TDG **Shipping Name:** Acetone

UN/NA #: UN1090 **Hazard Class:** 3 **Packing Group:** II

Required Label(s): Flammable Liquid

IATA Information

No Classification Assigned.

IMDG Information

No Classification Assigned.

* * * Section 15 - Regulatory Information * * *

Volatile Organic Compounds (As Regulated)

0 WT%; 0 lb/US gal; 0 g/L (as per 40 CFR Part 51.100(s))

Vapor Pressure: 180 mm Hg @ 68°F (20°C)

Non-Photochemically Reactive

SARA Sections 311/312

This product poses the following health hazard(s) as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):

Immediate (Acute) Health Hazard

Delayed (Chronic) Health Hazard

Fire Hazard

SARA 302/304

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313

Component Analysis

This product does not contain any "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

CERCLA

Component Analysis

Based on the ingredient(s) listed in SECTION 3, this product contains the following "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4 with the following reportable quantities (RQ):

Acetone (67-64-1)	5000 lb final RQ; 2270 kg final RQ

TSCA

The component of this product is listed on the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Acetone	67-64-1	Yes

State Regulations

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes

This product may contain benzene (CAS 71-43-2). WARNING: This chemical is known to the State of California to cause cancer and birth defects or other reproductive harm.

Canadian Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Acetone	67-64-1	DSL

Canadian WHMIS Information

B2 - Flammable Liquids

D2B - Toxic Material

WHMIS Classification: B2, D2B

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Acetone (67-64-1) 1 %

Canadian Environmental Protection Act (CEPA)

The component of this product is listed on the Canadian Domestic Substances List (DSL).

* * * Section 16 - Other Information * * *

Label/Other Information

No information available for the product.

Revision Information

Update to Section 8, PPE, Skin.

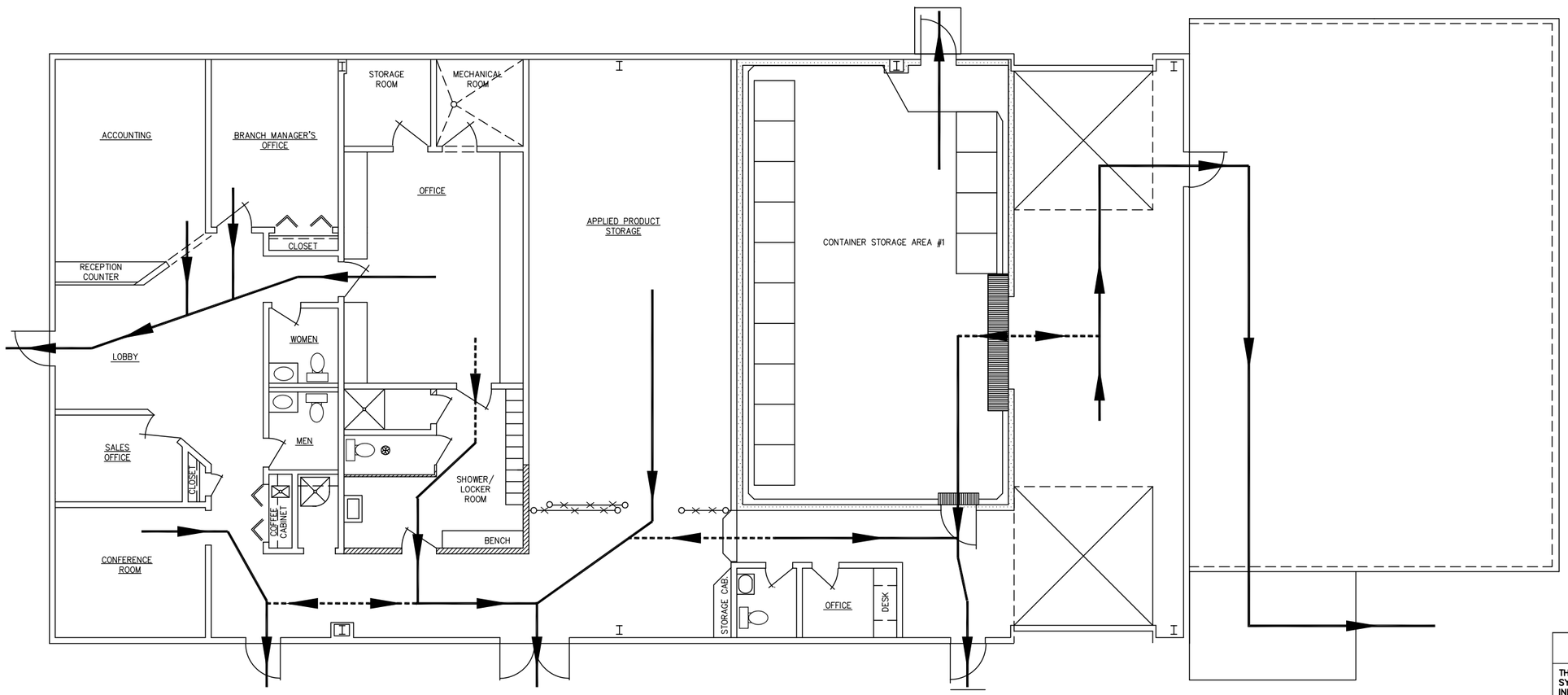
Disclaimer

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplier to the user.

End of Sheet 82730

Exhibit G-4

Office / Warehouse Evacuation Plan



N

0' 3' 10' 25'

1' 6' 15'

PRIMARY EVAC ROUTE

ALTERNATE EVAC ROUTE

PROPRIETARY STATEMENT

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Project Solutions Companies

2005 West Broadway • Suite 210 • Columbia • MO 65203
• Phone: (573) 443-7100 • Fax: (573) 443-7181 •

Exhibit G-4 ~~XXX~~

NO.	DESCRIPTION	BY	CHK	APPR	DATE
B	REVISED FOR PERMIT	JEK	NC	NC	052814
A	REVISED FOR PERMIT	JEK	NC	NC	012813
0	NEW ISSUE FOR REVIEW	JEK	DDP	DDP	072808

TITLE

OFFICE/WAREHOUSE EMERGENCY EVAC. PLAN

SAFETY-KLEEN SYSTEMS, INC.
2600 N. CENT.. EXPRESSWAY STE. 400 RICHARDSON, TX. 75080
PHONE 800-669-7540

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
3/16"=1'	JEK	NC	NC	NC	1/28/13

SERVICE CENTER LOCATION	SC-DWG. NO.	REV. NO.
BOISE, ID.	7114-0B00-003	B

Exhibit G-5

Site Emergency Evacuation Plan

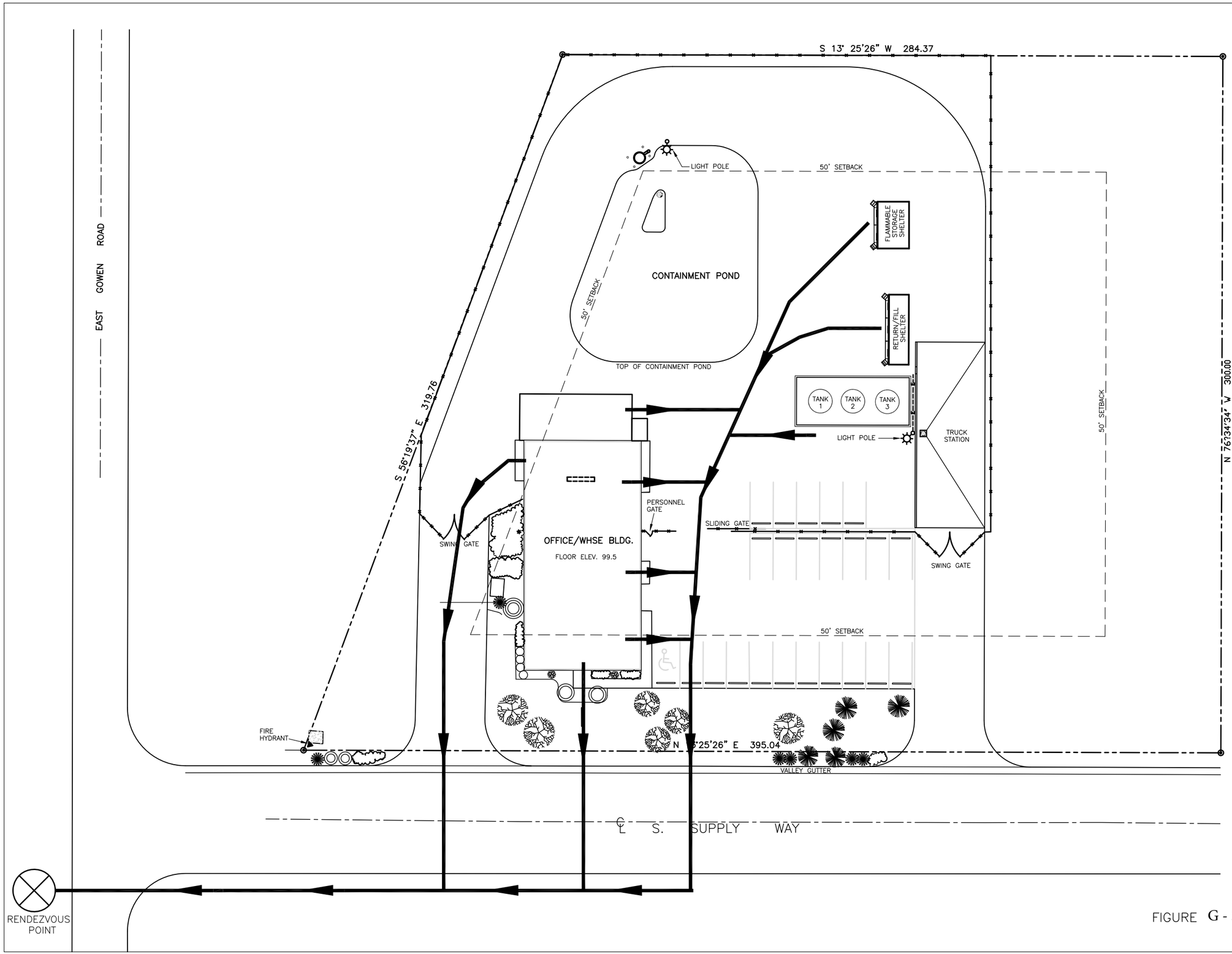

FIGURE G - 5

GENERAL NOTES

LEGEND

EVACUATION ROUTES

TANK LEGEND

TANK NO.	TANK VOLUME	TANK CONTENTS	REMARKS
1	12,000 USG	USED MINERAL SPIRITS	10'-6" F&D BOTTOM TANK
2	12,000 USG	OUT OF SERVICE	10'-6" F&D BOTTOM TANK FORMER 105 CMS TANK
3	12,000 USG	CLEAN 150° MINERAL SPIRITS	10'-6" F&D BOTTOM TANK

REVISIONS

NO.	DESCRIPTION	BY	CHK	APPR	DATE
A	RELEASED TO WEY FOR REVIEW	MBH	KJM	WEY	053196
B	ADDED LANDSCAPPING	MBH	KJM	WEY	053196
C	REVISED FOR PERMIT	JEK	NC	NC.	012813

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TITLE

SITE EMERGENCY EVAC PLAN

SAFETY-KLEEN SYSTEMS, INC.
2600 N. CENT. EXPRESSWAY STE. 400 RICHARDSON, TX. 75080
PHONE 800-669-5740

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
1"=20'-0"	JKM				05-31-96

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
BOISE, ID	7114-SP00-003	C

120601

HWMA/RCRA STORAGE PERMIT

for the

SAFETY-KLEEN SYSTEMS, INC., BOISE SERVICE CENTER

ATTACHMENT 8 – CLOSURE PLAN

Section I Closure Plans and Financial Requirements

Closure Cost Estimate

Closure Schedule

EFFECTIVE DATE: JULY 29, 2015

Section I Closure Plans and Financial Requirements

I-1 270.14(b)(13) Closure Plans

GENERAL INFORMATION

This closure plan provides for the closure of the hazardous waste management units (HWMU) at the Safety-Kleen Boise facility.

The hazardous waste units which require closure include:

- Tank Storage – One 12,000-gallon aboveground storage tank and concrete dike area for secondary containment and associated ancillary equipment.

- Tank System Subpart X Return and Fill Station – One drum washer situated within the return and fill dock structure with secondary containment. The drum washer has a capacity of 162 gallons. (Note: The wet dumpster which was part of the continued use program was never included in the RCRA permit. Therefore, the equipment for the continued use program was not subject to closure. This is a non-RCRA unit and was removed in December of 2014 from the R&F and recycled as scrap metal.)

- Container Storage – Two container storage areas (CSA). CSA-1 has approximately 912 square feet with a total storage capacity of 5,620 gallons, while CSA-2 (Flam Shed) has approximately 300 square feet with a total storage capacity of 2,700 gallons.

The maximum inventory of wastes based on the permitted capacities above is 20,482 gallons.

S-K has developed this generalized closure plan for decontamination of the HWMUs at the site.

The closure plan includes the following:

- The estimated expected year of closure and a closure schedule.
- An estimate of the maximum inventory of waste in storage at any time during the active life of the facility for development of the closure cost estimate.
- Notification procedures.
- A description of how and when the facility will be partially and/or finally closed.
- A description of decontamination procedures to be implemented during closure.
- Procedures for certification of closure activities by SK and an independent professional engineer.

I-1a 270.14(b)(13); 264.111 Closure Performance Standard

The Boise Service Center operates as a storage facility for hazardous wastes. The HWMUs will be closed in accordance with the closure requirements of 40 CFR 264.110 through 40 CFR 264.115. Closure of the facility will be carried out in accordance with the steps outlined in this plan and applicable Federal and State regulations. The closure cost estimate, which is based on a third party implementing closure, is included in Exhibit I-1. The closure plan and closure cost estimate, as part of the permit, will be kept on site. Hazardous wastes will be removed or remediated from the facility to a level that is protective of human health and the environment, thereby achieving clean closure and eliminating the need for further maintenance and care. Upon completion of closure activities, the need for post-closure maintenance will be eliminated.

I-1b	***270.14(b)(13); 264.112(b)(1) through 264.112(b)(7)***	***Time and Activities Required for Partial Closure and Final Closure Activities***

The HWMUs subject to closure are identified in section I-1. The units include one aboveground storage tank system, a return and fill station with one wet dumpster/drum washer (Subpart X, Miscellaneous Unit), two container storage areas located in the warehouse and stand-alone storage shed in the yard. This closure plan identifies steps necessary to conduct facility closure, or closure of a unit (partial closure) at any point during its intended life.

RCRA UNIT CLOSURE ACTIVITIES

Partial or facility closure will be implemented in accordance with this plan and any subsequent modifications. The contractor selected to implement closure will be required to prepare a health and safety plan for their personnel in accordance with applicable regulations. The health and safety plan shall be kept on-site during the closure activities.

ABOVEGROUND TANK AND ASSOCIATED PIPING

The aboveground storage tank is located within a concrete secondary containment area.
At facility closure or partial closure (i.e. closure of a tank unit) the following will generally be necessary to remove hazardous waste and waste residues: 1) opening of the tank and removal of wastes, 2) decontamination of the tank interior and piping, and 3) decontamination of the containment area, unless other permitted tanks remain. These procedures are briefly described below. The secondary containment area may be left in place after decontamination or removed.

OPENING OF THE TANK AND REMOVAL OF WASTE

To safely open the tank and remove the waste material the following activities will be conducted:

a) Waste material from the tank will be removed using a pump, tanker truck pump (for used solvent), vacuum truck (for heavy sludge) or similar equipment. All waste material will be transported to a permitted hazardous waste TSDF for reclamation and/or disposal.

b) Following removal of free-liquid wastes to the extent practicable, the aboveground waste tank's side manway will be removed, allowing access to remove residual waste and sludge from the bottom of the tank. Depending on the quantity and consistency of residual wastes, it may be removed using shovels, squeegees etc., and transferred to drums, or may be removed with a pump and stinger during tank decontamination (described below). Care must be exercised to minimize spark generation when working on the tank, including opening the manway. An effort will be made to remove as much liquid and sediment as possible.

Storage tanks are considered confined spaces (i.e. spaces open or closed having a limited means of egress in which poisonous gases or flammable vapors might accumulate or an oxygen deficiency might occur), and confined space entry requires special procedures. Confined space entry will be conducted in accordance with 29 CFR 1910.146. Tank entry procedures will be specified in the site health and safety plan. In all cases, personnel performing closure activities must have completed 40-hour OSHA hazardous waste training requirements (29 CFR 1910.120).

Prior to entering the tank, personnel should have appropriate respiratory protective equipment and protective clothing. Once the tank has been opened, they must be provided with positive ventilation. The tank will then be inspected to determine the approximate quantity and physical conditions of any residual waste material, as well as the integrity of the tanks system.

Procedures for purging or venting tanks are described in API RP1604 "Removal and Disposal of Used Petroleum Storage Tanks" and OSHA "Permit Required Confined Spaces" (29 CFR 1910.146). The contractor will monitor vapors to ensure the tank atmosphere has combustible gas concentrations of less than 10% of the lower explosive limit (LEL).

TANK DECONTAMINATION PROCEDURES

Once residual wastes are removed, the tank and piping will be decontaminated. Decontamination procedures will be generally consistent with the following:

a) Visually inspect tank for evidence of leakage.

b) The tank interior will be washed with a detergent-water solution and high-pressure spray. The interior may also be scraped and/or squeegeed, as needed, to remove residual waste material. Pressure washing will continue until the tank interior is visually clean, and then triple rinsed. The quantity of wash water will be kept to a minimum to reduce the amount required for treatment/disposal

c) Disconnect and decontaminate all appurtenant piping and pumping equipment.

d) Visually inspect appurtenant piping, equipment or underlying surfaces for evidence of leakage (i.e. staining and residue). The piping will be decontaminated with a detergent-water solution, rinsed with tap water, and either reused or removed and cut into manageable sized pieces for disposal as scrap.

e) Remove tank, piping and appurtenant equipment for offsite reuse, disposal, or sell as scrap. The tank may also remain onsite after decontamination. Any potential value realized for salvage was not included in the closure cost estimate.

f) Transport and dispose of all waste material generated during the project.

g) If the tank and piping will be processed as scrap metal following decontamination [i.e. the decontaminated structures no longer meet the definition of solid or hazardous waste in 40 CFR 261], rinsate sampling will not be required. Any potential value realized for salvage was not included in the closure cost estimate.

The detergent to be used will be Safety-Kleen Heavy Duty Cleaner/Degreaser or equivalent. This is a fast acting industrial cleaner, degreaser and stripper that removes oil, floor finish, carbon, caked grease and soil of all kinds. A special formulation combining biodegradable detergents for nor normal soils and water miscible solvents for effective, oil and grease removal. Nonflammable. Low foaming. Heavy Duty Cleaner/Degreaser is recommended for use on concrete, terrazzo and resilient tile floors, greasy walls and stoves and ventilating hoods. This product will etch glass and aluminum under certain conditions. See Exhibit I-5.

REMOVAL OF THE TANK

Following removal of wastes and decontamination activities, the tank may remain onsite, be removed and transported to an offsite location, or scrapped. If the tank is to be transported offsite or scrapped, the following procedures will be observed to safely remove the tanks:

a) Disconnect appurtenant piping.
b) Disconnect appurtenant pumping equipment.
c) If the tank is to be scrapped, the tanks and associated equipment will be removed and recycled in accordance with IDAPA 58.01.05.008 [40 CFR 261.1(c)(6) and (7)]. Verification of destruction will be provided by the contractor or scrap metal facility.
d) If the tank is to be reused (either remaining onsite or transported offsite) following decontamination, the final rinsate from the metal structure will be sampled. Rinsate sampling is adequate to verify decontamination since the interior tank surface is metal. The rinsate sample will be analyzed for VOCs, SVOCs, and metals. Rinsate sampling results will be compared to Maximum Contaminant Levels (MCLs) for drinking water to evaluate the effectiveness of decontamination.

DECONTAMINATION OF THE TANK CONTAINMENT AREA

At the time of facility closure, the tank containment area will be inspected and decontaminated in accordance with the following general procedures. Unless otherwise specified, the decontaminated containment structure will be left in place at the time of closure.

a) The tank containment area dike and slab area will be inspected by an independent Professional Engineer for the presence of cracks, fissures, missing seals, etc. If visible cracks or gaps in the containment are found during inspection, they shall be sealed prior to commencement of cleaning to prevent migration of rinsate outside of the containment area. In addition, if unsealed cracks are fully penetrating, the underlying soil will be sampled during closure as described below.

b) The containment dike will be washed using a non-phosphate detergent/water solution and high-pressure spray. Prior to pressure washing, the containment area surfaces will be sprayed with a non-phosphate detergent/water solution and scrubbed with a stiff-bristle broom. Areas with staining or scale will be scrubbed and/or scraped to remove residue to the extent practicable. A pressure washer unit will be used to perform the final decontamination activities. Following the final wash, the area will be triple rinsed with tap water.

c) The containment area will be visually inspected following decontamination. Areas noted with staining or residue will be rewashed as appropriate. A concrete chip sample will be collected and analyzed for similar constituents as for the tank system, described above (i.e. volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and RCRA metals). A concrete chip sample is required because the concrete surface may be pervious, since it is not coated with an epoxy coating. Results of the concrete chip sample will be compared to appropriate screening levels to verify effective decontamination. Decontamination will be considered adequate if the levels of any detected constituents meet screening levels for commercial exposure. If the results exceed these criteria, the certifying engineer will evaluate appropriate steps to verify that hazardous wastes and waste residues have effectively been removed.

d) The decontamination wash water, generated during decontamination, will either be managed as a hazardous waste and transported for treatment/disposal at an appropriately permitted TSDF or characterized as non-hazardous waste and treated or disposed in accordance with applicable regulations as required.

e) Soil samples will be collected if necessary; based on the engineer's inspection. If collected, soil samples will be analyzed in accordance with applicable requirements, and as described below in the sampling plan.

f) As an alternative to leaving the containment in place, the decontaminated concrete containment structure may be demolished and transported offsite for recycling or disposal. The area may be backfilled and graded as necessary to match surrounding elevation.

SOLVENT RETURN AND FILL STATION

The drum washer unit is housed within the return and fill station and is used to collect and return the used parts washer solvents to the waste storage tank via piping from the drum washer to the waste tank. The dock structure and underlying containment provides secondary containment to the drum washer. At the time of final facility closure or partial closure the following steps will be conducted:

a) The sediment in the drum washer, if any, will be removed and containerized, labeled, and manifested as a hazardous waste and transported to a permitted hazardous waste TSDF.

b) The drum washer, dock area and metal secondary containment area will be washed with a detergent solution and rinsed using similar procedures as described above for the waste storage tank and ancillary equipment.

c) Visible cracks or gaps in the containment (if present) shall be sealed prior to commencement of cleaning to prevent migration of rinsate outside of the containment area.

d) Following decontamination, the drum washer and return/fill components will be visually inspected. Areas noted with staining or residue will be rewashed as appropriate. The clean drum washer unit and dock structure may remain onsite or it may be scrapped. If the return and fill dock structure or dumpster/drum washer remains onsite, a sample will be collected of the final rinsate from the metal structure to verify effectiveness of the decontamination. The rinsate sample(s) will be analyzed for similar constituents as described above for the tank system. If the return and fill station and/or components will be scrapped during closure, rinsate samples will not be collected. The decontamination wash/rinsate water may be discharged through the appurtenant piping system into the storage tank, which will be subjected to a separate closure procedure as described above or containerized in an appropriate storage device. The wash/rinse water will be managed as a hazardous waste and treated or disposed of at a permitted TSDF or characterized as non-hazardous waste and treated or disposed in accordance with applicable regulations.

e) The secondary containment at the return and fill will be decontaminated using procedures consistent with those described for the tank containment area.

f) Following decontamination, the containment will be inspected by an independent Professional Engineer for the presence of cracks, fissures, missing seals, etc. If a breach in the steel containment pan(s) is observed that may have allowed a release, the Professional Engineer will inspect the underlying concrete pad for the presence of cracks, fissures, missing seals, staining, etc. If fully penetrating cracks are present, the underlying soil will be sampled during closure as described below.

CONTAINER STORAGE AREA 1

The container storage area is used to store/accumulate containers of used materials (e.g. used parts washer solvent, used immersion cleaner, dry cleaning waste, tank or drum washer sediment, or other non-regulated wastes or products). At the time of facility closure or partial closure of the container storage area, waste inventory will be removed and transported under manifest to a permitted hazardous waste TSDF. The contents of the drums will be treated or disposed of at a permitted TSDF.

At the time of facility closure or partial closure, the following steps will be conducted:

a) The concrete floor, containment trenches and grating will be high pressure cleaned with a detergent-water solution and triple rinsed with tap water. The container storage area will be visually inspected following decontamination. Areas noted with staining or residue will be rewashed as appropriate. The wash/rinse water will be managed as a hazardous waste and treated or disposed of at a permitted TSDF.

b) Since the container storage area floor has an impervious epoxy coating, a sample of the final rinsate will be collected and analyzed for VOCs, SVOCs, and metals to verify decontamination as described above.

c) The rinsate sample results will be used to verify the effectiveness of decontamination.

Decontamination of the concrete will be repeated as necessary, until the clean levels have been met.

d) Following decontamination of the container storage area, the floor, curbing, and containment trenches will be inspected by an independent registered Professional Engineer. If the independent Professional Engineer determines that the unsealed cracks are fully penetrating, the underlying soil will be sampled during closure as described below.

The rinsate samples will be collected under the supervision of the certifying engineer to ensure that the sample is representative of the decontaminated surface. Typically, this is performed by pouring water from the final rinse across the surface and collecting in sample containers. For containment areas, water is generally directed to a low point in the containment, such as a sump, which facilitates sample collection. For the tank and drum washer, rinse water is typically accumulated in the bottom of the unit. Rinse water is then transferred to sample containers.

CONTAINER STORAGE AREA 2 (Flam Shed)

Container Storage Area 2 (Flam Shed) is used to store containers of paint waste and mineral spirits in containers prior to shipment to a reclaimer. At closure, the contents of the container storage area will be removed and transported to a permitted hazardous waste management facility after proper packaging, labeling and manifesting.

At the time of facility closure or partial closure, the following steps will be conducted:

a) The interior portion of the shelter will be high pressure cleaned with a detergent-water solution and triple rinsed with tap water. The storage area will be visually inspected following decontamination. Areas noted with staining or residue will be rewashed as appropriate. The wash water/rinsate wastes from the CSA-2 closure process will be reclaimed or properly treated at a permitted facility.

b) The structure of CSA-2 will remain onsite, or scrapped following decontamination. If the shelter is to remain onsite for reuse, a sample will be collected of the final rinsate from the metal structure. The rinsate sample(s) will be analyzed for VOCs, SVOCs, and metals to verify decontamination as described above. If the shed, and/or components will be scrapped during closure, rinsate samples will not be collected.

c) Following decontamination of CSA-2 area, the floor, grating, curbing, and containment pans will be inspected by an independent registered Professional Engineer (or designate). The inspection will document any potential lapses of integrity that may have allowed potential migration of wastes outside the shelter containment area. If potential lapses in integrity are noted by the Engineer and determined to have the potential for wastes to migrate to underlying soils, soil sample(s) will be collected from immediately beneath the area(s) in question in accordance with the procedures below.

I-1c ***270.14(b)(13); 264.112(b)(3)*** ***Maximum Waste Inventory***

The maximum inventory of wastes based on the permitted capacities above is 20,482 gallons.

I-1d	***270.14(b)(13); 264.112(b)(6)***	***Schedule for Closure***
I-1d(1)	***270.14(b)(13); 264.112(b)(2); 264.113(a) and (b)***	***Time Allowed for Closure***

Within 90 days of receiving the final volume of hazardous wastes, Safety-Kleen will remove all hazardous wastes from the site in accordance with the approved closure plan. The Idaho Division of Environmental Quality may approve a longer period if Safety-Kleen demonstrates that the activities required to comply with this paragraph will, of necessity, take longer than 90 days to complete or the following requirements are met:

a. the facility has the capacity to receive additional wastes;
b. there is a likelihood that Safety-Kleen or a person other than Safety-Kleen will recommence operation of the site; and/or
c. closure of the facility is incompatible with continued operation of the site. In this case, Safety-Kleen will take all steps necessary to prevent threats to human health and the environment.

A timeline for the closure schedule is included as Exhibit I-2.

Safety-Kleen will complete closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of wastes or upon IDEQ approval of the closure plan and procedures, whichever is later.

I-1d(1)(a)	***270.14(b)(13); 264.113(a) and (b)***	***Extension for Closure Time***

Safety-Kleen will complete the closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of wastes. Safety-Kleen may petition the Idaho DEQ for an extension to the closure period to ensure that the facility has achieved clean closure levels that are protective of human health and the environment.

I-1e	***270.14(b)(13); 264.112; 264.114***	***Closure Procedures***
I-1e(1)	***270.14(b)(13); 264.112(b)(3)***	***Inventory Removal***

In the first 90 days, once closure is initiated, all current inventories will be removed from the site. As described in section 1-1b any waste containers remaining in CSA-1 or CSA-2 will be removed and transported under manifest to a permitted hazardous waste TSDF. The contents of the drums will be treated or disposed of at a permitted TSDF. Any sediment or solvent in the Return and Fill will be containerized similarly shipped to a permitted TSDF or pumped into the waste solvent tank. The remaining solvent and any sediment in the waste solvent tank will be removed

and transported under manifest in containers or a bulk tanker to a permitted hazardous waste TSDF. Closure costs for these activities are based on use of a third party vendor.

I-1e(2)	***270.14(b)(13); 264.112(b)(4); 264.114***	***Disposal or Decontamination of Equipment, Structure, and Soils***

DECONTAMINATION OF CLEANUP EQUIPMENT

Equipment used during decontamination activities will be cleaned along with and within the respective secondary containment structure. Therefore the anticipated amount of wash water to decontaminate equipment was included in the estimated quantity generated for each unit. Small consumable equipment (e.g. mops, rags, disposable PPE, etc.), which cannot be cleaned will be containerized, managed as a hazardous waste and disposed of at a permitted TSDF, or characterized as non-hazardous waste and treated or disposed in accordance with applicable regulations.

SK does not anticipate that heavy equipment, such as cranes and backhoes, will come into contact with hazardous wastes. For example, a crane may be used to remove the storage tank, but only after the tank has been decontaminated. Therefore, an equipment decontamination area should not be necessary during closure. However, if necessary, heavy equipment will be cleaned by scraping, brushing and/or using a pressure washer with a non-phosphate detergent/water solution with tap water rinse. The wash/rinse water will be containerized and managed as a hazardous waste and disposed of at a permitted TSDF or characterized as non- hazardous waste and treated or disposed in accordance with applicable regulations.

Soil Sampling

If the results of the inspections conducted at closure for the HWMU's described above indicate lapses of integrity may exist in the secondary containment system(s) that may have allowed the potential for waste to migrate to underlying soils, soil samples will be collected. If lapses of integrity are found that may have allowed wastes to migrate to underlying soils, soil samples will be collected as recommended by the certifying Professional Engineer along the length of an identified crack or gap.

If potential lapses of integrity are noted during the inspection of a concrete containment structure, a coring device will be used to allow collection of a sample from beneath the concrete surface. If the tank secondary containment area is removed, soil samples will be collected from areas that exhibit waste-related staining, if present.

Soil samples will be collected from native soil beneath the concrete and/or any gravel sub-base using an appropriate method of sample collection (e.g. core sampler, auger, etc.). A clean sampling device will be used to obtain the soil. The soil-filled sampler will be extracted so that soil can be directly transferred to appropriate sample containers supplied by the laboratory for the specific analysis being conducted. The laboratory will be advised of the required analysis prior to closure to ensure that the appropriate sample containers will be provided for the requested

analyses. Soil samples, as well as field and equipment blanks, field duplicates, whether preservative is required for any sample containers, and analytical hold-times will be in accordance with EPA procedures for the specified analyses.

The samples will be placed on ice in a sample cooler and shipped under chain-of-custody protocol to a laboratory for analysis. Soil samples submitted for analysis will be delivered to an Idaho-certified laboratory for analysis using appropriate EPA analytical protocol, and analyzed for compounds representative of the wastes that were permitted for storage in the unit (VOCs, SVOCs, and metals). Analytical results from soil sampling will be forwarded to DEQ in the closure documentation report.

If constituents are detected, the concentrations may be compared to appropriate risk-based clean-up levels to determine whether clean closure has been achieved and the HWMU's meet the closure performance standard. If constituents are detected at concentrations above appropriate risk-based cleanup levels, Safety-Kleen will prepare a closure plan amendment(s) that describes procedures for additional assessment and/or remediation that may be necessary to achieve clean closure.

I-1e(3)	***270.14(b)(13);***	***Closure of Disposal Units/Contingent Closures***
I-1e(3)(h)	***Thru 270.14(b)(13); 264.228(a)(2)(iii); 264.310(a)***	***Freeze/Thaw Effects***

Sections I-1e(3) thru 1-1e(3)(h),Closure of Disposal Units, does not apply to the Safety-Kleen Boise facility as it does not have a Surface Impoundment or Landfill.

I-1e(4)	***270.14(b)(13); 264.178; 264.112(b)(3)***	***Closure of Containers***

At time of closure all hazardous waste and hazardous waste residues will be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues will be decontaminated or removed as described above in section I.

I-1e(5)	***270.14(b)(13); 264.197; 264.112(b)(3)***	***Closure of Tanks***

At closure of a tank system, Safety-Kleen will remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structure and equipment contaminated with waste, and manage them as hazardous waste, unless 40 CFR 261.3(d) applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems will meet all of the requirements specified in 40 CFR 264 subparts G and H and are described elsewhere in this section.

While Safety-Kleen has every expectation of a clean closure, if we find that not all contaminated soils can be practicably removed or decontaminated as required in the prior paragraph, then Safety-Kleen will close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills (40 CFR 264.310). In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the Safety-Kleen will meet all of the requirements for landfills specified in 40 CFR 264 subparts G and H.

I-1e(6)	***270.14(b)(13); 270.18(h); 264.258***	***Closure of Waste Piles***
	Thru	
I-1e(10)	***270.14(b)(13); 264.1102***	***Closure of Land Treatment Units***

Sections I-1e(6) thru 1-1e(10) and I-1e(12) and (13) do not apply to the Safety-Kleen Boise facility as it does not have a Waste Pile, Surface Impoundment, Incinerator, Landfill, Land Treatment Unit, Boiler or Industrial Furnace, or Containment Building.

I-1e(11)	***270.14(b)(13); 264.1102***	***Closure of Miscellaneous Unit***

At closure of a miscellaneous unit, Safety-Kleen will remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structure and equipment contaminated with waste, and manage them as hazardous waste, unless 40 CFR 261.3(d) applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for miscellaneous units will meet all of the requirements specified in 40 CFR 264 subparts G and H and are described elsewhere in this section.

I-2	***270.14(b)(13);***	***Post-Closure Plans***
	Thru	
I-2g	***270.14(b)(13); 264.118(b)(3)***	***Post-Closure Contact***

Sections I-2 thru 12g on Post-Closure Plans do not apply to the Safety-Kleen Boise facility as it expects to clean close the sites. Any spills that occur on the site are cleaned up immediately.

I-3a	***270.14(b)(13); 264.115, 264.280***	***Certification of Closure***

When closure activities are completed, Safety-Kleen shall submit to the Idaho Division of Environmental Quality certification, both by the operator and a qualified independent registered professional engineer, that the facility has been closed in accordance with the approved closure plan. The closure certification will be presented in a Closure Certification Report, which will be prepared in accordance with applicable portions of 40 CFR 264.115. Information contained in the closure report will include a brief site history, site plan, closure field notes, documentation of decontamination procedures, photo-documentation, soil sampling locations (if required), laboratory analytical reports, tabular summaries of analytical results, volumes of wastes removed, copies of waste manifests, etc.

Any deviations from the approved closure plan will also be documented in the report. The Closure Certification Report will be submitted within 60 days of completion of the closure activities.

I-3b	***270.14(b)(13); 264.116***	***Survey Plat***
I-3c	***270.14(b)(13); 264.120***	***Post-Closure Certification***
I-3d	***270.14(b)(13); 270.14(b)(14); 264.119***	***Post-Closure Notices***

Sections I-3b thru I-3d Survey Plats of land disposal units and Post-Closure do not apply to the Safety-Kleen Boise facility as it has no land disposal units and expects to clean close the site.

I-4	***270.14(b)(15); 264.142***	***Closure Cost Estimate***

The most recent detailed written closure cost estimate in current dollars for closing the facility in accordance with the approved closure plan. The Closure Cost Estimate Worksheet is included as Exhibit I-1. Estimate is based on third party closing facility. Estimate is adjusted for annual inflation as stated in 40 CFR 264.142(b). Estimates do not assume zero cost for hazardous waste handling, and do not incorporate salvage value, facility structures/equipment, land, or other facility assets as offsets. The costs on this worksheet are derived using US EPA's CostPro cost estimating tool.

I-5	***270.14(b)(15); 264.143; 264.151***	***Financial Assurance for Closure***

The facility has established financial assurance that covers the closure cost estimate. The closure cost estimate is adjusted annually to reflect inflation, in accordance with and as required by and detailed in 40 CFR 264.142(b) and (c). Safety-Kleen maintains an insurance certificate for closure, as included in Exhibit I-3. This will be updated to the new amount in the Part B after approved by Idaho DEQ.

I-5a	***270.14(b)(15); 264.143(a); 264.151(a)(1)***	***Closure Trust Fund***
Thru		
I-5g	***270.14(b)(15); 264.143(h)***	***Use of Multiple Financial Mechanism for Multiple Facilities***

The facility does not have an alternative financial mechanism such as a trust fund as noted in section 1-5a to 1-5g. Therefore, this section does not apply.

I-6	***270.14(b)(16); 264.144***	***Post-Closure Cost Estimate***

As the facility expects a clean closure the Post-Closure Cost estimate does not apply.

I-7	***270.14(b)(16); 264.145; 264.151***	***Financial Assurance Mechanism for Post Closure Care***
I-7g	***Thru 270.14(b)(16); 264.145(h)***	***Use of Multiple Financial Mechanism for Multiple Facilities***

As the facility expects a clean closure, the section I-7 to I-7g; Financial Assurance Mechanism for Post-Closure care, do not apply.

I-8	***270.14(b)(17); 264.147***	***Liability Requirements***
I-8a	***270.14(b)(17); 264.147(a)***	***Coverage for Sudden Accidental Occurrences***

Coverage for sudden accidental occurrences of at least $1 million per occurrence with annual aggregate of at least $2 million is maintained. A copy of the Hazardous Waste Facility Certificate of Liability Insurance is included in Exhibit I-4.

I-8a(1)	***270.14(b)(17); 264.147(a)(1)***	***Endorsement of Certification***

Safety-Kleen's original Hazardous Waste Facility Liability Certificate of Liability wording is identical 264.151(j). Each insurance policy is issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

I-8a(2)	***270.14(b)(17); 264.147(a)(2), (f) , (g);264.151(f),(g)***	***Financial Test and Corporate Guarantee for Liability Coverage***

The facility does not use a Corporate Guarantee for liability coverage. Therefore, this section does not apply.

I-8a(3)	***270.14(b)(17); 264.147(a)(3)***	***Use of Multiple Financial Mechanism***

The facility does not use Multiple Financial Mechanism for liability coverage. Therefore, this section does not apply.

I-8b	***270.14(b)(17); 264.147(b)***	***Coverage for Nonsudden Accidental Occurrences***

Safety-Kleen Boise does not meet the definition of a high risk storage facilities, surface impoundments, land disposal, land treatment facilities. Therefore the insurance requirements under this section do not apply.

Exhibit I-1

Closure Cost Estimate Worksheet

Table 1. Closure Cost Estimate Worksheet, Safety-Kleen Branch Service Center, **[Boise, ID]**

Activity	Category	Hourly Rate or Unit Charge	Hours or Unit Estimate	Subtotal Cost
1. INVENTORY REMOVAL				
Assumptions			**Capacity (gallons)**	
- Waste mineral spirits tank(s) is full				
-Tank One			12000	
-Tank Two (IF APPLICABLE)			0	
	Total Tank Capacity		12000	
- Return/Fill station is full				
-Maximum capacity of drum washers added to waste mineral spirits tank quantity			162	
- Container storage area(s) full				
-CSA 1			5620	
-CSA 2 (IF APPLICABLE)			0	
	Total CSA Capacity		5620	
- Flammable materials storage shelter is full (IF APPLICABLE)			2700	
Subcontractor Costs				
- Transfer tank contents to tankers				
Tank Capacity (total gallons)			12162	
Work Rate to Unload Tank Capacity (hours per gallon)			0.0003	
Total Hours to Unload			3.6	
Labor and equipment rate to unload (PPE Level D) and cost	Labor/equipment	$175.95	3.6	$642
- Transport waste mineral spirits to a TSD for treatment/disposal				
Number of tanker trailers required (6,000 gallons max each load)			3	
Cost per mile =$5.64/mile				
Mileage = 300 miles (Number in second column is 300 miles x number trucks)	Transport = 300 miles each	$5.64	900	$5,076
Disposal/treatment cost (per gallon - low cost based on suitability for fuel)	TSD @$0.45/gallon	$0.450	12162	$5,473
- Transfer drums from CSA(s) to trucks				
Labor/Equipment (PPE Level D)	Labor/equipment per drum	$3.57	103	$368
(Number in second column is number of drums determined from total CSA capacity)				
- Transfer drums from Flammable Materials Storage Shed to trucks with forklift				
Labor/Equipment (PPE Level D)	Labor/equipment per drum	$3.57	50	$179
(Number in second column is number of drums determined from flam shed capacity)				
- Transport drums to TSD for Treatment/Disposal				
Total Number of Drums (Number is total of CSA drums and Flam Shed drums)			153	
Total Number of Trucks Required to Transport Drums (84 per truck max)			2	
Cost per mile =$5.64/mile				
Mileage = 300 miles (Number in second column is 300 miles x number of trucks)	Transport trailer(s) x 300 miles	$5.64	600	$3,384
Disposal/treatment cost (per drum - low cost based on suitability for fuel)	TSD @ $90/drum	$90	153	$13,770
Activity 1. Subtotal				$28,891

Table 1. Closure Cost Estimate Worksheet, Safety-Kleen Branch Service Center, **[Boise, ID]**

Activity	Category	Hourly Rate or Unit Charge	Hours or Unit Estimate	Subtotal Cost
2. STORAGE TANK DECONTAMINATION				
Assumptions:				
- The tanks, piping and appurtenant equipment are decontaminated and remain in place				
- Rinsate sampling necessary because the tank will remain in place. Assumes 1 rinsate sample per tank.				
- Includes decontamination of the containment area				
- Assumes containment area to remain in place following decontamination				
- Assumes 1 concrete chip sample required to leave containment in place				
- Assumes 2 soil samples required from beneath containment area. Actual number of samples will be based on engineer's inspection.				
- Tank Interior Square Footage (based on tank volume) and includes 130 feet of piping			**Square Footage**	
- Tank 1			781	
- Tank 2 (IF APPLICABLE)			0	
- Piping (130 feet)			68	
	Total Tank Interior Square Footage		849	
- Tank Farm Containment Square Footage (includes floor and walls)			1408.25	
Prime Contractor Costs				
-Costs for oversight and engineers inspection included in Closure Certification Activity below				
- Collect Rinsate Sample(s) (1 per tank) and 1 concrete chip sample from containment				
Work Rate for Sampling (hours per sample)			0.5000	
Number of Samples			2	
Labor and equipment per work hour (PPE Level D)	Labor/equipment	$91.88	1.00	$92
- Drilling for Soil Samples (2.5 in boring to 1 ft each)				
Work Rate for Drilling (hours per foot)			0.3050	
Number of Feet (subslab sample depth = 1 foot each)			2	
Labor and equipment per work hour (PPE Level D)	Labor/equipment	$146.29	0.61	$89
- Collect Soil Samples				
Work Rate for Sampling (hours per sample)			0.5000	
Number of Samples			2	
Labor and equipment per work hour (PPE Level D)	Labor/equipment	$91.88	1.00	$92
Subcontractor Costs				
- Decontaminate waste AST, piping and appurtenant equipment				
Work Rate to Pressure Wash (hours per square foot)			0.0405	
Area of Tanks to be decontaminated			849	
Labor and equipment for tank decon (PPE Level C)	Labor/equipment	$97.23	34	$3,342
Add additional low-cost miscellaneous labor items				$750
- Decontaminate Tank Containment Area				
Work Rate to Pressure Wash 1 sq ft (hours per square foot)			0.0405	
Total Area of Containment (includes walls and floor)			1408	
Labor and equipment for CSA decon (PPE Level D)	Labor/equipment	$65.77	57	$3,751
Laboratory Subcontractor Costs				
- Analyze rinsate sample(s) from tank(s) and concrete chip from containment area for VOCs, SVOCs, and RCRA metals	VOCs @ $189/sample SVOCs @ $359/sample 8 RCRA Metals @ $110/sample Total per sample cost	$658	2	$1,316
- Analyze soil sample(s) from containment area for VOCs, SVOCs and RCRA metals	VOCs @ $189/sample SVOCs @ $359/sample 8 RCRA Metals @ $110/sample Total per sample cost	$658	2	$1,316

Table 1. Closure Cost Estimate Worksheet, Safety-Kleen Branch Service Center, **[Boise, ID]**

Activity	Category	Hourly Rate or Unit Charge	Hours or Unit Estimate	Subtotal Cost
Activity 2. Subtotal				$10,748
3. DECONTAMINATE THE RETURN/FILL STATION				
Assumptions:				
- Decontamination shall consist of washing with detergent/water solution and rinsing with high-pressure spray				
- Return/Fill structure and dock area will remain in place following decontamination				
- Drum washers to remain in place or sent offsite for reuse following decontamination				
- Rinsate sampling required from each drum washer to remain in place or sent offsite for reuse, and from containment				
- Assumes 2 soil samples required from beneath containment area. Actual number of samples will be based on engineer's inspection				
- Square footage used for decontamination includes containment, dock and drum washer units			**Square Footage**	
			1200	
Prime Contractor Costs				
-Costs for oversight and engineers inspection included in Closure Certification Activity below				
- Collect Rinsate Samples (1 per drum washer plus containment)				
Work Rate for Sampling (hours per sample)			0.5000	
Number of Samples			2	
Labor and equipment per work hour (PPE Level D)	Labor/equipment	$91.88	1.00	$92
- Drilling for Soil Samples (2.5 in boring to 1 ft each)				
Work Rate for Drilling (hours per foot)			0.3050	
Number of Feet (subslab sample depth = 1 foot each)			2	
Labor and equipment per work hour (PPE Level D)	Labor/equipment	$146.29	0.61	$89
- Collect Soil Samples				
Work Rate for Sampling (per sample)			0.5000	
Number of Samples			2	
Labor and equipment per work hour (PPE Level D)	Labor/equipment	$91.88	1.00	$92
Subcontractor Costs				
- Decontaminate waste AST, piping and appurtenant equipment				
Work Rate to Pressure Wash (hours per square foot)			0.0405	
Area of Returen/Fill to be decontaminated			1200	
Labor and equipment for tank decon (PPE Level C)	Labor/equipment	$97.23	49	$4,725
Laboratory Subcontractor Costs				
- Analyze 1 rinsate sample per drum washer and containment for VOCs	VOCs @ $189/sample SVOCs @ $359/sample 8 RCRA Metals @ $110/sample Total per sample cost	$658	2	$1,316
- Analyze soil sample(s) from containment area for VOCs, SVOCs and RCRA metals	VOCs @ $189/sample SVOCs @ $359/sample 8 RCRA Metals @ $110/sample Total per sample cost	$658	2	$1,316

Table 1. Closure Cost Estimate Worksheet, Safety-Kleen Branch Service Center, **[Boise, ID]**

Activity	Category	Hourly Rate or Unit Charge	Hours or Unit Estimate	Subtotal Cost
Activity 3. Subtotal				$7,630
4. DECONTAMINATE CONTAINER STORAGE AREA(S)				
Assumptions:				
- Decontamination shall consist of washing with a detergent water solution and rinsing with a high-pressure spray				
- CSA(s) to remain in-place following closure				
- Decontamination of CSA includes floor, curbing and containment trenches				
- Assumes 1 rinsate and 2 soil samples required per CSA. Actual number of soil samples will be based on engineer's inspection.				
- CSA Containment Square Footage			**Square Footage**	
- CSA 1			683.8225	
- CSA 2 (IF APPLICABLE)			0	
	Total CSA Square Footage		684	
Prime Contractor Costs				
-Costs for oversight and engineers inspection included in Closure Certification Activity below				
- Collect Rinsate Samples (1 per CSA)				
Work Rate for Sampling (hours per sample)			0.5000	
Number of Samples			1	
Labor and equipment per work hour (PPE Level D)	Labor/equipment	$91.88	0.50	$46
- Drilling for Soil Samples (2.5 in boring to 1 ft each)				
Work Rate for Drilling (hours per foot)			0.3050	
Number of Feet (subslab sample depth = 1 foot each x number of samples)			2	
Labor and equipment per work hour (PPE Level D)	Labor/equipment	$146.29	0.61	$89
- Collect Soil Samples				
Work Rate for Sampling (hours per sample)			0.5000	
Number of Samples			2	
Labor and equipment per work hour (PPE Level D)	Labor/equipment	$91.88	1.00	$92
Subcontractor Costs				
- Decontaminate CSA(s)				
Work Rate to Pressure Wash (hours per sqaure foot)			0.0405	
Total Area of Permitted CSA(s) to be decontaminated			684	
Labor and equipment for CSA decon (PPE Level D)	Labor/equipment	$65.77	28	$1,821
Laboratory Subcontractor Costs				
- Analyze rinsate sample(s) from each CSA for VOCs	VOCs @ $189/sample SVOCs @ $359/sample 8 RCRA Metals @ $110/sample Total per sample cost	$658	1	$658
- Analyze 2 soil sample(s) from each CSA for VOCs, SVOCs and RCRA metals	VOCs @ $189/sample SVOCs @ $359/sample 8 RCRA Metals @ $110/sample Total per sample cost	$658	2	$1,316

Table 1. Closure Cost Estimate Worksheet, Safety-Kleen Branch Service Center, [Boise, ID]

Activity	Category	Hourly Rate or Unit Charge	Hours or Unit Estimate	Subtotal Cost
Activity 4. Subtotal				$4,023
5. DECONTAMINATE THE FLAMMABLE STORAGE SHELTER (CSA 2)				
Assumptions:				
- Decontamination shall consist of washing with detergent/water solution and rinsing with high-pressure spray				
- Flammable Materials structure and dock area will remain in place				
- Assumes 1 rinsate sample required to leave in place				
- Analyses also includes a rinsate duplicate and field (tap water) blank for a total of 3 rinsate samples				
- Assumes 2 soil samples required from beneath containment area. Actual number of samples will be based on engineer's inspection				
- Square footage used for decontamination includes dock, structure and containment			**Square Footage**	
			600	
Prime Contractor Costs				
-Costs for oversight and engineers inspection included in Closure Certification Activity below				
- Collect Rinsate Samples (1 per Flam Shed)				
Work Rate for Sampling (hours per sample)			0.5000	
Number of Samples			1	
Labor and equipment per work hour (PPE Level D)	Labor/equipment	$91.88	0.50	$46
- Drilling for Soil Samples (2.5 in boring to 1 ft each)				
Work Rate for Drilling (hours per foot)			0.3050	
Number of Feet (subslab sample depth = 1 foot each x number of samples)			2	
Labor and equipment per work hour (PPE Level D)	Labor/equipment	$146.29	0.61	$89
- Collect Soil Samples				
Work Rate for Sampling (hours per sample)			0.5000	
Number of Samples			2	
Labor and equipment per work hour (PPE Level D)	Labor/equipment	$91.88	1.00	$92
Subcontractor Costs				
- Decontaminate structure, grating and containment				
Work Rate to Pressure Wash (hours per square foot)			0.0405	
Total Area of Permitted Flam Shed to be decontaminated			600	
Labor and equipment for CSA decon (PPE Level D)	Labor/equipment	$65.77	24	$1,598
Laboratory Subcontractor Costs				
- Analyze rinsate sample(s) from each shelter for VOCs	VOCs @ $189/sample			
- Include 1 additional sample for QA/QC	SVOCs @ $359/sample			
	8 RCRA Metals @ $110/sample			
	Total per sample cost	$658	3	$1,974
- Analyze 2 soil sample(s) from each shelter for VOCs, SVOCs and RCRA metals	VOCs @ $189/sample			
- Include 1 additional soil sample for QA/QC purposes	SVOCs @ $359/sample			
	8 RCRA Metals @ $110/sample			
	Total per sample cost	$658	3	$1,974
Activity 5. Subtotal				$5,773
6. CONTAINERIZE, STAGE, TRANSPORT AND DISPOSE OF DECONTAMINATION WASTES				
Assumptions:				
- Amount of decon wash water generated derived from previous closure experience. Quantity based on approximately 0.8 gal/ sq ft for tank systems and 0.1 gal/sq ft for containment area floors				

Unit Description	Square Footage	Number Gallons	Number Drums
STORAGE TANK DECONTAMINATION	849	849	16
DECONTAMINATE TANK CONTAINMENT	1,408	141	3
DECONTAMINATE THE RETURN/FILL STATION	1,200	1200	22
DECONTAMINATE CONTAINER STORAGE AREA(S)	684	68	2
DECONTAMINATE THE FLAMMABLE STORAGE SHELTER (CSA 2)	600	60	2
PPE, CONSUMABLES, DEBRIS	NA	NA	5

- Purchase 55-gallon drums to containerize wash water	Drums @ $83 each	$83	50	$4,565
Subcontractor Costs				
- Transfer drums to trucks				
Labor/Equipment (PPE Level D)	Labor/equipment per drum	$3.57	50	$179
- Transport drums to TSD for Treatment/Disposal				
Total Number of Trucks Required to Transport Drums (84 per truck max)			1	
Cost per mile =$5.64/mile				
Mileage = 300 miles (Number in second column is 300 miles x number trucks)	Transport trailer(s) x 300 miles	$5.64	300	$1,692
Disposal/treatment cost (per drum - low cost based on lack of hazardous constituents)	TSD @ $90/drum	$90	45	$4,050
Disposal/treatment cost for PPE drums (assumed haz to landfill)	TSD @$250/drum	$250	5	$1,250

Table 1. Closure Cost Estimate Worksheet, Safety-Kleen Branch Service Center, **[Boise, ID]**

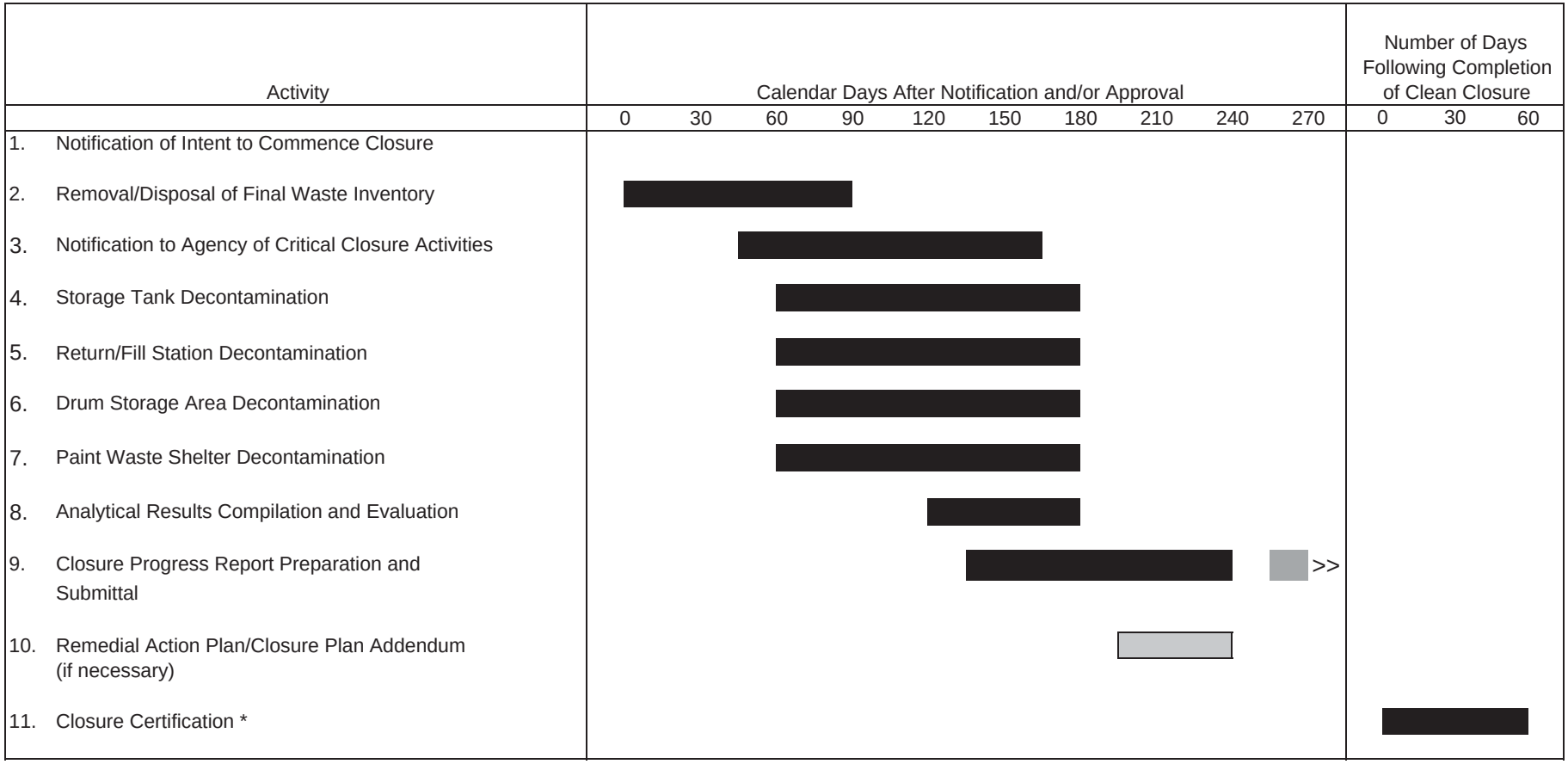
Activity	Category	Hourly Rate or Unit Charge	Hours or Unit Estimate	Subtotal Cost
Activity 6. Subtotal				$11,736
7. CLOSURE CERTIFICATION				
Assumptions:				
- Cost Pro unit rate per unit to be closed is $4,118				
- Unit rate includes engineer inspection and decontamination oversight of each unit				
Prime Contractor Costs				
- Oversee and certify closure per unit times number of units	Project Manager/Engineer	$4,118	4	$16,472
Activity 7. Subtotal				$16,472
COST ESTIMATE ACTIVITIES SUMMARY				
1. INVENTORY REMOVAL				$28,891
2. STORAGE TANK DECONTAMINATION				$10,748
3. DECONTAMINATE THE RETURN/FILL STATION				$7,630
4. DECONTAMINATE CONTAINER STORAGE AREA(S)				$4,023
5. DECONTAMINATE THE FLAMMABLE STORAGE SHELTER (CSA 2)				$5,773
6. CONTAINERIZE, STAGE, TRANSPORT AND DISPOSE OF DECONTAMINATION WASTES				$11,736
7. CLOSURE CERTIFICATION				$16,472
SUBTOTAL CLOSURE COST ESTIMATE				$85,273
ADD ENGINEERING COST (10%of Subtotal)				$8,527
				$93,800.47
CONTINGENCY				20%
TOTAL CLOSURE COST WITH CONTINGENCY				$112,561
Add Inflation factors from 2010 to most recent				
2010			1.012	$113,911
2011			1.01	$115,050
2012			1.021	$117,466
2013			1.018	$119,581
TOTAL CLOSURE COST ESTIMATE				$119,581

Notes:

- Estimate assumes that waste management units are at permitted capacity at time of closure, which is the most expensive in the facility's operating life.
- All unit rates obtained from Cost Pro version 6.0, which is designed to be represetative of 3rd party costs and includes the following:
  - Transportation @ $5.64/mile and 300 mile trip
  - Disposal for bulk liquids $0.45/gallon based on suitability of waste mineral spirits as fuel
  - Disposal for CSA liquids $90/drum based on suitability of drummed waste streams as fuel
  - Disposal of decon wash water $90/drum based on lack of hazardous constituents in waste (soapy water)
  - Subcontractor Decontamination Rate for tanks and return/fill based on PPE Level C
  - Subcontractor decontamination rates for tank containment, CSAs and Flam Shed (if applicable) based on PPE Level D
  - Prime Contractor Rates based on hourly rate for rinsate sampling, drilling and soil sample collection
  - Lab subcontractor rates for analysis of rinsate and soil samples (Assumes VOCs, SVOCs and metals)
  - Closure Certification Activity includes contractor oversight, PE integrity inspections and reporting/Certification

Exhibit I-2

Closure Schedule



Notes:

>>> Indicates that this activity continues until certification of "clean closure."

Indicates an optional activity based on the closure analytical results.

* If no impacts are detected during the decontamination activities, closure certification will be submitted within 60 days of the completion of closure activities.

Closure Plan Table: Tentative Closure Completion Schedule, Safety-Kleen Systems, Inc. Service Center, Boise, ID

Exhibit I-3

Indian Harbor Closure Insurance Certificate

safety-kleen.
PROTECTION·CHOICES·PEOPLE
MAKE GREEN WORK

Via FedEx

November 13, 2014

Mr. Robert Bullock
Hazardous Waste Permitting Manager
Waste Management and Remediation Division
Idaho Department of Health and Welfare
1410 North Hilton
Boise, Idaho 83706

RE: Insurance Policy Renewal
Safety-Kleen Systems, Inc.
6335 Supply Way
Boise ID 83716
IDD981770498

Dear Mr. Bullock:

Enclosed please find an original insurance certificate issued by Indian Harbor Insurance Company for Closure Coverage for the Safety-Kleen facility located in Boise. The face amount has not changed; this is only a policy renewal, effective November 17, 2014. Please note the renewed policy number is PEC000707012. The next annual inflation increase will be submitted in January 2015.

If you have any questions, I may be reached at hodge.kathleen@cleanharbors.com or at 803-225-5459.

Sincerely,

Kathy Hodge

Kathy Hodge
Manager, EHS Compliance Administration

CERTIFICATE OF INSURANCE FOR CLOSURE AND/OR POST CLOSURE CARE

Name and Address of Insurer: Indian Harbor Insurance Company
(hereinafter called the "Insurer") Seaview House, 70 Seaview Ave., Stamford, CT 06902-6040

Name and Address of Insured: Safety-Kleen Systems, Inc.
(herein called the "Insured") 42 Longwater Drive, Norwell, MA 02061

Facilities Covered:

EPA ID NO.: IDD981770498	Closure Amt	Post Closure Amt.	Total
Name: Safety-Kleen Systems, Inc. Address: 6334 Supply Way City: Boise, ID 83716	$93,041	$0	$93,041

Please attach a separate page if more space is needed for all facilities

Face Amount: $3,187,164

Policy Number: PEC000707013

Effective Date: November 17, 2014

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for closure and post closure for the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of IDAPA 58.01.05.008 and 58.01.05.009 (40 CFR 264.143(e), 264.145(e), 265.143(d), and 265.145(d)), as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the Director of the Idaho Department of Environmental Quality, hereafter called IDEQ, the Insurer agrees to furnish to the IDEQ a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in 40 CFR 264.151(e) as such regulations were constituted on the date shown immediately below.

Name (Authorized signature for Insurer) Mary Ann Susavidge
Typed Name: Mary Ann Susavidge
Title: Vice President
Signature of witness or notary: Lynda A. Sergeant
Date: 11-7-14

NOTARIAL SEAL
LYNDA A SERGEANT
Notary Public
UWCHLAN TWP., CHESTER COUNTY
My Commission Expires Jun 19, 2016

From: (803) 473-4972
Kathy Hodge
Safety-Kleen Systems Inc
1021 Pebble Lane

Manning, SC 29102

Origin ID: FLOA

FedEx. Express

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Ship Date: 13NOV14
ActWgt: 1.0 LB
CAD: 100021226/INET3550

Delivery Address Bar Code

SHIP TO: (208) 334-6700 BILL SENDER

Robert Bullock
Idaho Dept of Health and Welfare
1410 N HILTON ST
WASTE MGMT AND REMED. DIVISION
BOISE, ID 83706

Ref # S206577ECU
Invoice #
PO #
Dept #

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Exhibit I-4

Hazardous Waste Liability Insurance

Exhibit I-4

safety-kleen.

PROTECTION CHOICES PEOPLE
MAKE GREEN WORK

October 14, 2014

Mr. Robert Bullock
Hazardous Waste Permits Manager
Waste Management and Remediation Division
Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706

RE: Safety-Kleen Systems, Inc.
2014-2015 Hazardous Waste Liability Insurance Policy Renewal

Dear Mr. Bullock:

Enclosed is an original Hazardous Waste Facility Certificate of Liability Insurance, issued by Indian Harbor Insurance Company under policy number PEC0042039, for the Safety-Kleen facility in Boise. The renewed policy number is PEC0042039***01***.

Please note that the policy renewal for September 1, 2013 was for an extended period of September 1, 2013 – November 1, 2014. The policy renewal date going forward will be November 1 each year.

If you have any questions, please contact me at hodge.kathleen@cleanharbors.com or at 803-225-5459.

Sincerely,

Kathy Hodge

Kathy Hodge
Manager, EHS Compliance Administration

HAZARDOUS WASTE FACILITY CERTIFICATE OF LIABILITY INSURANCE

1. Indian Harbor Insurance Company, (the Insurer) of Seaview House, 70 Seaview Avenue, Stamford, CT 06902-6040, hereby certifies that it has issued liability insurance covering bodily injury and property damage to Safety-Kleen Systems, Inc., (the Insured), of 42 Longwater Drive, Norwell, MA 02061 in connection with the Insured's obligation to demonstrate financial responsibility under IDAPA 58.01.05.008 or IDAPA 58.01.05.009 [40 CFR §§ 264.147 or 265.147]. The coverage applies at EPA ID# , SEE ATTACHED LIST for "sudden and nonsudden accidental occurrences".

   The limits of liability are $1,000,000 "each occurrence" and $2,000,000 "annual aggregate", exclusive of legal defense costs. The coverage is provided under policy number PEC004203901 issued on November 1, 2014.. The effective date of said policy is November 1, 2014.

2. The Insurer further certifies the following with respect to the insurance described in Paragraph 1:

   (a) Bankruptcy or insolvency of the Insured shall not relieve the Insurer of its obligations under the policy.

   (b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the Insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in IDAPA 58.01.05.008 or IDAPA 58.01.05.009 [40 CFR §§ 264.147(f) or 265.147(f)].

   (c) Whenever requested by the Director of the Department of Environmental Quality (DEQ), the Insurer agrees to furnish to the Director of DEQ a signed duplicate original of the policy and all endorsements.

   (d) Cancellation of the insurance, whether by the Insurer, the Insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the Director of DEQ, of the State of Idaho in which the facility(ies) is (are) located.

   (e) Any other termination of the insurance will be effective only upon written notice and only after the expiration of thirty (30) days after a copy of such written notice is received by the Director of DEQ, of the State of Idaho in which the facility(ies) is (are) located.

I hereby certify that the wording of this instrument is identical to the wording specified in IDAPA 58.01.05.008 [40 CFR 264.151(j)] as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(Signature of Authorized Representative of Insurer) Date: 10/24/14

Christopher Biddle, Vice President Authorized Representative of Indian Harbor Insurance Company

c/o XL Insurance
505 Eagleview Boulevard
Suite 100
Exton, PA 19341-0636

SAFETY-KLEEN SYSTEMS, INC. LOCATIONS

STATE OF IDAHO

Safety-Kleen Systems, Inc.
6334 Supply Way
Boise, ID 83705

EPA ID# IDD981770498

2055 Garrett Way
Pocatello, ID

EPA ID# IDR000001040

180 Southside Way, Suite 1
190 Southside Way. Suite 1
Chubbock, ID 83202

301 N. Cloverdale Road
Boise, ID 83709

5795 Industry Way, Suite 2 & 2
Chubbock, ID 83202

From: (803) 473-4972
Kathy Hodge
Safety-Kleen Systems Inc
1021 Pebble Lane

Manning, SC 29102

Origin ID: FLOA

FedEx. Express

J142214092303uv

Ship Date: 01NOV14
ActWgt: 1.0 LB
CAD: 100021226/INET3550

Delivery Address Bar Code

Ref # S206577ECU
Invoice #
PO #
Dept #

SHIP TO: (208) 334-6700 BILL SENDER

Robert Bullock
Idaho Dept of Health and Welfare
1410 N HILTON ST
WASTE MGMT AND REMED. DIVISION
BOISE, ID 83706

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Exhibit I-5

MSDS for Heavy Duty Cleaner/Degreaser

Material Safety Data Sheet

Material Name: Safety-Kleen Professional Heavy Duty Cleaner Degreaser Concentrate **ID: 82991**

* * * Section 1 - Chemical Product and Company Identification * * *

Product Code: 819, 820, 821, 822
Product Use: Cleaner and Degreaser
Synonyms: Not available

Safety-Kleen Systems, Inc.
5360 Legacy Drive
Building 2, Suite 100
Plano, TX 75024

Phone: 1-800-669-5740

Emergency # 1-800-468-1760
www.safety-kleen.com

Issue Date
August 22, 2012
Supersedes Issue Date
August 20, 2009
Original Issue Date
September 1, 2005
PREPARED BY: Product MSDS Coordinator APPROVED BY: MSDS Task Force

* * * Section 2 - Hazardous Identification * * *

EMERGENCY OVERVIEW
Appearance
Yellow liquid.
Signal Word
CAUTION!
Physical Hazards
Minimal fire hazard.
Health Hazards
May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin. May be harmful if swallowed.
POTENTIAL HEALTH EFFECTS
Inhalation (Breathing)
High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects.
Eyes
May cause irritation.
Skin
May cause irritation. A component may be absorbed through the skin and cause harm as noted under **INHALATION (BREATHING)**.
Ingestion (Swallowing)
May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**.
Medical Conditions Aggravated by Exposure
Individuals with pre-existing respiratory tract (nose, throat, and lungs), central nervous system, kidney, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.
Chronic
Prolonged or repeated inhalation may cause toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated exposure may cause central nervous system and kidney damage. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis).
Cancer Information
No known carcinogenicity. For more information, see **SECTION 11: CARCINOGENICITY**.

Also see **SECTION 15: CALIFORNIA**.

Environmental Hazards

Product is not expected to be toxic to aquatic life. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS	Component	Percent
7732-18-5	Water	75-100
68439-57-6	Sodium alkyl olefin sulfonate	1-4
34590-94-8	Dipropylene glycol monomethyl ether	1-5
34398-01-1	Poly(oxy-1,2-ethanediyl), α-undecyl-ω-hydroxy-	1-3
1569-01-3	2-Propanol, 1-propoxy-	1-3
6834-92-0	Silicic acid, disodium salt	1-2

**OSHA Final PEL value (enforceable). Some States have adopted more stringent values. * Even though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of the product.

*****PRODUCT DILUTION FOR USE ranges are as follows:**
LIGHT: 1 to 50 with water.
MEDIUM: 1 to 20 with water.
HEAVY: 1 to 4 with water.
Actual wt% of product constituents will vary according to dilution.

* * * Section 4 - First Aid Measures * * *

Inhalation (Breathing)

Remove to fresh air. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

Eyes

If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention if irritation develops or persists.

Skin

Immediately flush skin with plenty of water while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Seek medical attention if irritation develops or persists.

Ingestion (Swallowing)

If the material is swallowed, get immediate medical attention or advice. Do not induce vomiting. Call 1-800-468-1760 for additional information.

Notes to Physicians

Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

* * * Section 5 - Fire Fighting Measures * * *

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce carbon monoxide and unidentified organic compounds.

Conditions of Flammability

Product may burn, but does not ignite readily.

Extinguishing Media

Carbon dioxide, alcohol-resistant foam, dry chemical, water spray, or water fog.

Protective Equipment For Firefighting

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Equipment/Instructions

Keep storage containers cool with water spray.

NFPA Ratings: Health: 1 **Fire:** 1 **Reactivity:** 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Fire and Explosion Hazards

Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Products are not sensitive to mechanical impact or static discharge.

* * * Section 6 - Accidental Release Measures * * *

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Sorb with compatible sorbent material and shovel with a clean tool into a sealable container for disposal.

Additionally, for large spills: Dike far ahead of liquid spill for collection and later disposal.

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke when using this product.

Prior to use, this product must be diluted. Dilution strength should be according to product cleaning application and local VOC restrictions. Please consult the table below when mixing.

MIX RATIO		g/L VOC	VOC CONCENTRATION (WT%)
LIGHT:	1 part concentrate:50 parts water	1.5	0.15
MEDIUM:	1 part concentrate:20 parts water	0.36	0.36
HEAVY:	1 part concentrate:4 parts water	15.4	1.5

Shipping and Storing

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry, well-ventilated place. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous. Store between 40-90°F (4°C-32°C). Prevent product from freezing.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

Component Exposure Limits

Dipropylene glycol monomethyl ether (34590-94-8)

ACGIH: 100 ppm TWA
150 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route

OSHA Final: 100 ppm TWA; 600 mg/m3 TWA
prevent or reduce skin absorption

OSHA Vacated: 100 ppm TWA; 600 mg/m3 TWA
150 ppm STEL; 900 mg/m3 STEL
Prevent or reduce skin absorption

NIOSH: 100 ppm TWA; 600 mg/m3 TWA
150 ppm STEL; 900 mg/m3 STEL
Potential for dermal absorption

Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

Personal Protective Equipment: Respiratory

Use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

Personal Protective Equipment: Eyes/Face

Wear chemical goggles; contact lens use is not recommended.

Personal Protective Equipment: Skin

Wear chemical resistant protective gloves; use of natural rubber or equivalent gloves is not recommended. Where spills are likely, wear appropriate chemical-resistant apron, coveralls, long sleeve shirts, or other protective clothing.

Personal Protective Equipment: Personal Hygiene

Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with this product.

Other Personal Protective Equipment

Where spills and splashes are likely, facilities storing or using these products should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance/Odor :	Yellow liquid, sassafras odor	**pH:**	12.7 in undiluted form; 12.3 at 1:4 Dilution; 11.5 at 1:20 diluation; 11.1 At 1:50 dilution
Boiling Point:	>200°F (93°C)	**Melting Point:**	Not available
Solubility (H2O):	Complete	**Specific Gravity:**	1.029(water = 1)
Density:	8.52 to 8.62 LB/US gal (1020 to 1034 g/L)	**Octanol/H2O Coeff.:**	Not available
Evaporation Rate:	1 (butyl acetate = 1)	**Molecular Weight:**	Not available
Odor Threshold:	Not available	**Auto Ignition:**	Not Available
LFL:	Not Available	**Flash Point:**	>200°F (93.3°C)
UFL:	Not Available	**Viscosity:**	Not available
Vapor Pressure:	Not available		
Freezing Point:	Not available		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Stability

Stable under normal temperatures and pressures.

Incompatibility

Do not mix with strong acids or bowl cleaners.

Reactivity

Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

Hazardous Decomposition Products

None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

Conditions To Avoid

Avoid excessive heat and ignition sources.

* * * Section 11 - Toxicological Information * * *

Toxicity Data

Component Analysis - LD50/LC50

Water (7732-18-5)

Oral LD50 Rat >90 mL/kg

Sodium alkyl olefin sulfonate (68439-57-6)
Oral LD50 Rat 2310 mg/kg; Dermal LD50 Rabbit 6300 mg/kg
Dipropylene glycol monomethyl ether (34590-94-8)
Oral LD50 Rat 5230 mg/kg; Dermal LD50 Rabbit 9500 mg/kg
2-Propanol, 1-propoxy- (1569-01-3)
Oral LD50 Rat 2504 mg/kg; Dermal LD50 Rabbit 3550 mg/kg
Silicic acid, disodium salt (6834-92-0)
Oral LD50 Rat 600 mg/kg

Acute Effects

May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin. May be harmful if swallowed.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Sensitization

Based on best current information, there is no known human sensitization associated with this product.

Mutagenicity

Based on best current information, there is no known mutagenicity associated with this product.

Reproductive Toxicity

Based on best current information, there is no known reproductive toxicity associated with this product.

Teratogenicity

Based on best current information, there is no known teratogenicity associated with this product.

Toxicologically Synergistic Products

Based on best current information, there are no known toxicologically synergistic products associated with this product.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

Product will rapidly neutralize in the environment. This material is not expected to be harmful to aquatic life.

Component Analysis - Ecotoxicity - Aquatic Toxicity

Sodium alkyl olefin sulfonate (68439-57-6)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Brachydanio rerio	1.0-10.0 mg/L [static]	
96 Hr LC50 Brachydanio rerio	12.2 mg/L [semi-static]	

Dipropylene glycol monomethyl ether (34590-94-8)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	>10000 mg/L [static]	

Silicic acid, disodium salt (6834-92-0)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Brachydanio rerio	210 mg/L [semi-static]	
96 Hr LC50 Brachydanio rerio	210 mg/L	

Persistence/Degradability

No information available for the product.

Mobility in Environmental Media

No information available for the product.

Other Adverse Effects

No additional information available.

* * * Section 13 - Disposal Considerations * * *

Disposal Instructions

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

US EPA Waste Number & Descriptions

D002 for undiluted product. For waste disposal purposes, diluted products with a pH between 2.1 and 12.4 is not defined or designated as hazardous by current provisions of the Federal (EPA) Resource Conservation and Recovery Act (RCRA, 40CFR261). Based on available data, this information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product.

* * * Section 14 - Transportation Information * * *

Emergency Response Guide Number

Not applicable

DOT **Shipping Name:** Not regulated as a hazardous material.

TDG **Shipping Name:** Not regulated as a dangerous good.

IATA Information

No Classification Assigned.

IMDG Information

No Classification Assigned.

* * * Section 15 - Regulatory Information * * *

VOC (As Regulated)

7.7% or less, depending on use dilution.
As per 40 CFR Part 51.100(s)
See Section 7, Handling and Storage, for VOC of diluted product.

SARA Sections 311/312

This product poses the following health hazards as defined in 40 CFR Part 370 and are subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):
Immediate (Acute) Health Hazard

SARA 302/304

Component Analysis

This product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313

This product does not contain "toxic" chemicals subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

Component Analysis

This product does not contain any "toxic" chemical subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

CERCLA

Component Analysis

This product does not contain any "hazardous substance" listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

TSCA

All the components of this product are listed on, or are automatically included as "naturally occurring chemical substances" on, or are exempted from the requirement to be listed on, the TSCA Inventory.

Component Analysis

Component	CAS #	TSCA
Water	7732-18-5	Yes
Sodium alkyl olefin sulfonate	68439-57-6	Yes
Dipropylene glycol monomethyl ether	34590-94-8	Yes
Poly(oxy-1,2-ethanediyl), α-undecyl-ω-hydroxy-	34398-01-1	Yes
2-Propanol, 1-propoxy-	1569-01-3	Yes
Silicic acid, disodium salt	6834-92-0	Yes

State Regulations

This product does not contain detectable amounts of any chemical known to the State of California to cause birth defects or other reproductive harm.

This product does not contain detectable amounts of any chemical known to the State of California to cause cancer.

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	MA	MN	NJ	PA	CA
Dipropylene glycol monomethyl ether	34590-94-8	Yes	Yes	Yes	Yes	Yes

No component(s) are listed under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).

Canadian Regulations

This product have been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

Component Analysis

Component	CAS #	CAN
Water	7732-18-5	DSL
Sodium alkyl olefin sulfonate	68439-57-6	DSL
Dipropylene glycol monomethyl ether	34590-94-8	DSL
Poly(oxy-1,2-ethanediyl), α-undecyl-ω-hydroxy-	34398-01-1	DSL
2-Propanol, 1-propoxy-	1569-01-3	DSL
Silicic acid, disodium salt	6834-92-0	DSL

Canadian WHMIS Information

Class D2B - Irritating.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Dipropylene glycol monomethyl ether (34590-94-8) 1 %

Silicic acid, disodium salt (6834-92-0) 1 %

Canadian Environmental Protection Act (CEPA)

All the components of these products are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

*** Section 16 - Other Information ***

Label/Other Information

No additional information available.

Revision Information

Updated in Sections 1 (dates), 2 (Composition, Toxicity and Exposure values), 3 (Emergency Overview, Health Effects), 4 (first Aid), 5 (NFPA Ratings), 7 (Handling), 8 (Personal Protective Equipment), 9 (Physical Properties), 12(Volatile Organic Compounds), 13 (Waste Codes), 14 (Transportation Classification), 16 (Revision Information).

Disclaimer

User assumes all risks incident to the use of this (these) product(s). To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either express or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the product(s) as supplied to the user.

End of Sheet 82991

HWMA/RCRA STORAGE PERMIT

for the

SAFETY-KLEEN SYSTEMS, INC., BOISE SERVICE CENTER

ATTACHMENT 9 – AIR EMISSIONS PLAN

Section M Subpart AA Process Vents

Section N Subpart BB Equipment Leaks

Section O Subpart CC Air Emission Standards

Subpart BB Inspection Checklist

Subpart CC Inspection Checklist:

EFFECTIVE DATE: JULY 29, 2015
REVISION July 20, 2018

Section M Subpart AA
Process Vents

The facility does not conduct distillation, fractionation, thin-film evaporation, solvent extraction, air stripping operations, or steam stripping operations. Therefore, there are no process vents subject to Subpart AA at the facility and this section does not apply.

Section N Subpart BB Equipment Leaks

N-1a ***270.14(a); 270.25; 264.1050(b),(d)*** ***Applicability***

The used solvent managed in the tank system is presumed to contain hazardous waste with an organic concentration of at least 10-percent by weight, so Subpart BB regulations apply.

N-1b ***270.14(a); 270.25; 264.1031; 264.1050(b),(d)*** ***Definition of Equipment***

Equipment includes one 12,000 gallon aboveground storage tank with associated piping and one drum washer/wet dumpster with associated piping. The aboveground storage tank is located adjacent to the tank farm. The drum washer unit is located at the facility's Return and Fill station next to the tank farm. See Exhibit N-1 for a site location map.

Each valve, pump, and flange associated with the hazardous waste storage tank and drum washer unit is labeled with a numbered tag. A listing of the tag numbers, descriptions of the tagged equipment, and location of each piece of equipment is located on Air Emission Equipment Inventory Form Exhibit N-2.

Safety-Kleen complies with Subpart BB requirements by inspecting the process piping and equipment each operating day. Each valve, joint, flange, pressure relief device, pump, etc. is inspected to insure the equipment is not leaking and is functioning properly. Open-ended pipes are capped when not in use. An example diagram of the facility's piping and equipment is located at Exhibit N-6. Process equipment is also included on the facility's daily inspection record.

N-1c ***270.14(a); 270.25; 264.1050(f)*** ***Equipment in a vacuum or equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for a period of less than 300 hours per calendar year is excluded from requirements in 264.1052 to 264.1060.***

Safety-Kleen is not claiming any equipment exclusion. Therefore, this section does not apply.

N-2a, N-2b, N-2c, N2-d, N-2e ***270.25(d); 264.1052(a),(f)*** ***Equipment in Light Liquid Service Monitoring Requirements***

The used parts washer solvent managed in the tank system is a heavy liquid (vapor pressure less than 0.3 kilopascals at 20°C) and has a maximum concentration in the vapor phase of 2,000 ppm. The hazardous waste state at each piece of equipment is liquid. Safety-Kleen's heavy liquid determination is included in Exhibit N-3. Sections *N2a-N2e* do not apply.

N-3a, N-3b N-3c, N-3d N-3e, N-3f, N-3g, ***270.25(d); 264.1053(b),(i)*** ***Compressors in Light Liquid Service***

There are no compressors in light liquid service. Therefore, these sections do not apply.

N-4a N-4b N-4c ***270.25(d); 264.1054(a),(c)*** ***Pressure Relief Devices in Gas/Vapor Light Liquid Service***

There are no pressure relief devices in light liquid service. Therefore, these sections do not apply.

N-5a N-5b ***270.25(d); 264.1055(a-b);*** ***Sampling Connection Systems in Light Liquid Service***

There are no sampling connection systems in light liquid service. Therefore, these sections do not apply.

N-6a N-6b ***270.25(d); 264.1056(a-c);*** ***Open-ended Valves or Lines***

There are no open-ended valves or lines in light liquid service. Therefore, these sections do not apply.

N-7 N-7d ***270.25(d); 264.1057(a-h);*** ***Valves in Gas/Vapor Service or in Light Liquid Service***

There are no valves in gas/vapor service or in light liquid service. Therefore, these sections do not apply

N-8a-b ***270.25(d); 264.1058(a); 264.1063(b)*** ***Monitoring and Leak Detection***

Compliance with the standard will be achieved through facility inspections. These inspections will be conducted each operating day, typically Monday through Friday. An example inspection form is included in Exhibit N-5. In addition, BB equipment on the top of the tank which is considered difficult to monitor, is inspected annually (between June and August) and recorded using the example inspection form shown in Exhibit N-7. Whether in electronic or written form, required inspections will be maintained for at least three years. Each of these inspection are conducted with the guidance of Exhibit N-6, the Piping Schematic. A legible version of this should be with the inspector at the time of the inspection, so they can identify the locations where potential leaking connections may be found. The top of the tank equipment that can be seen from the ground, such as the side of the manhole cover will also be inspected using Exhibit N-5 each operating day from the ground. Inspection personnel should spend at least 10 seconds to see if any visible vapor is being released from anything other than the pressure vent. This inspection will be documented using Exhibit F-1 BOI Tank Systems Inspection.

Because the spent parts washer solvent is a heavy liquid, a photo ionizer type instrument will not detect leaks at 10,000 ppm. A leak will be observed based on visual, audible, or olfactory inspection. Records of equipment monitoring and repair are maintained in the operating record.

Equipment in question will be tagged with the identification number, date of potential or actual leak, and date of leak confirmation. After a valve has been repaired, it will be visually monitored as part of the daily facility inspection. After two successive months with no leak detection, the identification tag may be removed. For other equipment, such as pumps, the tag may be removed after a successful repair. An example leak detection and repair record is in Exhibit N-4.

N-8c 270.25(d); 264.1058(c); 264.1059 Leak Repair as Soon as Practicable

Any leak or potential leak must be repaired as soon as practicable, but at least within 15 days, with the first attempt at repair made no later than 5 days after the leak is detected. The Environmental Compliance Manager will be contacted immediately to arrange for the equipment to be monitored (if required). The piece of equipment in question must be tagged with the identification number, date of potential or actual leak, and date of leak confirmation.

N-8d 270.25(d); 264.1058(e); Any Connector that is Inaccessible or is Ceramic-Lined

Due to the difficult location of the Subpart BB tag for the long bolted emergency pressure relief vent (top manhole) at the top of the tank, and other connections at the top of the tank, daily inspections are not possible. Therefore, these tagged fittings will be inspected in conjunction with the annual Subpart CC inspection and documented using example inspection form Exhibit N-7. The emergency pressure relief vent will be inspected annually, or more frequently, by Safety-Kleen depending on use and observed condition. This inspection includes assessing the fitting for potential leaks, actual leaks, sticking, wear, and unusual odors. During the annual inspection of the top of the tank the manufacturer's suggested annual inspection of the Pressure Relief Vent will be conducted to ensure it is operating properly, with no debris restricting the movement of the vent valve.

N-9 270.25(d); 264.1059 Specific Allowances for Delay of Repair for Various Types of Equipment

It is not anticipated delay of repair would occur at the facility. If repairs cannot be made as described in N-8c above, notification will be made to Idaho DEQ.

N-9, N-10, N- 1, N-12 270.25(d); 264.1060, 264.1061, 264.1062

These sections do not apply.

N-13 270.25(d); 264.1064 Recordkeeping Requirements

Leak detection monitoring and repair records are maintained. Records of equipment monitoring and repair are maintained on an inspection form in the operating records. This leak detection and repair record will be kept on file at the facility.

N-13a	***270.25(a);***	***Semiannual Report***
N-13b	***270.25(b)***	***Implementation Schedule***
N-13c	***270.25(c)***	***Performance Test Plan***

These sections do not apply.

Section O

Subpart CC Air Emission Standards

O-1 270.14(a); 270.27 264.1080(a)-(d) Standards that Apply to All Facilities That Treat, Store, or Dispose of Hazardous Waste in Tanks, Surface Impoundments, or Containers

The Safety-Kleen Boise, Idaho facility shall control air pollutant emissions from waste management units at this facility pursuant to the requirements of RCRA Subpart CC through implementation of this compliance program.

The plan describes this facility's waste determination procedures, tanks and container design/management practices, organic emission controls, inspection and monitoring, and recordkeeping and reporting, pursuant to standards promulgated under RCRA Subpart CC.

O-2 270.14(a); 270.27 264.1082(c) List of Units Exempt from the 264.108-264.1087 Standards

There is no tank, surface impoundment, or container exempt from Subpart CC standards. Therefore, this section does not apply.

O-2a O-2b 270.14(a); 270.27 264.1082(c)-(1) Waste Determination Procedures

For purposes of waste determination, this facility utilizes knowledge developed in the Waste Characteristics portion of the site's hazardous waste permit. On an annual basis, the waste streams are re-characterized by collecting small retain samples of each waste stream shipment arriving at a Safety-Kleen Recycle Center for a period of several weeks. Analyses are performed on composite samples, including flash point pH, specific gravity, and TCLP-metals, volatiles, and semi-volatiles. Other analyses are performed throughout the year as necessary. In addition, the facility may use knowledge of the waste based on information included in manifests, shipping papers, or waste certification notices to confirm waste determination for the generator or the ultimate receiving facility. For those hazardous wastes which are managed on a transfer basis, and are not described in the Operation Plan/Permit, the Subpart CC regulation does not apply.

Based upon this knowledge, it has been determined that all wastes managed in tanks or containers at this facility may contain an average volatile organic concentration of greater than 500 ppmw at the point of waste generation. Therefore, all hazardous wastes managed in tanks or containers at this facility shall be managed in accordance with the applicable Subpart CC standards. Under such a management scenario, no direct measurements will be conducted.
This is consistent with 40 CFR 265.1084(a)(1).

The point of waste origination for all wastes generated from off-site sources and transported to the facility in DOT approved containers (if required by DOT regulation) which are subsequently managed in tanks or containers on-site, is the boundary at the entrance gate.

O-2c ***270.14(a); 270.27 264.1082(c)(3)*** ***Tank Used for Biological Treatment of Hazardous Waste***

There is no tank used for biological treatment of hazardous waste to destroy or degrade the organics contained in the hazardous waste. Therefore, this section does not apply.

O-2d ***270.14(a); 270.27 264.1082(c)(4)*** ***Tank, Surface Impoundment, or Container for Which All Hazardous Waste Placed in the Unit Meets Applicable Organic Concentration Limits***

The facility does not land dispose of any wastes at the facility. Therefore, this section does not apply.

O-2e ***270.14(a); 270.27 264.1082(c)(5)*** ***Tank Located Inside an Enclosure Vented to a Control Device***

The facility does not feed hazardous waste to a waste incinerator. Therefore, this section does not apply.

O-3 ***270.14(a); 270.27 264.1083, 264.1084*** ***Waste Determination Procedures to Demonstrate Subpart CC Exemptions***

The facility is not claiming Subpart CC exemptions. Therefore, this section does not apply.

O-4 ***270.14(a); 270.27 264.1084(b)(1),(2)*** ***Tank Level 1 Conditions***

Following is a summary table of the criteria that must be met in order for Safety-Kleen's hazardous waste tank to be subject to Level 1 controls.

Tank Design Capacity	Maximum Vapor Pressure of Waste
<19,789 Gallons	11.26 psi
19,789 Gallons - <39,841 Gallons	4.0 psi
>39,841 Gallons	0.75 psi

O-5 ***270.14(a); 270.27 264.1084(b)(1)*** ***The Conditions at 264.1084(b)(1)(i-ii) Provide that Hazardous Waste in the Tank Shall:***

O-5a(1) ***270.14(a); 270.27 264.1084(b)(1)(i)*** ***Have Maximum Organic Vapor Pressure Which is Less Than Maximum Organic Vapor Pressure Limit the Tank's Design Capacity Category***

The hazardous waste storage tank stores spent mineral spirits solvent. Vapor pressure testing performed on this material in product form identifies the vapor pressure is .004 psia at 68°F (Safety-Kleen 150 Mineral spirits). Since the material has a vapor pressure that is significantly lower than the maximum threshold of 11.26 psia for Level 1 tanks, Safety-Kleen Systems, Inc. has determined that the hazardous waste storage tank at the Service Center has a design

capacity of less than 19,789 gallons. Therefore, the waste materials are subject to Level 1 controls. The vapor pressure of the waste in the tank will fluctuate on a periodic basis due to the cyclic generation of hazardous waste streams by off-site generators. The maximum vapor pressure in the hazardous waste tank will not exceed the applicable Level 1 threshold.

O-5a(2) 270.14(a); 270.27 264.1084(b)(1)(ii) Not be Heated to Temperature Greater than Temperature at Which Maximum Organic Vapor Pressure of Waste is Determined

The hazardous waste in the tank is not heated. Therefore, this section does not apply.

O-5a(4) 270.14(a); 270.27 264.1084(b)(1)(iii) Not be Treated Using a Waste Stabilization Process

The hazardous waste in the tank is not treated using a waste stabilization process. Therefore, this section does not apply.

O-5b 270.14(a); 270.27 264.1084(c)(1) Maximum Organic Vapor Pressure Determination

Safety-Kleen will manage organic wastes at the Service Center in the spent mineral spirits storage tank. The waste tank will manage hazardous waste with 500 ppmw greater VO concentration. The waste in this tank exhibits a vapor pressure of less than 5.2 kPa (.75 psia). The measured vapor pressure of the waste managed in the tank is =0.2mm/Hg. The maximum organic vapor pressure is determined using knowledge of the waste pursuant to 265.1084(c)(4). Therefore, this tank is subject to Level 1 controls. While there are other storage tanks at the facility, they are not used to store hazardous waste and therefore are exempt from regulation under Subpart CC.

O-5b(1) 270.14(a); 270.27 264.1084(c)(2),(3) Owner/Operator Shall Equip Tanks with Fixed Roof and Closure Devices as Needed

The waste storage tank is a fixed roof tank. There are no visible open spaces between roof section joints or between interface of roof edge and tank wall. All tanks at the Service Center are designed so that all opening covers can be closed with no visible gaps, holes, cracks, or other open spaces into the interior of the tank.

O-5b(2)(i) ***270.14(a); 270.27*** ***Level 2 Tank Requirements***
O-5b(2)(ii) ***264.1084(d)(1)(2,(3)***
O-5b(3)
O-5c
O-5d

The waste storage tank is not a Level 2 Tank. Therefore, these sections do not apply.

O-5e ***270.14(a); 270.27 264.1084(c)(1),(3)*** ***Tank Level 1 Owner/Operator Shall:***

O-5e(1) ***270.14(a); 270.27 264.1084(c)(1)*** ***Determine Maximum Organic Vapor***

The maximum VO concentration has been determined pursuant to 264.1083(c) procedures. Reference O-5b above.

O-5~~d~~e(2) ***270.14(a); 270.27 264.1084(c)(3)*** ***Owner/Operator Shall Equip Tanks with Fixed Roof and Closure Devices as Needed***

The waste storage tank is a non-pressurized aboveground storage tank. It is constructed with a fixed roof and is 10’6” in diameter, with a height of 21’8”. The tank has a 12,000 gallon storage capacity. The tank is constructed of 3/16” thick (1/4” thick in the lower third of the tank) carbon steel. The tank is constructed in accordance with Underwriters Laboratories Standard 142.

All of the tanks present at this Service Center are designed so that all opening covers can be closed with no visible gaps, holes, cracks, or other open spaces into the interior of the tank. The cover and all cover openings operate with no detectable emissions when in a closed position. Cover openings are maintained in a closed position at all times except when waste is being added to or removed from the tanks, or when necessary sampling or repair/maintenance is performed on the tanks.

The tanks are vented to the atmosphere through a safety device (pressure vacuum vent) which has been designed to operate with no detectable organic emissions when the device in the closed position. These tanks have a Morrison 548 3-inch pressure vacuum. In addition, these tanks are designed with a long-bolted manway pressure relief device which remains in the closed position when not in use to relieve pressure.

O-5e(3) ***270.14(a); 270.27 264.1084(c)(4)*** ***Inspect the Air Emission Control Equipment***

Visual inspection of the tank closure devices will be conducted on an annual basis and recorded using the example inspection form in Exhibit O-1. The intent of the inspection is to check for defects that could result in air pollution emissions (cracks, gaps, and gaskets, damaged closure devices, etc.). Included in the inspection is the verification that the long bolts are properly attached, with enough free length in the bolt, so the nut does not impede the manhole from lifting should the tank become pressurized. Typically 1 ½ inches of free play is expected. Should a long bolt have been replaced, in error, by a shorter bolt and snugged down it would need to be replaced immediately. In addition, a visual inspection of the gasket between the manhole and the manhole cover is made to verify it is intact. Inspections may be recorded electronically. If

evidence of damage or vapors coming out of the tank from the emergency pressure vent the gasket will be replaced.

O-5f,O-5f(1), O-5f(2),O-5f(3) O-5f(4), O-5f(6)	***270.14(a); 270.27 264.1084(e)***	***Tank Level 2 Requirements***

The waste storage tank is not a Level 2 Tank. Therefore, these sections do not apply.

O-6 through O-7	***270.14(a); 270.27 264.1085***	***Standards: Surface Impoundments***

The facility does not operate a surface impoundment. Therefore, these sections do not apply.

O-8a O-8a(1) O-8a(2)	***270.14(a); 270.27 264.1086(b)(1)(i) 264.1086(b)(1)(ii)***	***Container Level 1 Standards***

Containers managing hazardous wastes generally fall into three categories.

1. Hazardous waste containers less than 26 gallons in capacity that are wholly exempt from regulation on Subpart CC. Containers of hazardous wastes that are transferred through the facility that are “still in the course of transportation” and therefore are exempt from Subpart CC.

2. Containers with capacities between 26 gallons and 122 gallons are all Level 1 containers. The Level 1 containers have covers that are designed with no gaps, holes, cracks, or other open spaces into the container. In addition, all containers used to handle hazardous waste meet U.S. DOT Performance Oriented Packaging Standards.

Level 1 containers typically received and managed by this facility include, but are not limited to 5 gallon, 15 gallon, 30 gallon, 55 gallon, and 250 gallon containers. These containers typically meet applicable U.S. DOT specifications and/or authorizations. Therefore, these containers are acceptable for use in accordance with Level 1 controls. Containers greater than 26 gallons managing site-generated hazardous waste will be visually inspected upon their initial filling and within one year if the container is not completely emptied of its contents.

Inspections

Hazardous Waste Received from Off-Site – All hazardous waste received from offsite sources are received in containers. All Level 1 containers managing hazardous waste subject to Subpart CC received from off-site sources that will not be completely emptied within 24 hours of receipt will be inspected to ensure that all applicable covers and closure devices are closed. This inspection already occurs as part of the facility inspection. Therefore, compliance with the inspection requirements of Subpart CC is incorporated in the facility inspection plan by this reference. Defective containers will be remediated within 24 hours of observation, and initial remediation will be attempted within 12 hours of

observation.

On-Site Generated Hazardous Waste – Containers greater than 26 gallons will be visually inspected upon their initial filling to ensure that all openings are properly closed and/or covered. Satellite accumulation containers managed in accordance with 40 CFR 262.34(c)(1) are not subject to Subpart CC requirements.

Monitoring

Containers Managing Off-Site hazardous Waste – Level 1 containers managed at the Service Center are not subject to monitoring for no detectable emissions (NDE). Therefore, no monitoring for NDE will be conducted on such containers. However, they will be closed when not involved in transfer activities.

Transferring Hazardous Waste

Container To Container – This type of transfer will typically be done at the Service Center when i t is necessary to remove waste from a damaged container to a non-damaged container that will provide containment for the waste, or to place the entire container into a larger container. An example would be placing a 55 gallon container into an 85 gallon salvage drum. This may occur for both liquid and solid wastes. Only container openings that are necessary to add or remove waste from each container will be open during the transfer. This activity will be conducted in accordance with 40 CFR 265.1087(c)(3)(ii) for Level 1 containers.

Container To Tank – This type of transfer involving liquids will be done regularly for Level 1 containers. Following is an explanation of this activity.

Spent mineral spirits from parts washers is accumulated in a 12,000 gallon aboveground storage tank via the Return and Fill station. Typically, 5-, 16-, 30-, and 55-gallon containers are poured into the dumpster in the return and fill station, and the material in the dumpster is pumped into the spent solvent storage tank.

O-8b ***270.14(a); 270.27 264.1086(b)(1)(iii)*** ***Container Level 2 Standards***

The facility does not manage Level 2 containers. Therefore, this section does not apply.

O-8c ***270.14(a); 270.27 264.1086(b)(2)*** ***Container Level 3 Standards***

The facility does not manage Level 3 containers. Therefore, this section does not apply.

O-9a Through O-9a(2)(3) ***270.14(a); 270.27 264.1086(c)*** ***Container Level 1 Standards***

Reference section O-8 above for narrative.

O-9b ***Through O-9b(3)*** ***270.14(a); 270.27***

264.108 6(d)	***Container Level 2 Standards***	

The facility does not manage Level 2 containers. Therefore, this section does not apply.

O-9c Through O-9c(2)	***270.14(a); 270.27 264.1086(e)***	***Container Level 3 Standards***

The facility does not manage Level 3 containers. Therefore, this section does not apply.

O-10a	***270.14(a); 270.27 264.1086(c)(3)(4)***	***Container Level 1 Standards***

Reference section O-8 above for narrative.

O-10c	***270.14(a); 270.27 264.1086(e)(3)(5)(5)***	***Container Level 3 Standards***

The facility does not manage Level 3 containers. Therefore, this section does not apply.

O-11a Through O-14c	***270.14(a); 270.27 264.1087 through 264.1090***	***Closed-Vent Systems and Control Devices*** ***Inspection and Monitoring Requirements*** ***Recordkeeping Requirements*** ***Reporting Requirements***

These sections do not apply.

Miscellaneous Units

The return and fill is a non-pressurized, quiescent unit. The unit is designed as a Level 1 unit. The design capacity of the return fill unit is 162 gallons with a maximum sump capacity of 42 gallons. Waste that is transferred through the unit exhibits a vapor pressure of less than 76.6 kPa for units <75m^3. The actual vapor pressure of the material is 0.2 psia, which was determined using knowledge of the waste pursuant to 265.1084(c)(4).

The return and fill unit meets the requirements of 40 CFR 264.1084(c)(2) through (c)(4), allowing drums to be cleaned while the rolling door is in the closed position. The continuous gasket seal on the rolling door shall be maintained in such a manner that there are no visible gaps, holes, cracks, or other open spaces into the interior of the unit. The unit is designed to create no atomization of the solvent. Cover openings are maintained in a closed position at all times except when waste is being added, during periods of routine inspections and maintenance, or during removal of accumulated sludge and residues.

The rolling door of the return and fill unit is interlocked with a limit switch that shall automatically shut down operation of the unit in the event the rolling door is not in the closed latch position.

Inspections – Visual inspections of the unit is conducted on each operating day.

Monitoring – Monitoring for NDE is not required for Level 1 units, therefore no such monitoring will be conducted.

Specifications for the Return and Fill unit can be found in:

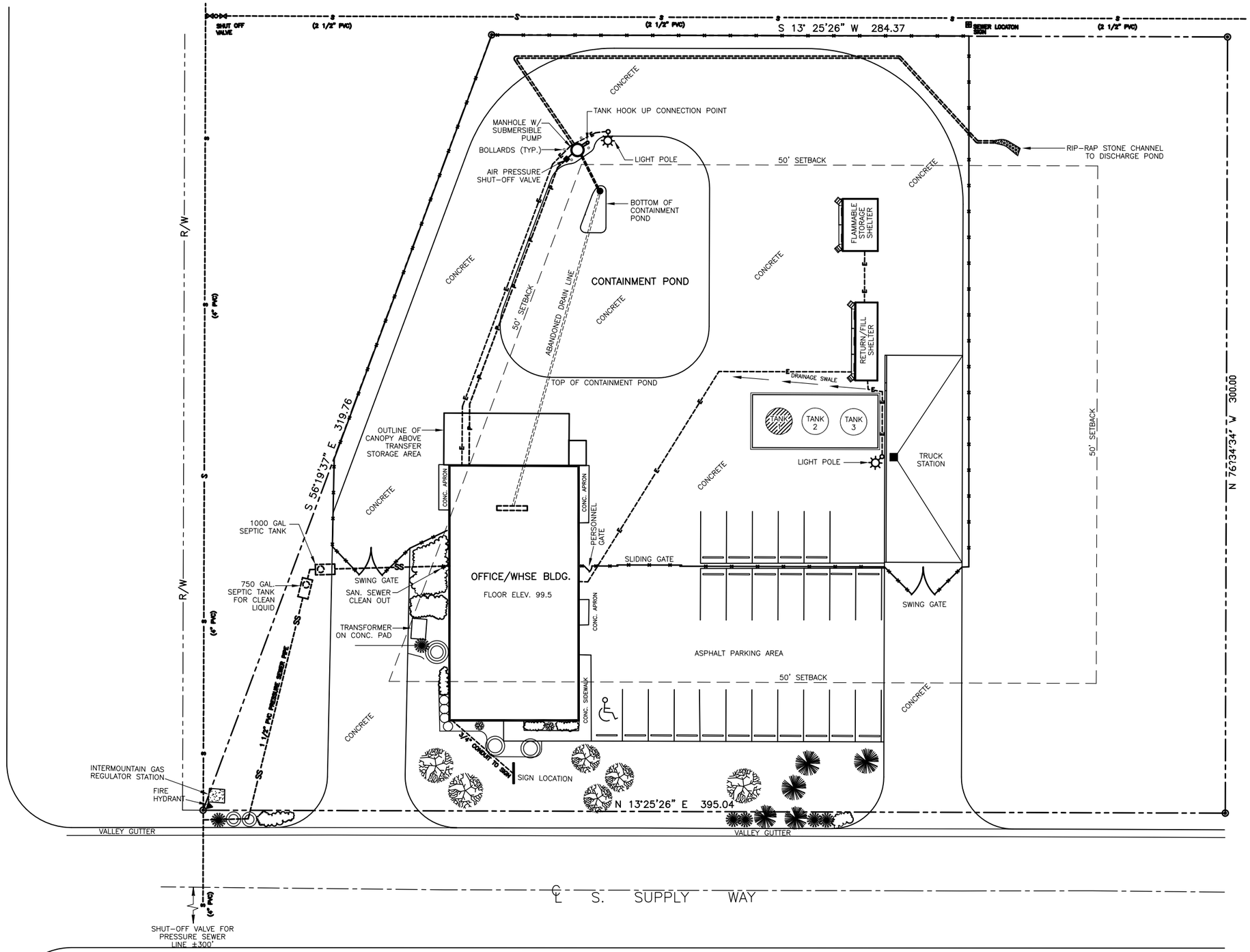
Exhibit D-13: Drum Washer Isometric

Exhibit D-14: Drum Washer Roll Up Door Assembly

Exhibit D-15: Drum Washer Capacity Calculations

Exhibit N-1

Site Location Map



N

0' 15' 50'
5' 30' 75'

GENERAL NOTES

- PROPERTY LINE
- FENCE LINE
- ELECTRICAL LINE
- PNEUMATIC LINE
- SANITARY SEWER LINE
- 50' SETBACK
- PRESSURE SEWER LINE
- CONTAINMENT POND DISCHARGE LINE
- RIGHT OF WAY
- FIRE HYDRANT
- HAZARDOUS WASTE TANK
- PROPERTY CORNER

TANK LEGEND

TANK NO.	TANK VOLUME	TANK CONTENTS	REMARKS
1	12,000 USG	USED MINERAL SPIRITS	10'-6" F&D BOTTOM TANK
2	12,000 USG	OUT OF SERVICE	10'-6" F&D BOTTOM TANK FORMER 105 CMS TANK
3	12,000 USG	CLEAN 150° MINERAL SPIRITS	10'-6" F&D BOTTOM TANK

REVISIONS

NO.	DESCRIPTION	BY	CHK	APPR	DATE
A	RELEASED TO WEY FOR REVIEW	MBH	KJM	WEY	053196
B	ADDED LANDSCAPING	MBH	KJM	WEY	053196
C	REVISED FOR PERMIT	JEK	NC	NC	012813

PROPRIETARY STATEMENT

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TITLE

EXISTING SITE /FACILITY LAYOUT PLAN

SAFETY-KLEEN SYSTEMS, INC.
2600 N. CENT. EXPRESSWAY STE. 400 RICHARDSON, TX. 75080
PHONE 800-669-5740

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
1"=20'-0"	JKM				05-31-96

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
BOISE, ID	7114-SP00-001	C

120601

Exhibit N-2

Valve List of Subpart BB Tags

Exhibit N-2

VALVE LIST				
INDIVIDUAL VALVE NUMBER	VALVE SIZE	VALVE TYPE	HAZARDOUS WASTE MANAGEMENT UNIT	LOCATION
3	3"	Ball	Waste Material Tank System	Refer to site plan and piping schematic
5	3"	Check	Waste Material Tank System	Refer to site plan and piping schematic
8	3"	Ball	Waste Material Tank System	Refer to site plan and piping schematic
10	3"	Emergency	Waste Material Tank System	Refer to site plan and piping schematic
14	3"	Ball	Waste Material Tank System	Refer to site plan and piping schematic
16	3"	Emergency	Waste Material Tank System	Refer to site plan and piping schematic
22	2"	Check	Waste Material Tank System	Refer to site plan and piping schematic
23	2"	Ball	Waste Material Tank System	Refer to site plan and piping schematic
30	2"	Gate	Waste Material Tank System	Refer to site plan and piping schematic
32	1"	Gate	Waste Material Tank System	Refer to site plan and piping schematic
40	1 1/2"	Ball	Waste Material Tank System	Refer to site plan and piping schematic

FLANGE LIST				
INDIVIDUAL FLANGE NUMBER	FLANGE SIZE	FLANGE TYPE	HAZARDOUS WASTE MANAGEMENT UNIT	LOCATION
2	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
4	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
6	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
7	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
9	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
11	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
13	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
15	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
17	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
18	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
19	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
21	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
38	1 1/2"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
42	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
44	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
45	2"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
46	2"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
48	2"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
49	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
50	3"	Connection	Waste Material Tank System	Refer to site plan and piping schematic
51	6"	Connection	Waste Material Tank System	Refer to site plan and piping schematic

PUMP LIST			
INDIVIDUAL PUMP NUMBER	DESCRIPTION	HAZARDOUS WASTE MANAGEMENT UNIT	LOCATION
24	Tank Pump	Waste Material Tank System	Refer to site plan and piping schematic
36	Recirculation	Waste Material Tank System	Refer to site plan and piping schematic

OTHER NON-WELDED CONNECTIONS, UNIONS, COUPLINGS, CAPS AND DEVICES LIST			
INDIVIDUAL NUMBER	Description	HAZARDOUS WASTE MANAGEMENT UNIT	LOCATION
1	3" Threaded Camloc Coupling	Waste Material Tank System	Refer to site plan and piping schematic
12	3" Threaded Camloc Coupling	Waste Material Tank System	Refer to site plan and piping schematic
20	Manhole Cover	Waste Material Tank System	Refer to site plan and piping schematic
25	2" - 1 1/2" Reducer	Waste Material Tank System	Refer to site plan and piping schematic
26	Strainer	Waste Material Tank System	Refer to site plan and piping schematic
27	2" Elbow	Waste Material Tank System	Refer to site plan and piping schematic
28	2" Threaded Connection T	Waste Material Tank System	Refer to site plan and piping schematic
29	2" Threaded Camloc Coupling	Waste Material Tank System	Refer to site plan and piping schematic
31	45 Degree Elbow	Waste Material Tank System	Refer to site plan and piping schematic
33	1" Union	Waste Material Tank System	Refer to site plan and piping schematic
34	1 1/2" - 1" Reducer	Waste Material Tank System	Refer to site plan and piping schematic
35	1 1/2" Threaded Flex Hose	Waste Material Tank System	Refer to site plan and piping schematic
37	1 1/2" Elbow	Waste Material Tank System	Refer to site plan and piping schematic
39	1 1/2" Union	Waste Material Tank System	Refer to site plan and piping schematic
41	Manhole - Emergency	Waste Material Tank System	Refer to site plan and piping schematic
43	Pressure Release Vent	Waste Material Tank System	Refer to site plan and piping schematic
47	Tank Gauge Connection	Waste Material Tank System	Refer to site plan and piping schematic

Exhibit N-3

Heavy Liquid Determination
(for Safety-Kleen Solvent)

WASTE SOLVENT – HEAVY LIQUID DETERMINATION

&

VAPOR PRESSURE INFORMATION

Heavy Liquid Determination:

In the annual Recharacterization for waste solvent, a total of three constituents are identified: Benzene (D018), Perchloroethylene (D039), and TCE (D040). The total concentration for these three constituents is 855.2 ppm or mg/l (see attached detailed table from annual Recharacterization (Attachment No. 1). The conversion from ppm or mg/l to percent shows that these three constituents make of 0.085%, which is less than 20%. Therefore, the waste solvent is a heavy liquid not a light liquid.

To further explain the vapor pressure of the waste solvent, Safety-Kleen did a study to determine the waste solvent vapor pressure at different temperatures. The vapor pressures were determined at ASTM D2789: Vapor Pressure – Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope. The isoteniscope data indicates the vapor pressure at 100 degree Fahrenheit (assuming this to be the high temperature in San Antonio TX branch) to be 0.03281 psi, which is below the maximum organic vapor pressure (11.1 psi) for these tanks under 40 CFR 264.1084(b)(1)(i). In addition, this study also obtained data for temperature up to 375 degrees Fahrenheit, and the vapor pressure at this temperature was 9.7 psi, which is still lower than 11.1 psi. We are enclosing a copy of the actual laboratory results for this study (see Attachment No. 2).

Vapor Pressure Determination:

In reference to the vapor pressure of the waste spent solvent, to further explain this issue, Safety-Kleen did a study to determine the waste solvent vapor at different temperatures. The vapor pressures were determined by ASTM D2789: Vapor Pressure – Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope. The isoteniscope data indicates the vapor pressure at 100 degree Fahrenheit (assuming this to be the high temperature in San Antonio TX branch) to be 0.03281 psi, which is below the maximum organic vapor pressure (11.1 psi) for these tanks under 40 CFR 264.1084(b)(1)(i). In addition, this study also obtained data for temperature up to 375 degrees Fahrenheit, and the vapor pressure at this temperature was 9.7 psi, which is still lower than 11.1 psi. We are enclosing a copy of the actual laboratory results for this study (see Attachment No. 2).

We are also attaching a copy of a Safety-Kleen memorandum dated August 2, 2000 in which detailed information is provided about the vapor pressure determination for the waste spent solvent. This memorandum contains actual test data from a representative set of samples that were used for the vapor pressure determination (see Attachment No. 3).

As clarification, the August 2, 2000 memorandum lists the vapor pressure for all samples as measured by isoteniscope. Data from five samples were excluded because these samples had high concentrations of water. The vapor pressure of waste @ 68 degrees Fahrenheit is 2.330kPa (17.5 mm Hg). An attempt was made to calculate the partial pressure due to water, and subtract that from measure total vapor pressure to

give the VOC-only vapor pressure. However, the calculated vapor pressure waste greater than the measured total vapor pressure. As explained in the memorandum, the error is due to inaccuracy of water determination in a three-phase system (mineral spirits, water, and solids), which is difficult to sample accurately. In other words, the calculated VOC partial pressure was the difference between two large numbers, one of which had a probable error on the order of magnitude of the resultant difference.

ATTACHMENT No. 1

Waste Parts Wa. .er Solvent - 105

			84 SAMPLES	2009203	2011431	2015033	2015436	2015441	2015462	2016049	2017367	2017645	2018176	2025720
			YEAR	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
ANALYSIS METALS	90 UCL for the 50th Percentile	Waste Code	SITE ⇨ Reg Limit	DENTON, TX	GERING, NE	FARGO, ND	FARGO, ND	ALBUQUERQUE, NM	OMAHA, NE	SIOUX FALLS, SD	EDWARDSVILLE, KS	GRAND ISLAND, NE	WICHITA, KS	GARDEN CITY, GA
AS	ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BA	0.768	D005	100	<0.500	<0.500	70.3	1.32	24.3	<0.500	1.87	0.706	<0.500	<0.500	<0.500
CD	ND	D006	1	<0.500	<0.500	**F 3.04**	<0.500	<0.500	<0.500	0.627	<0.500	<0.500	0.646	<0.500
CR	ND	D007	5	<0.500	<0.500	**F 5.22**	<0.500	<0.500	<0.500	<0.500	<0.500	0.550	<0.500	0.53
PB	ND	D008	5	<4.00	<4.00	**F 31.4**	<4.00	<4.00	<4.00	<4.00	**F 25.9**	<4.00	**F 7.45**	<4.00
HG	ND	D009	0.2	<0.10	<0.10	<0.10	<0.040	<0.040	<0.040	<0.10	<0.10	<0.10	<0.040	<0.040
SE	ND	D010	1	<0.45	<0.45	<0.45	<0.008	<0.008	<0.008	<0.45	<0.45	<0.45	<0.008	<0.008
AG	ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOA														
1,1-DCE	ND	D029	0.7	<4.0	<4.0	<40	<4.0	<0.40	<4.0	<4.0	<4.0	<4.0	<4.0	<0.40
1,2-DCE	ND	D028	0.5	<2.0	<2.0	<20	<2.0	<0.20	<2.0	<2.0	<2.0	<2.0	<2.0	<0.20
PDCB	2.5	D027	7.5	<5.0	**F 10.4**	<50	<5.0	0.74	<5.0	6.4	**F 9.8**	<5.0	<5.0	<0.50
BENZ	**1.8**	D018	0.5	**F 9.9**	**F 2.2**	<20	**F 3.7**	0.28	**F 2.4**	<2.0	<2.0	**F 2.2**	**F 3.8**	**F 96.7**
CCL4	ND	D019	0.5	<2.0	<2.0	<20	<2.0	<0.20	<2.0	<2.0	<2.0	<2.0	<2.0	<0.20
MCB	ND	D021	100	<2.0	<2.0	<20	<2.0	<0.20	<2.0	<2.0	<2.0	<2.0	<2.0	<0.20
CHCL3	ND	D022	6	<2.0	<2.0	<20	<2.0	<0.20	<2.0	<2.0	<2.0	<2.0	<2.0	<0.20
MEK	2.2	D035	200	6.7	<5.0	<50	6.2	<0.50	5.4	11.9	<5.0	6.1	5	77.5
PERC	**838**	D039	0.7	**F 877**	**F 2430**	**F 46000**	**F 2410**	**F 40.6**	**F 974**	**F 532**	**F 820**	**F 917**	**F 430**	**F 1.1**
TCE	**15.4**	D040	0.5	**F 117**	**F 78.5**	**F 54.2**	**F 59**	**F 0.71**	**F 45.8**	**F 19**	**F 9.5**	**F 46.1**	**F 34.1**	<0.20
VC	ND	D043	0.2	<0.60	<0.60	<15	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
BNA														
2,4,5-TCP	ND	D041	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2,4,6-TCP	ND	D042	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2,4-DNT	ND	D030	0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.60	<0.13	<0.13	<0.13	<0.13	<0.13
2-MP	ND	D023	200	<5.0	13.5	<6.0	<5.0	<5.0	<5.0	<16	<9.5	<5.0	<5.0	11
3+4-MP	ND	D024/25	400	<5.0	14.5	9.77	<5.0	<5.0	6.95	7.24	<5.0	<5.0	<5.0	<5.0
HCB	ND	D032	0.13	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.0050	<0.025
HCBD	ND	D033	0.5	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.10
HCE	ND	D034	3	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<1.0
NTB	ND	D036	2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
PCP	ND	D037	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
PYR	ND	D038	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MISC														
FP	144	D001	140	146	**F 136**	142	**F 130**	161	**F 137**	**F 139**	**F 137**	145	143	**F 112**
pH	7.1	D002	2-12.5	6.1	10.16	7.4	7.4	6.3	6.1	7.0	7.2	7.2	8.51	9.11
SpG				0.793	0.797	0.910	0.790	0.790	0.788	0.840	0.773	0.802	0.784	0.814

Waste Parts Wa .er Solvent - 105

90 UCL for the 50th Percentile	Waste Code	Reg Limit	2035230	2037675	2039386	2039389	2042560	2042593	2044434	2045076	2046600	2046607	2046613	2049653
		84 SAMPLES	2035230	2037675	2039386	2039389	2042560	2042593	2044434	2045076	2046600	2046607	2046613	2049653
		YEAR	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
		SITE ⇨	LONGVIEW, TX	SYRACRUSE, NY	PINEVILLE, LA	SALIDA, CA	NONE GIVEN, IL	SIOUX FALLS, SD	N AMITYVILLE, NY	ST CHARLES, MO	ASHLAND, KY	ASHLAND, KY	ASHLAND, KY	LEXINGTON, KY
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
0.768	D005	100	4.61	1.4	<0.500	2.31	1.29	2.55	<0.500	<0.500	7.78	1.54	<0.500	2.36
ND	D006	1	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D007	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D008	5	**F 10.4**	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	**F 7.7**	**F 9.2**	<4.00	<4.00
ND	D009	0.2	<0.100	<0.10	<0.10	<0.10	<0.10	<0.100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<0.40	<4.0	<4.0	<4.0	<0.80	<4.0	<4.0	<4.0	<4.0	<0.80	<0.80	<0.80
ND	D028	0.5	<0.20	<2.0	<2.0	<2.0	<0.40	<2.0	<2.0	<2.0	<2.0	<0.40	**F 2.4**	<0.40
2.5	D027	7.5	0.99	<5.0	<5.0	<5.0	1.4	6.5	<5.0	<5.0	<5.0	3.1	1.2	5.3
1.8	D018	0.5	**F 3.8**	**F 2.3**	**F 6.6**	**F 13.8**	**F 4.2**	**F 20.9**	**F 2**	<2.0	**F 12.4**	<0.40	**F 106**	<0.40
ND	D019	0.5	<0.20	<2.0	<2.0	<2.0	<0.40	<2.0	<2.0	<2.0	<2.0	**F 1.1**	**F 3.7**	<0.40
ND	D021	100	<0.20	<2.0	<2.0	<2.0	<0.40	<2.0	<2.0	<2.0	<2.0	<0.40	<0.40	<0.40
ND	D022	6	<0.20	<2.0	<2.0	<2.0	<0.40	<2.0	<2.0	<2.0	<2.0	<0.40	<0.40	<0.40
2.2	D035	200	<0.50	<5.0	78	<5.0	6.3	12.4	<5.0	<5.0	<5.0	<1.0	9	<1.0
838	D039	0.7	**F 735**	**F 1780**	**F 836**	**F 284**	**F 916**	**F 38700**	**F 1310**	**F 1140**	**F 365**	**F 23100**	**F 5150**	**F 1120**
15.4	D040	0.5	**F 17.8**	**F 16.8**	**F 85.9**	<2.0	**F 51.3**	**F 5.7**	**F 23.4**	**F 35.5**	<2.0	**F 5.2**	**F 7320**	**F 14.8**
ND	D043	0.2	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
ND	D041	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
ND	D023	200	<5.0	6.89	<5.0	<5.0	25.2	<5.0	8.59	8.74	<5.0	<5.0	<5.0	<5.0
ND	D024/25	400	<5.0	5.29	<5.0	<5.0	22.6	<5.0	6.36	6.48	<5.0	<5.0	<5.0	<5.0
ND	D032	0.13	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	0.1377	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.0882	<1.0	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D037	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D038	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
144	D001	140	152	**F 130**	141	151	152	**F 128**	148	142	**F 135**	152	**F 125**	**F 138**
7.1	D002	2-12.5	6.93	6.85	5.46	7.44	6.94	7.17	6.25	7.7	7.7	7.82	7.69	6.9
			0.852	0.796	0.810	0.810	0.768	0.824	0.794	0.782	0.824	0.874	0.836	0.792

Waste Parts Wa er Solvent - 105

90 UCL for the 50th Percentile	Waste Code	Reg Limit	2050529	2050719	2051064	2051094	2052339	2053035	2054245	2054691	2056648	2057701	2058154	2058274
		84 SAMPLES	2050529	2050719	2051064	2051094	2052339	2053035	2054245	2054691	2056648	2057701	2058154	2058274
		YEAR	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
		SITE ⇨	LACKAWANNA, NY	COLUMBUS, GA	FARMINGTON, NM	MACON, GA	LEXINGTON, KY	GREER, SC	MORROW, GA	ASHLAND, KY	LONGVIEW, TX	OMAHA, NE	GERING, NE	GRAND ISLAND, NE
ND	D004	5	<5.00	<5.00	<5.00	<0.905	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
0.768	D005	100	2.23	10.5	<0.500	17.438	<0.500	0.853	1.56	8.06	0.927	1.03	0.941	1.21
ND	D006	1	<0.500	<0.500	<0.500	0.181	<0.500	<0.500	0.587	0.52	<0.500	<0.500	<0.500	<0.500
ND	D007	5	<0.500	<0.500	<0.500	0.325	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D008	5	<4.00	<4.00	<4.00	<0.724	<4.00	**F 11.4**	**F 9.16**	**F 19**	**F 8.32**	<4.00	<4.00	<4.00
ND	D009	0.2	<0.10	<0.10	<0.10	0.011	<0.10	<0.100	<0.10	<0.10	<0.10	<0.100	<0.10	<0.10
ND	D010	1	<0.45	<0.45	<0.45	<0.723	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.0905	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<0.40	<0.40	<0.80	<0.242	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40
ND	D028	0.5	<0.20	<0.20	<0.40	<0.214	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20
2.5	D027	7.5	6.1	0.6	<1.0	<0.256	5	0.6	0.63	3.5	<0.50	0.62	2.6	4.9
1.8	D018	0.5	0.23	<0.20	**F 0.86**	<0.214	**F 76.3**	**F 98.2**	<0.20	<0.20	<0.20	**F 4.6**	**F 4.4**	0.48
ND	D019	0.5	<0.20	<0.20	<0.40	<0.214	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20
ND	D021	100	<0.20	<0.20	<0.40	<0.214	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20
ND	D022	6	1.1	<0.20	<0.40	<0.214	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20
2.2	D035	200	<0.50	0.66	1.8	<0.535	<0.50	5.4	<0.50	<0.50	<0.50	2.4	1.8	0.62
838	D039	0.7	**F 924**	**F 514**	**F 308**	**F 11.596**	**F 1110**	**F 1230**	**F 221**	**F 240**	**F 165**	**F 1510**	**F 828**	**F 477**
15.4	D040	0.5	**F 22.8**	**F 2.6**	**F 16.8**	0.227	**F 32.2**	**F 9.7**	<0.20	<0.20	**F 1.2**	**F 21.3**	**F 17.2**	**F 11.1**
ND	D043	0.2	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
ND	D041	400	<5.0	<5.0	<5.0	<0.905	<5.0	<5.0	<200	<5.0	<5.0	<25	<5.0	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<0.635	<2.0	<2.0	<200	<2.0	<2.0	<10.0	<2.0	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.1027	<0.13	<0.13	<40	<0.13	<0.13	<0.65	<0.13	<0.13
ND	D023	200	12.2	<5.0	<5.0	<45.95	<5.0	<5.0	<200	<5.0	<5.0	<25	<5.0	<5.0
ND	D024/25	400	12.2	<5.0	<5.0	<45.96	<5.0	<5.0	<200	<5.0	<5.0	<25	<5.0	<5.0
ND	D032	0.13	<0.025	<0.025	<0.025		<0.025	<0.025	<40	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.10	<0.10	<0.10	<0.464	<0.10	<0.10	<200	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<1.0	<1.0	<1.0	<0.545	<1.0	<1.0	<200	<1.0	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.491	<0.40	<0.40	<200	<0.40	<0.40	<2.0	<0.40	<0.40
ND	D037	100	<5.0	<5.0	<5.0	<0.905	<5.0	<5.0	<200	<5.0	<5.0	<25	<5.0	<5.0
ND	D038	5	<1.0	<1.0	<1.0	<0.57685	<1.0	<1.0	<210	<1.0	<1.0	<5.0	<1.0	<1.0
144	D001	140	**F 136**	148	153	166	**F 130**	**F 130**	160	152	160	**F 132**	146	148
7.1	D002	2-12.5	6.3	6.62	4.46	9.52	7.08	**F 7.29**	6.55	7.46	**F 6.35**	6.95	7.79	7.23
			0.769	0.799	0.878	1.028	0.801	0.802	0.731	0.821	0.812	0.812	0.807	0.804

Waste Parts Wa er Solvent - 105

90 UCL for the 50th Percentile	Waste Code	Reg Limit	2062345	2064802	2066247	2066750	2066973	2066986	2067058	2067069	2067104	2067123	2075107	2075710
		84 SAMPLES	2062345	2064802	2066247	2066750	2066973	2066986	2067058	2067069	2067104	2067123	2075107	2075710
		YEAR	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2001	2001
		SITE ⇨	COHOES, NY	DODGE CITY, KS	EL MONTE, CA	SACRAMENTO, CA	LOS ANGELES, CA	HIGHLAND, CA	SANTA ANA, CA	OAKLAND, CA	SALIDA, CA	ROHNERT PARK, CA	GERING, NE	DENTON, TX
ND	D004	5	<5.00	<5.00	<5.00	<0.500	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
0.768	D005	100	2.07	0.768	<0.500	<0.050	<0.500	<0.500	0.787	2.42	3.73	1.89	11.8	<0.500
ND	D006	1	<0.500	<0.500	<0.500	0.098	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.535	<0.500
ND	D007	5	<0.500	<0.500	<0.500	<0.050	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D008	5	<4.00	<4.00	<4.00	<0.400	<4.00	<4.00	<4.00	**F 10.3**	<4.00	<4.00	<4.00	<4.00
ND	D009	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.050	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<0.80	<0.80	<0.40	<0.80	<0.40	<0.80	<0.80	<0.80	<0.80	<0.80	<2.0	<1.6
ND	D028	0.5	<0.40	<0.40	<0.20	<0.40	<0.20	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0	<0.80
2.5	D027	7.5	3.4	<1.0	2	1.4	2.4	1.7	1.5	<1.0	1.4	1.3	6.6	2
1.8	D018	0.5	**F 0.4**	**F 0.83**	**F 1.7**	**F 1.2**	**F 1.5**	**F 1.2**	**F 3.3**	**F 2.4**	**F 3.8**	**F 81.6**	**F 21.1**	**F 8.1**
ND	D019	0.5	<0.40	<0.40	<0.20	<0.40	<0.20	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0	<0.80
ND	D021	100	<0.40	<0.40	<0.20	<0.40	<0.20	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0	<0.80
ND	D022	6	<0.40	<0.40	<0.20	<0.40	<0.20	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0	2.8
2.2	D035	200	<1.0	18.3	5.2	1.4	6.6	2	4.9	<1.0	1.2	142	<2.5	4.5
838	D039	0.7	**F 213**	**F 3360**	**F 1050**	**F 824**	**F 751**	**F 1010**	**F 10800**	**F 416**	**F 725**	**F 2430**	**F 4090**	**F 892**
15.4	D040	0.5	**F 1.2**	**F 12.2**	**F 20.8**	**F 17.4**	**F 10.6**	**F 7.2**	**F 33.3**	**F 7**	**F 10.1**	**F 15.4**	**F 12.4**	**F 67.1**
ND	D043	0.2	<0.15	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
ND	D041	400	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<10.0	<10.0	<5.0	<5.0	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<4.0	<4.0	<2.0	<2.0	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.26	<0.13	<0.26	<0.26	<0.13	<0.13	<0.13
ND	D023	200	6.64	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<10.0	<10.0	<5.0	<5.0	<5.0
ND	D024/25	400	5.04	<5.0	<5.0	<5.0	<5.0	<10.0	5.55	<10.0	<10.0	<5.0	<5.0	<5.0
ND	D032	0.13	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.80	<0.40	<0.40	<0.40
ND	D037	100	<50	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<10.0	<10.0	<5.0	<5.0	<5.0
ND	D038	5	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	<1.0	<1.0	<1.0
144	D001	140	141	150	154	156	154	156	154	**F 69**	154	**F 78**	**F 129**	149
7.1	D002	2-12.5	7.05	6.03	4.64	6.81	5.96	5.96	5.83	6.89	8.34	7.12	7.44	6.69
			1.150	0.811	0.829	0.805	0.833	0.832	0.833	0.812	0.819	0.793	0.810	0.801

Waste Parts Wa. er Solvent - 105

90 UCL for the 50th Percentile	Waste Code	84 SAMPLES / YEAR / SITE ⇨ Reg Limit	2078392	2078397	2078406	2078822	2080677	2082219	2082497	2083420	2083438	2083444	2083717	2083720
		YEAR	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
		SITE ⇨	ORANGE, TX	ORANGE, TX	OMAHA, NE	FARGO, ND	SIOUX FALLS, SD	ALBUQUERQUE, NM	GRAND ISLAND, NE	SYRACUSE, NY	SYRACUSE, NY	SYRACUSE, NY	N AMITYVILLE, NY	N AMITYVILLE, NY
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
0.768	D005	100	<0.500	6.46	6.62	<0.500	<0.500	0.730	0.869	<0.500	<0.500	1.93	0.740	0.672
ND	D006	1	<0.500	<0.500	<0.500	0.527	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D007	5	<0.500	<0.500	<0.500	**F 7.11**	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D008	5	<4.00	4.29	<4.00	<4.00	<4.00	<4.00	**F 16.4**	<4.00	<4.00	<4.00	<4.00	<4.00
ND	D009	0.2	<0.10	<0.100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<2.0	<2.0	<0.40	<2.0	<0.40	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6
ND	D028	0.5	<1.0	<1.0	<0.20	<1.0	<0.20	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80
2.5	D027	7.5	<2.5	<2.5	1.7	5.4	0.96	<2.0	4.3	6.7	7.2	7.4	3.7	4.2
1.8	D018	0.5	<1.0	<1.0	0.33	**F 40.8**	0.25	<0.80	**F 2**	**F 1.4**	**F 1.6**	**F 2.1**	**F 38.2**	<0.80
ND	D019	0.5	<1.0	<1.0	<0.20	<1.0	<0.20	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80
ND	D021	100	<1.0	<1.0	<0.20	<1.0	<0.20	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80
ND	D022	6	<1.0	<1.0	0.26	<1.0	<0.20	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80
2.2	D035	200	<2.5	<2.5	2.6	<2.5	<0.50	<2.0	<2.0	2.5	<2.0	3.1	2.1	<2.0
838	D039	0.7	**F 36**	**F 55.7**	**F 153**	**F 347**	**F 0.74**	**F 945**	**F 325**	**F 748**	**F 2040**	**F 1050**	**F 1130**	**F 949**
15.4	D040	0.5	<1.0	<1.0	**F 6.9**	**F 12.7**	<0.20	**F 1.1**	**F 4.8**	**F 21.5**	**F 16.5**	**F 35.8**	**F 31.3**	**F 14.4**
ND	D043	0.2	<0.30	<0.30	<0.30	<0.30	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
ND	D041	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
ND	D023	200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	11.2	<5.0	<5.0	<5.0	8.41
ND	D024/25	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	8.69	10.1	<5.0	<5.0	<6.7
ND	D032	0.13	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D037	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D038	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
144	D001	140	164	145	142	**F 136**	157	**F 128**	141	152	**F 123**	**F 124**	**F 122**	142
7.1	D002	2-12.5	6.93	4.86	7.94	7.41	7.32	6.85	9.37	5.92	7.24	7.38	8.32	7.68
			0.880	0.880	0.780	0.870	0.786	0.802	0.830	0.815	0.797	0.794	0.783	0.791

Waste Parts Wa. er Solvent - 105

90 UCL for the 50th Percentile	Waste Code	Reg Limit	2083721	2085292	2085303	2085304	2085317	2089012	2089567	2090894	2091979	2092403	2093718	2093722
	84 SAMPLES		2083721	2085292	2085303	2085304	2085317	2089012	2089567	2090894	2091979	2092403	2093718	2093722
	YEAR		2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
		SITE ⇨	N AMITYVILLE, NY	LACKAWANNA, NY	LACKAWANNA, NY	CLACKAMAS, OR	LACKAWANNA, NY	MACON, GA	COLUMBUS, GA	OKLAHOMA, OK	TULSA, OK	LONGVIEW, TX	COHOES, NY	COHOES, NY
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
0.768	D005	100	<0.500	<0.500	<0.500	4.00	<0.500	3.73	2.32	1.45	2.23	18.2	<0.500	<0.500
ND	D006	1	**F 1.56**	<0.500	<0.500	<0.500	<0.500	<0.500	0.759	0.670	<0.500	0.587	<0.500	<0.500
ND	D007	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.563	<0.500	<0.500	0.975	<0.500	<0.500
ND	D008	5	<4.00	<4.00	<4.00	<4.00	4.85	<4.00	**F 16.2**	4.02	<4.00	<4.00	<4.00	<4.00
ND	D009	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<1.6	<1.6	<1.6	<1.6	<1.6	<2.0	<2.0	<2.0	<0.80	<1.6	<1.6	<1.6
ND	D028	0.5	<0.80	<0.80	<0.80	<0.80	<0.80	<1.0	<1.0	<1.0	<0.40	<0.80	<0.80	<0.80
2.5	D027	7.5	5.2	4.5	4.2	2.1	4.4	<2.5	<2.5	<2.5	<1.0	<2.0	5.1	4.5
1.8	D018	0.5	<0.80	**F 1.8**	**F 1.8**	**F 5.8**	**F 2**	**F 1.7**	<1.0	**F 4.8**	**F 0.7**	**F 1.9**	**F 4.9**	**F 4.3**
ND	D019	0.5	<0.80	<0.80	<0.80	<0.80	<0.80	<1.0	<1.0	<1.0	<0.40	<0.80	<0.80	<0.80
ND	D021	100	<0.80	<0.80	<0.80	<0.80	<0.80	<1.0	<1.0	<1.0	<0.40	<0.80	<0.80	<0.80
ND	D022	6	<0.80	<0.80	<0.80	<0.80	<0.80	<1.0	<1.0	<1.0	<0.40	<0.80	<0.80	<0.80
2.2	D035	200	<2.0	<2.0	<2.0	<2.0	2	12.1	36.5	4.6	91.3	2.2	17.2	18.4
838	D039	0.7	**F 509**	**F 900**	**F 748**	**F 1360**	**F 889**	**F 1090**	**F 838**	**F 758**	**F 268**	**F 286**	**F 943**	**F 852**
15.4	D040	0.5	**F 7.8**	**F 17.8**	**F 16.3**	**F 24.8**	**F 17.8**	**F 24.9**	**F 1.4**	**F 8.8**	**F 7.9**	**F 10.7**	**F 18.2**	**F 17.3**
ND	D043	0.2	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
ND	D041	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
ND	D023	200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D024/25	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D032	0.13	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D037	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D038	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
144	D001	140	144	144	146	148	144	**F 116**	160	154	156	158	**F 118**	**F 120**
7.1	D002	2-12.5	7.21	7.07	6.26	4.61	5.07	6.44	6.77	7.23	7.05	6.02	7.12	6.05
			0.776	0.809	0.819	0.805	0.806	0.872	0.841	0.840	0.794	0.750	0.810	0.800

Waste Parts Wa er Solvent - 105

90 UCL for the 50th Percentile	Waste Code	84 SAMPLES / YEAR / SITE ⇨ Reg Limit	2093723	2093898	2094180	2094379	2094880	2097351	2098603	2098615	2100671	2107122	2107132	2107134
		YEAR	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
		SITE ⇨	COHOES, NY	PINEVILLE, LA	FARMINGTON, NM	ST CHARLES, MO	MORROW, GA	AVON, NY	SANTA ANA, CA	GREER, SC	DODGE CITY, KS	ASHLAND, KY	ASHLAND, KY	AHLAND, KY
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
0.768	D005	100	0.532	1.67	<0.500	<0.500	8.26	1.59	1.16	0.608	0.609	<0.500	<0.500	<0.500
ND	D006	1	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.792	<0.500	<0.500	<0.500	0.879
ND	D007	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D008	5	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	**F 5.58**	4.56	<4.00	<4.00
ND	D009	0.2	<0.10	<0.10	<0.10	<0.10	<0.100	<0.10	<0.10	<0.100	<0.100	<0.10	<0.10	<0.100
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<0.40	<1.6	<0.40	<0.40	<1.6	<0.80	<1.6	<1.6	<0.80	<0.40	<0.40	<0.40
ND	D028	0.5	<0.20	<0.80	<0.20	<0.20	<0.80	<0.40	<0.80	<0.80	<0.40	<0.20	<0.20	<0.20
2.5	D027	7.5	5.7	4.5	<0.50	1.3	<2.0	3.7	<2.0	<2.0	<1.0	4.9	5.3	6.6
1.8	D018	0.5	**F 5.3**	**F 4.6**	**F 0.82**	<0.20	**F 0.99**	**F 2.1**	**F 1.7**	<0.80	**F 0.5**	<0.20	**F 9.8**	**F 0.81**
ND	D019	0.5	<0.20	<0.80	<0.20	<0.20	<0.80	<0.40	<0.80	<0.80	<0.40	<0.20	<0.20	<0.20
ND	D021	100	<0.20	<0.80	<0.20	<0.20	<0.80	<0.40	<0.80	<0.80	<0.40	<0.20	<0.20	<0.20
ND	D022	6	<0.20	<0.80	<0.20	<0.20	<0.80	<0.40	<0.80	<0.80	<0.40	<0.20	<0.20	<0.20
2.2	D035	200	18.5	19.4	82.5	2	<2.0	90.9	99.9	56.5	<1.0	<0.50	2.2	0.76
838	D039	0.7	**F 1150**	**F 912**	**F 22.9**	0.57	**F 1520**	**F 1060**	**F 1170**	**F 835**	**F 184**	**F 121**	**F 830**	**F 934**
15.4	D040	0.5	**F 23.2**	**F 19**	0.3	<0.20	**F 19.6**	**F 37.4**	**F 30.2**	**F 4.8**	**F 6.8**	<0.20	**F 42.5**	**F 22.7**
ND	D043	0.2	<0.15	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
ND	D041	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.26	<0.13	<0.13	<0.13	<0.13
ND	D023	200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	5.01
ND	D024/25	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0
ND	D032	0.13	<0.025	<0.025	0.043108	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	**F 0.52691**	0.25329	0.48637
ND	D034	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.40	<0.40	<0.40
ND	D037	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0
ND	D038	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0
144	D001	140	**F 118**	**F 78**	**F 122**	152	150	146	153	156	160	146	**F 134**	**F 136**
7.1	D002	2-12.5	6.52	6.99	6.30	7.66	7.09	7.22	6.49	6.72	9.04	7.18	7.12	7.66
			0.810	0.800	0.813	0.799	0.810	0.814	0.813	0.930	0.802	0.910	0.940	0.950

Waste ,rts Washer Solvent - 105

		84 SAMPLES	2113299
		YEAR	2001
90 UCL for the 50th Percentile	Waste Code	SITE ⇨ Reg Limit	NORCROSS, GA
ND	D004	5	<5.00
0.768	D005	100	<0.500
ND	D006	1	<0.500
ND	D007	5	<0.500
ND	D008	5	<4.00
ND	D009	0.2	<0.10
ND	D010	1	<0.45
ND	D011	5	<0.500
ND	D029	0.7	<0.40
ND	D028	0.5	<0.20
2.5	D027	7.5	1.3
1.8	D018	0.5	**F 16.7**
ND	D019	0.5	<0.20
ND	D021	100	<0.20
ND	D022	6	<0.20
2.2	D035	200	0.98
838	D039	0.7	**F 766**
15.4	D040	0.5	**F 13.2**
ND	D043	0.2	<0.60
ND	D041	400	<5.0
ND	D042	2	<2.0
ND	D030	0.13	<0.13
ND	D023	200	<5.0
ND	D024/25	400	<5.0
ND	D032	0.13	<0.025
ND	D033	0.5	<0.10
ND	D034	3	<1.0
ND	D036	2	<0.40
ND	D037	100	<5.0
ND	D038	5	<1.0
144	D001	140	154
7.1	D002	2-12.5	7.1
			0.821

Waste Parts Washe Solvent (105/150)

			53 Samples	9900811	9900900	9900901	9908598	9914275	9915174	9922363	9925895	9926261	9942190	9942191
			YEAR	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
ANALYSIS METALS	90 UCL for the 50th Percentile	Waste Code	SITE ⇨ Reg Limit	FARGO, ND	DR. EAGAN, MN	DR EAGAN, MN	MACON, GA	AVON, NY	SALT LAKE CITY, UT	FARGO, ND	OMAHA, NE	PINEVILLE, LA	EAGAN, MN	EAGAN, MN
AS	ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BA	1.27	D005	100	1.39	1.37	1.74	<0.500	5.95	2.26	5.62	1.42	1.27	1.31	1.36
CD	ND	D006	1	<0.500	<0.500	<0.500	<0.500	0.502	<0.500	**F 1.6**	<0.500	<0.500	<0.500	<0.500
CR	ND	D007	5	<0.500	<0.500	<0.500	<0.500	0.848	<0.500	0.701	0.665	0.68	<0.500	0.9
PB	4.04	D008	5	<4.00	**F 5.8**	**F 5.79**	<4.00	**F 6.7**	<4.00	**F 13.5**	4.54	**F 5.75**	<4.00	<4.00
HG	ND	D009	0.2	<0.040	<0.040	<0.040	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
SE	ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
AG	ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOA														
1,1-DCE	ND	D029	0.7	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	<40	<4.0	<4.0	<4.0	<4.0
1,2-DCE	ND	D028	0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<2.0
PDCB	ND	D027	7.5	<2.0	4.359	4.684	<2.0	<2.0	<5.0	<50	<5.0	<5.0	<5.0	<5.0
BENZ	**2.5**	D018	0.5	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<20	**F 5.7**	<2.0	**F 1.7**	**F 2.3**
CCL4	ND	D019	0.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<2.0
MCB	ND	D021	100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<2.0
CHCL3	ND	D022	6	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<20	<2.0	<2.0	<2.0	<2.0
MEK	5	D035	200	<10.0	<10.0	<10.0	<10.0	<5.0	<5.0	<50	13.8	<5.0	6.6	11.1
PERC	**1,060**	D039	0.7	**F 119.41**	**F 1000.548**	**F 835.451**	**F 1503.077**	**F 7.31**	**F 644**	**F 1230**	**F 3670**	**F 584**	**F 863**	**F 960**
TCE	**30.6**	D040	0.5	**F 3.285**	**F 82.888**	**F 66.57**	**F 42.801**	<2.0	**F 19.4**	**F 27.3**	**F 534**	**F 15.2**	**F 33.2**	**F 36.2**
VC	ND	D043	0.2	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
BNA														
2,4,5-TCP	ND	D041	400	<0.20	<0.20	<0.20	<4.7	<2.0	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7
2,4,6-TCP	ND	D042	2	<0.30	<0.30	<0.30	<1.3	<3.0	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
2,4-DNT	ND	D030	0.13	<0.10	<0.10	<0.10	<0.10	<1.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
2-MP	ND	D023	200	6.309	<0.25	<0.25	3.298	<2.0	1.81	<1.1	5.706	<1.1	2.478	3.026
3+4-MP	ND	D024/25	400	5.322	<0.65	<0.65	4.218	<2.6	<3.8	<3.8	4.885	<3.8	<3.8	<3.8
HCB	ND	D032	0.13	<0.0050	0.00867	0.00584	<0.0050	<2.2	<0.0050	0.01066	<0.0050	<0.0050	0.00816	<0.0050
HCBD	ND	D033	0.5	<0.020	0.02656	0.02452	<0.020	<2.3	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
HCE	ND	D034	3	<0.20	<0.20	<0.20	<0.20	<2.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
NTB	ND	D036	2	<0.75	<0.75	<0.75	<0.46	<1.9	<0.46	<0.46	<0.46	<0.46	<0.46	<0.46
PCP	ND	D037	100	<0.40	<0.40	<0.40	<8.1	<4.7	<8.1	<8.1	<8.1	<8.1	<8.1	<8.1
PYR	ND	D038	5	<0.30	<0.30	<0.30	<0.32	<5.9	<0.32	<0.32	<0.32	<0.32	<0.32	<0.32
MISC														
FP	145	D001	140	**F 138**	148	148	157	198	152	148	144	**F 113**	**F 120**	**F 121**
pH	7.0	D002	2-12.5	8.01	6.65	6.42	7.03	9.84	7.42	5.77	6.04	6.96	6.28	5.3
SpG				0.848	0.839	0.851	0.797	1.000	0.774	0.838	0.822	0.784	0.828	0.795

Waste Parts Washe Solvent (105/150)

90 UCL for the 50th Percentile	Waste Code	SITE ⇨ Reg Limit	BLAINE, MN	SALT LAKE CITY, UT	ASHLAND, KY	LEXINGTON, KY	LEXINGTON, KY	LEXINGTON, KY	LEXINGTON, KY	LEXINGTON, KY	EAGAN, MN	EAGAN, MN	BLAINE, MN	BLAINE, MN
		53 Samples	9943595	9955802	9956878	9957571	9958772	9965799	9966765	9966767	2016048	2016050	2016264	2016269
		YEAR	1999	1999	1999	1999	1999	1999	1999	1999	2000	2000	2000	2000
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
1.27	D005	100	2.11	2.7	21.6	<0.500	4.98	50.0	10.4	1.03	1.27	1.30	1.08	1.10
ND	D006	1	0.574	<0.500	<0.500	<0.500	<0.500	<0.500	0.580	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D007	5	0.854	<0.500	<0.500	<0.500	<0.500	<0.500	0.718	<0.500	<0.500	<0.500	<0.500	<0.500
4.04	D008	5	**F 9.55**	4.58	**F 9.99**	<4.00	<4.00	**F 14.7**	**F 13.1**	**F 6.50**	**F 5.38**	**F 5.81**	**F 12.4**	**F 12.2**
ND	D009	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1	<0.10	<0.100	<0.10	<0.040
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.008
ND	D011	5	<0.500	<0.500	<0.500	<0.500	0.66	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<4.0	<4.0	<2.0	<4.0	<0.40	<0.20	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
ND	D028	0.5	<2.0	<2.0	<2.0	<2.0	<0.20	<0.20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D027	7.5	<5.0	<5.0	<2.0	<5.0	<0.50	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2.5	D018	0.5	**F 6.7**	**F 3.8**	<2.0	<2.0	<0.20	<0.20	<2.0	<2.0	**F 2.6**	**F 2.4**	<2.0	<2.0
ND	D019	0.5	<2.0	<2.0	<2.0	<2.0	<0.20	<0.20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D021	100	<2.0	<2.0	<2.0	<2.0	<0.20	<0.20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D022	6	<2.0	<2.0	<2.0	<2.0	<0.20	<0.20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
5	D035	200	11.3	<5.0	<5.0	9.7	<0.50	<0.50	<5.0	21.1	7.6	<5.0	<5.0	<5.0
1,060	D039	0.7	**F 1770**	**F 1080**	**F 146.65**	<2.0	<0.20	**F 137.4**	**F 9360**	**F 354**	**F 894**	**F 847**	**F 1360**	**F 1330**
30.6	D040	0.5	**F 19.9**	**F 24**	<2.0	**F 895**	<0.20	**F 3.076**	**F 9.9**	<2.0	**F 86.1**	**F 95.2**	**F 54.2**	**F 54.2**
ND	D043	0.2	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
ND	D041	400	<4.7	<4.7	<71	<5.0	<71	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
ND	D042	2	<1.3	<1.3	<86	<2.0	<86	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
ND	D030	0.13	<0.10	<0.10	<37	<0.13	<37	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	
ND	D023	200	4.255	2.108	<150	<5.0	<150	5.209	<5.0	<5.0	<5.0	5.68	<5.0	
ND	D024/25	400	4.499	<3.8	<130	<5.0	<130	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
ND	D032	0.13	0.02025	<0.0050	<34	0.0251	<34	0.009	<0.0050	<0.0050	<0.025	<0.025	**F 0.15903**	**F 0.16651**
ND	D033	0.5	<0.020	<0.020	<51	<0.020	<51	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
ND	D034	3	0.84325	<0.20	<47	<0.20	<47	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
ND	D036	2	<0.46	<0.46	<58	<0.40	<58	<0.40	<0.40	<0.40	<0.4	<0.4	<0.40	
ND	D037	100	<8.1	<8.1	<89	<5.0	<89	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
ND	D038	5	<0.32	<0.32	<180	<1.0	<180	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
145	D001	140	**F 128**	155	**F 121**	160	165	146	145	145	142	142	**F 122**	146
7.0	D002	2-12.5	7.22	7.1	8	6.41	8.36	7.59	8.1	6.8	7.2	7.0	7.9	8.1
			0.809	0.816	0.816	0.837	0.821	0.838	0.820	0.829	0.850	0.850	0.787	0.792

Waste Parts Washe Solvent (105/150)

90 UCL for the 50th Percentile	Waste Code	53 Samples / YEAR / SITE ⇨ Reg Limit	2024844	2024861	2035145	2042518	2042576	2042585	2057300	2058620	2059482	2064580	2067245	2075099
		YEAR	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2001
		SITE ⇨	BLAINE, MN	BLAINE, MN	SALT LAKE CITY, UT	BLAINE, MN	BLAINE, MN	EAGAN, MN	ASHLAND, KY	SALT LAKE CITY, UT	REEDLEY, CA	LEXINGTON, KY	FRESNO, CA	GERING, NE
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
1.27	D005	100	0.867	1.48	1.19	1.28	1.15	1.29	1.03	0.870	1.31	0.946	<0.500	2.45
ND	D006	1	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D007	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
4.04	D008	5	<4.00	4.66	<4.00	**F 12.2**	**F 12.5**	<4.00	<4.00	<4.00	<4.00	<4.00	**F 17.4**	4.04
ND	D009	0.2	<0.10	<0.10	<0.100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.100
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<4.0	<4.0	<0.40	<0.80	<0.80	<4.0	<0.40	<0.80	<0.80	<0.80	<0.80	<2.0
ND	D028	0.5	<2.0	<2.0	<0.20	<0.40	<0.40	<2.0	<0.20	<0.40	<0.40	<0.40	<0.40	<1.0
ND	D027	7.5	<5.0	<5.0	1.9	**F 33.7**	**F 161**	<5.0	1.7	1.2	4.5	2.8	<1.0	**F 8**
2.5	D018	0.5	**F 2.8**	**F 2.9**	**F 41.2**	**F 2.6**	**F 2.4**	**F 3.2**	**F 4.9**	**F 8.5**	**F 4.7**	**F 3**	**F 1.3**	**F 2.2**
ND	D019	0.5	<2.0	<2.0	<0.20	<0.40	<0.40	<2.0	<0.20	<0.40	<0.40	<0.40	<0.40	<1.0
ND	D021	100	<2.0	<2.0	<0.20	8.1	47.1	<2.0	<0.20	<0.40	<0.40	<0.40	<0.40	<1.0
ND	D022	6	<2.0	<2.0	<0.20	<0.40	<0.40	<2.0	<0.20	<0.40	<0.40	<0.40	<0.40	<1.0
5	D035	200	8	6.4	<0.50	7.7	5.4	24.3	2	2.1	8.6	9	<1.0	<2.5
1,060	D039	0.7	**F 1770**	**F 1470**	**F 1190**	**F 1850**	**F 1890**	**F 887**	**F 953**	**F 984**	**F 2040**	**F 773**	**F 815**	**F 3280**
30.6	D040	0.5	**F 57.6**	**F 49**	**F 6.7**	**F 28.6**	**F 34.3**	**F 58.6**	**F 43.7**	**F 474**	**F 16.7**	**F 50.3**	**F 19.4**	**F 11.6**
ND	D043	0.2	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
ND	D041	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<200	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<200	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<40	<0.13
ND	D023	200	<5.0	<5.0	<5.0	7.65	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<200	<5.0
ND	D024/25	400	<5.0	<5.0	<5.0	5.73	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<200	<5.0
ND	D032	0.13	0.064636	0.064502	<0.025	<0.025	<0.025	<0.025	<0.025	0.047759	<0.025	<0.025	<40	0.028925
ND	D033	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<200	<0.10
ND	D034	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<200	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<200	<0.40
ND	D037	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<50	<200	<5.0
ND	D038	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<210	<1.0
145	D001	140	**F 118**	**F 122**	146	146	**F 135**	145	**F 92**	158	152	150	160	**F 136**
7.0	D002	2-12.5	6.42	7.01	7.25	7.78	6.87	6.69	7.17	8.11	6.91	7.20	6.91	7.19
			0.830	0.814	0.794	0.801	0.770	0.805	0.810	0.822	0.825	0.847	0.798	0.807

Waste Parts Washe Solvent (105/150)

90 UCL for the 50th Percentile	Waste Code	53 Samples / YEAR / SITE ⇨ Reg Limit	2076552	2076554	2079301	2082499	2083130	2083428	2087153	2088692	2089538	2089559	2091972	2094182
		YEAR	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
		SITE ⇨	EAGAN, MN	EAGAN, MN	OMAHA, NE	GRAND ISLAND, NE	SALT LAKE CITY, UT	GARDEN CITY, GA	FRESNO, CA	LOS ANGELES, CA	SALIDA, CA	SANTA ANA, CA	SACRAMENTO, CA	OAKLAND, CA
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
1.27	D005	100	1.21	1.20	1.49	0.774	1.40	<0.500	<0.500	<0.500	0.762	<0.500	0.678	1.34
ND	D006	1	<0.500	<0.500	<0.500	0.512	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	**F 2.56**
ND	D007	5	<0.500	<0.500	<0.500	0.501	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
4.04	D008	5	<4.00	**F 5.34**	<4.00	**F 7.71**	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	**F 9.19**	**F 6.86**
ND	D009	0.2	<0.10	<0.100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<1.6	<1.6	<2.0	<0.40	<1.6	<1.6	<1.6	<2.0	<4.0	<0.80	<0.80	<1.6
ND	D028	0.5	<0.80	<0.80	<1.0	<0.20	<0.80	<0.80	<0.80	<1.0	<2.0	<0.40	<0.40	<0.80
ND	D027	7.5	3.7	3.4	4.9	4.5	<2.0	<2.0	3.1	<2.5	<5.0	1.3	<1.0	<2.0
2.5	D018	0.5	**F 2**	**F 2.4**	**F 3.9**	**F 4.4**	**F 5**	**F 3.2**	<0.80	**F 3.5**	**F 3.8**	**F 7.7**	<0.40	**F 3.4**
ND	D019	0.5	<0.80	<0.80	<1.0	<0.20	<0.80	<0.80	<0.80	<1.0	<2.0	<0.40	<0.40	<0.80
ND	D021	100	<0.80	<0.80	<1.0	<0.20	<0.80	<0.80	<0.80	<1.0	<2.0	<0.40	<0.40	<0.80
ND	D022	6	<0.80	<0.80	<1.0	<0.20	<0.80	<0.80	<0.80	<1.0	<2.0	<0.40	<0.40	<0.80
5	D035	200	3.4	5.7	5.7	<0.50	12.4	<2.0	<2.0	124	53.1	**F 226**	2.4	60
1,060	D039	0.7	**F 691**	**F 745**	**F 1270**	**F 1070**	**F 1090**	**F 1370**	**F 1060**	**F 1470**	**F 1130**	**F 1120**	**F 3100**	**F 1720**
30.6	D040	0.5	**F 51.4**	**F 60.2**	**F 124**	**F 16.6**	**F 43.9**	**F 28.1**	**F 11**	**F 35.8**	**F 30.6**	**F 69**	**F 1**	**F 8.8**
ND	D043	0.2	<0.30	<0.60	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75	<0.75
ND	D041	400	<200	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<300	<5.0	<5.0	<5.0	<5.0
ND	D042	2	<200	<200	<2.0	<2.0	<2.0	<2.0	<2.0	<300	<2.0	<2.0	<2.0	<2.0
ND	D030	0.13	<40	<40	<0.13	<0.13	<0.13	<0.13	<0.13	<40	<0.13	<0.13	<0.13	<0.13
ND	D023	200	<200	<200	5.42	<5.0	<5.0	<5.0	<5.0	<400	<5.0	<5.0	<5.0	<5.0
ND	D024/25	400	<200	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<500	<5.0	<5.0	<5.0	<5.0
ND	D032	0.13	<40	<40	<0.025	<0.025	<0.025	<0.025	<0.025	<40	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<200	<200	<0.10	<0.10	<0.10	<0.10	<0.10	<200	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<200	<200	<1.0	<1.0	<1.0	<1.0	<1.0	<200	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<200	<200	<0.40	<0.40	<0.40	<0.40	<0.40	<200	<0.40	<0.40	<0.40	<0.40
ND	D037	100	<200	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<520	<5.0	<5.0	<5.0	<5.0
ND	D038	5	<210	<210	<1.0	<1.0	<1.0	<1.0	<1.0	<580	<1.0	<1.0	<1.0	<1.0
145	D001	140	142	147	144	**F 138**	154	145	152	152	151	148	158	152
7.0	D002	2-12.5	6.88	6.71	5.33	7.27	5.18	6.24	5.39	6.87	5.76	7.91	8.02	5.33
			0.800	0.840	0.890	0.843	0.807	0.797	0.798	0.805	0.798	0.803	0.803	0.785

Waste Pa s Washer Solvent (105/150)

90 UCL for the 50th Percentile	Waste Code	53 Samples / YEAR / SITE ⇨ Reg Limit	2094452	2095479	2096846	2097353	2099685	2112364
		YEAR	2001	2001	0	2001	2001	2001
		SITE ⇨ Reg Limit	ARCHDALE, NC	REEDLEY, CA	BOYNTON BEACH, FL	AVON, NY	ROHNERT PARK, CA	BLAINE, MN
ND	D004	5	<0.500	<5.00	<5.00	<5.00	<5.00	<5.00
1.27	D005	100	3.58	1.26	<0.500	1.39	1.80	1.17
ND	D006	1	**F 3.06**	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D007	5	0.147	<0.500	<0.500	<0.500	<0.500	<0.500
4.04	D008	5	**F 123**	<4.00	<4.00	<4.00	4.98	**F 15.9**
ND	D009	0.2	<0.0008	<0.10	<0.10	<0.10	<0.10	<0.100
ND	D010	1	<0.750	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.050	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<0.20	<0.80	<0.80	<0.80	<1.6	<0.40
ND	D028	0.5	<0.20	<0.40	<0.40	<0.40	<0.80	<0.20
ND	D027	7.5	<0.20	<1.0	<1.0	3.3	<2.0	1.2
2.5	D018	0.5	<0.20	**F 7**	**F 15**	**F 1.9**	**F 10.8**	**F 0.53**
ND	D019	0.5	<0.20	<0.40	<0.40	<0.40	<0.80	<0.20
ND	D021	100	<0.20	<0.40	<0.40	<0.40	<0.80	<0.20
ND	D022	6	<0.20	<0.40	<0.40	<0.40	<0.80	<0.20
5	D035	200	0.64	34.6	3.8	51.7	49.9	<0.50
1,060	D039	0.7	**F 1.135**	**F 1130**	**F 1660**	**F 906**	**F 3710**	**F 726**
30.6	D040	0.5	<0.20	**F 66.6**	<0.40	**F 33.7**	**F 10**	**F 77**
ND	D043	0.2	<0.75	<0.30	<0.30	<0.30	<0.30	<0.30
ND	D041	400	<0.15	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D042	2	<0.15	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D030	0.13	<0.020	<0.13	<0.13	<0.13	<0.13	<0.13
ND	D023	200	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D024/25	400	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D032	0.13	<0.020	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<0.10	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D037	100	<0.26	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D038	5	<0.25	<1.0	<1.0	<1.0	<1.0	<1.0
145	D001	140	**F 138**	151	160	145	**F 138**	**F 131**
7.0	D002	2-12.5	**F 7.77**	6.58	**F 7.91**	7.20	7.19	7.36
			1.400	0.810	0.790	0.810	0.849	0.750

Waste Premium Gold Pa .s Washer Solvent (150)

			78 SAMPLES	2009202	2011424	2015443	2015468	2015472	2015505	2015607	2015609	2015611	2017074	2017075
			YEAR	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
ANALYSIS METALS	90 UCL for the 50th Percentile	Waste Code	SITE ⇨ Reg Limit	DENTON, TX	GERING, NE	ALBUQUERQUE, NM	LACKAWANNA, NY	LACKAWANNA, NY	LACKAWANNA, NY	SYRACUSE, NY	SYRACUSE, NY	SYRACUSE, NY	N. AMITYVILLE, NY	N. AMITYVILLE, NY
AS	ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BA	ND	D005	100	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	6.88	7.80	<0.500	<0.500
CD	ND	D006	1	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
CR	ND	D007	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.549	<0.500	<0.500
PB	ND	D008	5	<4.00	4.34	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
HG	ND	D009	0.2	<0.10	<0.10	<0.040	<0.040	<0.040	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
SE	ND	D010	1	<0.45	<0.45	<0.008	<0.008	<0.008	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
AG	ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
VOA														
1,1-DCE	ND	D029	0.7	<0.40	<0.40	<0.40	<4.0	<4.0	<4.0	<4.0	<0.40	<4.0	<0.40	<0.40
1,2-DCE	ND	D028	0.5	<0.20	<0.20	<0.20	<2.0	<2.0	<2.0	<2.0	<0.20	<2.0	<0.20	<0.20
PDCB	1	D027	7.5	<0.50	<0.50	<0.50	<5.0	<5.0	<5.0	<5.0	0.81	<5.0	<0.50	<0.50
BENZ	0.23	D018	0.5	<0.20	<0.20	0.23	<2.0	<2.0	<2.0	<2.0	**F 1.4**	<2.0	0.26	0.23
CCL4	ND	D019	0.5	<0.20	<0.20	<0.20	<2.0	<2.0	<2.0	<2.0	<0.20	<2.0	<0.20	<0.20
MCB	ND	D021	100	<0.20	<0.20	<0.20	<2.0	<2.0	<2.0	<2.0	<0.20	<2.0	<0.20	<0.20
CHCL3	ND	D022	6	<0.20	<0.20	<0.20	<2.0	<2.0	<2.0	<2.0	<0.20	<2.0	<0.20	<0.20
MEK	ND	D035	200	<0.50	<0.50	<0.50	<5.0	<5.0	<5.0	<5.0	<0.50	<5.0	<0.50	<0.50
PERC	**3.2**	D039	0.7	<0.20	<0.20	<0.20	**F 5100**	**F 5170**	**F 5760**	**F 2920**	**F 13.2**	**F 335**	**F 3.2**	**F 3.3**
TCE	0.2	D040	0.5	<0.20	<0.20	<0.20	<2.0	<2.0	<2.0	<2.0	<0.20	**F 26.5**	<0.20	<0.20
VC	ND	D043	0.2	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
BNA														
2,4,5-TCP	ND	D041	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2,4,6-TCP	ND	D042	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
2,4-DNT	ND	D030	0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
2-MP	ND	D023	200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
3+4-MP	ND	D024/25	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
HCB	ND	D032	0.13	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.010796	0.009367	0.013648	<0.025	<0.025
HCBD	ND	D033	0.5	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
HCE	ND	D034	3	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
NTB	ND	D036	2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
PCP	ND	D037	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
PYR	ND	D038	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MISC														
FP	158	D001	140	158	164	153	158	161	159	164	158	164	160	158
pH	7.1	D002	2-12.5	7.2	9.4	6.8	7.0	6.6	6.6	7.1	7.4	7.5	7.4	7.4
SpG				0.805	0.803	0.780	0.792	0.793	0.798	0.788	0.796	0.787	0.798	0.781

Waste Premium Gold P s Washer Solvent (150)

90 UCL for the 50th Percentile	Waste Code	78 SAMPLES / SITE ⇨ Reg Limit	2017076	2017077	2017364	2017904	2017906	2017908	2018172	2022090	2039382	2045078	2046598	2046603
		YEAR	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
		SITE ⇨	N. AMITYVILLE, NY	N. AMITYVILLE, NY	EDWARDSVILLE, KS	COHOES, NY	COHOES, NY	COHOES, NY	WICHITA, KS	AVON, NY	PINEVILLE, LA	ST CHARLES, MO	ASHLAND, KY	ASHLAND, KY
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
ND	D005	100	<0.500	<0.500	<0.500	10.1	1.08	6.32	0.733	6.13	<0.500	<0.500	2.88	4.39
ND	D006	1	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.528	<0.500	<0.500
ND	D007	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D008	5	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	**F 14.5**	<4.00	<4.00	<4.00	<4.00
ND	D009	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.040	<0.040	<0.10	<0.10	<0.10	<0.10
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.008	<0.008	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<0.40	<0.40	<0.40	<0.40	<0.40	<4.0	<4.0	<4.0	<0.40	<0.40	<0.40	<0.40
ND	D028	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<2.0	<2.0	<2.0	<0.20	<0.20	<0.20	<0.20
1	D027	7.5	<0.50	<0.50	1.2	0.77	1.4	<5.0	<5.0	5.2	<0.50	0.9	<0.50	1.1
0.23	D018	0.5	<0.20	0.22	<0.20	<0.20	<0.20	<2.0	**F 4**	<2.0	**F 0.61**	<0.20	<0.20	<0.20
ND	D019	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<2.0	<2.0	<2.0	<0.20	<0.20	<0.20	<0.20
ND	D021	100	<0.20	<0.20	<0.20	<0.20	<0.20	<2.0	<2.0	<2.0	<0.20	<0.20	<0.20	<0.20
ND	D022	6	<0.20	<0.20	<0.20	<0.20	<0.20	<2.0	<2.0	<2.0	<0.20	<0.20	<0.20	<0.20
ND	D035	200	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<5.0	<0.50	<0.50	<0.50	<0.50
3.2	D039	0.7	**F 4.6**	**F 3.2**	**F 8.9**	**F 30**	0.28	**F 2950**	**F 1590**	**F 4160**	<0.20	0.24	0.39	**F 29.2**
0.2	D040	0.5	**F 0.59**	<0.20	**F 1.8**	**F 1.5**	<0.20	**F 2.6**	**F 10.6**	**F 57.9**	<0.20	<0.20	<0.20	0.33
ND	D043	0.2	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<1.5	<1.5	<1.5	<0.15	<0.15
ND	D041	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
ND	D023	200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D024/25	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D032	0.13	<0.025	<0.0050	<0.025	<0.025	<0.025	<0.025	<0.0050	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<1.0	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D037	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D038	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
158	D001	140	161	156	160	160	167	157	153	**F 100**	154	155	158	154
7.1	D002	2-12.5	7.8	7.8	7.2	4.6	5.8	8.4	4.89	6.7	7.23	7.14	6.91	7.86
			0.787	0.782	0.765	0.780	0.791	0.793	0.801	0.812	0.810	0.809	0.834	0.807

Waste Premium Gold P .s Washer Solvent (150)

90 UCL for the 50th Percentile	Waste Code	78 SAMPLES / YEAR / SITE ⇨ Reg Limit	2049651	2051061	2051523	2051525	2051528	2051529	2054244	2054685	2054688	2054689	2054692	2056272
		YEAR	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
		SITE ⇨	LEXINGTON, KY	FARMINGTON , NM	LEXINGTON, KY	LEXINGTON, KY	LEXINGTON, KY	LEXINGTON, KY	MORROW, GA	LEXINGTON, KY	LEXINGTON, KY	LEXINGTON, KY	ASHLAND, KY	DODGE CITY, KS
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
ND	D005	100	<0.500	3.56	43.5	<0.500	<0.500	0.539	3.27	<0.500	0.507	<0.500	7.5	<0.500
ND	D006	1	<0.500	0.586	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D007	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D008	5	<4.00	**F 5.25**	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
ND	D009	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<0.80	<0.80	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D028	0.5	<0.40	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1	D027	7.5	1.8	<1.0	0.91	1.5	1.5	1.2	0.8	1	0.74	0.78	1.5	<0.50
0.23	D018	0.5	<0.40	<0.40	<0.20	<0.20	0.26	<0.20	**F 3.1**	<0.20	0.22	<0.20	<0.20	**F 133**
ND	D019	0.5	<0.40	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
ND	D021	100	<0.40	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
ND	D022	6	<0.40	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
ND	D035	200	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.56	<0.50	<0.50	<0.50
3.2	D039	0.7	**F 0.98**	**F 11300**	**F 536**	**F 0.81**	0.21	<0.20	**F 149**	0.53	**F 1.2**	**F 1.8**	0.61	**F 1250**
0.2	D040	0.5	<0.40	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	**F 5.4**	<0.20	<0.20	<0.20	**F 128**
ND	D043	0.2	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
ND	D041	400	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<200	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<4.0	<4.0	<2.0	<200	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.26	<0.26	<0.13	<40	<0.13	<0.13	<0.13	<0.13	<0.13
ND	D023	200	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<200	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D024/25	400	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<200	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D032	0.13	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<40	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<200	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<200	<1.0	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.80	<0.80	<0.40	<200	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D037	100	<5.0	<5.0	<5.0	<10.0	<10.0	<5.0	<200	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D038	5	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	<210	<1.0	<1.0	<1.0	<1.0	<1.0
158	D001	140	154	160	152	152	163	155	160	158	154	156	154	146
7.1	D002	2-12.5	6.99	5.32	7.3	7.45	7.09	7.25	7.38	7.56	7.94	7.7	7.44	4.44
			0.778	0.819	0.787	0.790	0.794	0.811	0.722	0.808	0.917	0.792	0.799	0.942

Waste Premium Gold P. .s Washer Solvent (150)

90 UCL for the 50th Percentile	Waste Code	SITE ⇨ Reg Limit	2056649	2057491	2058155	2066751	2067124	2075109	2075382	2075384	2075447	2075705	2077301	2077306
		78 SAMPLES	2056649	2057491	2058155	2066751	2067124	2075109	2075382	2075384	2075447	2075705	2077301	2077306
		YEAR	2000	2000	2000	2000	2000	2001	2001	2001	2001	2001	2001	2001
		SITE ⇨	LONGVIEW, TX	BOYNTON BEACH, FL	ASHLAND, KY	SACRAMENTO, CA	ROHNERT PARK, CA	GERING, NE	COHOES, NY	COHOES, NY	COHOES, NY	DENTON, TX	BLAINE, MN	BLAINE, MN
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
ND	D005	100	0.919	<0.500	<0.500	0.846	<0.500	2.32	<0.500	<0.500	<0.500	<0.500	1.90	1.09
ND	D006	1	<0.500	<0.500	<0.500	<0.500	<0.500	0.582	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D007	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D008	5	<4.00	<4.00	<4.00	<4.00	**F 6.65**	<4.00	<4.00	<4.00	<4.00	<4.00	4.53	<4.00
ND	D009	0.2	<0.10	<0.10	<0.100	<0.10	<0.10	<0.100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<0.40	<0.40	<0.80	<0.40	<0.80	<1.6	<1.6	<1.6	<1.6	<0.40	<1.6	<1.6
ND	D028	0.5	<0.20	<0.20	<0.40	<0.20	<0.40	<0.80	<0.80	<0.80	<0.80	<0.20	<0.80	<0.80
1	D027	7.5	4.1	0.96	1.5	<0.50	<1.0	4.5	<2.0	<2.0	<2.0	<0.50	2.6	2.6
0.23	D018	0.5	<0.20	<0.20	<0.40	<0.20	<0.40	<0.80	<0.80	<0.80	<0.80	<0.20	**F 3**	**F 2.9**
ND	D019	0.5	<0.20	<0.20	<0.40	<0.20	<0.40	<0.80	<0.80	<0.80	<0.80	<0.20	<0.80	<0.80
ND	D021	100	<0.20	<0.20	<0.40	<0.20	<0.40	<0.80	<0.80	<0.80	<0.80	<0.20	<0.80	<0.80
ND	D022	6	<0.20	<0.20	<0.40	<0.20	<0.40	<0.80	<0.80	<0.80	<0.80	<0.20	<0.80	<0.80
ND	D035	200	<0.50	<0.50	<1.0	<0.50	<1.0	4.3	<2.0	<2.0	<2.0	<0.50	<2.0	<2.0
3.2	D039	0.7	<0.20	**F 4920**	**F 2.1**	**F 3.9**	**F 1.9**	**F 502**	**F 1.5**	**F 1.4**	**F 1.4**	<0.20	**F 2.3**	**F 2.2**
0.2	D040	0.5	**F 0.71**	**F 9.6**	<0.40	<0.20	<0.40	**F 568**	<0.80	<0.80	<0.80	<0.20	<0.80	<0.80
ND	D043	0.2	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
ND	D041	400	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.26	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
ND	D023	200	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D024/25	400	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D032	0.13	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.80	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D037	100	<5.0	<5.0	<5.0	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D038	5	<1.0	<1.5	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
158	D001	140	162	160	156	163	163	148	163	160	161	155	154	157
7.1	D002	2-12.5	**F 6.56**	6.62	4.54	6.64	7.18	7.22	6.65	6.21	6.81	6.89	7.39	6.27
			0.798	0.839	0.808	0.797	0.789	0.802	0.794	0.801	0.790	0.791	0.810	0.810

Waste Premium Gold Pa s Washer Solvent (150)

90 UCL for the 50th Percentile	Waste Code	78 SAMPLES / YEAR / SITE ⇨ Reg Limit	2078383	2078387	2078401	2081037	2081043	2081045	2082490	2082496	2083422	2083431	2083435	2083713
		YEAR	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
		SITE ⇨	ORANGE, TX	ORANGE, TX	OMAHA, NE	LACKAWANNA, NY	LACKAWANNA, NY	LACKAWANNA, NY	ALBUQUERQUE, NM	GRAND ISLAND, NE	SYRACUSE, NY	SYRACUSE, NY	SYRACUSE, NY	N AMITYVILLE, NY
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
ND	D005	100	5.81	<0.500	4.53	<0.500	<0.500	<0.500	<0.500	0.680	<0.500	<0.500	2.41	0.845
ND	D006	1	0.700	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D007	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D008	5	**F 5.14**	<4.00	<4.00	<4.00	**F 13.7**	<4.00	4.34	<4.00	<4.00	<4.00	<4.00	<4.00
ND	D009	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<2.0	<0.40	<1.6	<0.40	<0.40	<0.40	<1.6	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D028	0.5	<1.0	<0.20	<0.80	<0.20	<0.20	<0.20	<0.80	<0.20	<0.20	<0.20	<0.20	<0.20
1	D027	7.5	<2.5	<0.50	3.6	1.6	<0.50	2.1	**F 93**	1.4	0.79	0.84	0.74	0.62
0.23	D018	0.5	**F 9.8**	<0.20	<0.80	<0.20	<0.20	<0.20	**F 63.1**	<0.20	<0.20	<0.20	**F 0.7**	**F 1**
ND	D019	0.5	<1.0	<0.20	<0.80	<0.20	<0.20	<0.20	<0.80	<0.20	<0.20	<0.20	<0.20	<0.20
ND	D021	100	<1.0	<0.20	<0.80	<0.20	<0.20	<0.20	12.7	<0.20	<0.20	<0.20	<0.20	<0.20
ND	D022	6	<1.0	<0.20	<0.80	<0.20	<0.20	<0.20	<0.80	<0.20	<0.20	<0.20	<0.20	<0.20
ND	D035	200	<2.5	<0.50	<2.0	<0.50	<0.50	<0.50	2.2	0.56	<0.50	<0.50	<0.50	<0.50
3.2	D039	0.7	**F 122**	0.36	**F 172**	0.43	0.45	0.53	**F 68.4**	**F 0.72**	<0.20	0.41	0.5	**F 608**
0.2	D040	0.5	**F 4.3**	<0.20	<0.80	<0.20	<0.20	<0.20	**F 4.5**	**F 43.7**	<0.20	<0.20	<0.20	**F 0.6**
ND	D043	0.2	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
ND	D041	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<300	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<300	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<40	<0.13	<0.13	<0.13	<0.13	<0.13
ND	D023	200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<400	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D024/25	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<500	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D032	0.13	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<40	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<100	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<200	<1.0	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<200	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D037	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<520	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D038	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<580	<1.0	<1.0	<1.0	<1.0	<1.0
158	D001	140	157	156	156	**F >200**	158	158	**F 95**	159	154	143	148	168
7.1	D002	2-12.5	6.87	6.93	7.02	6.76	6.89	6.27	9.00	8.32	7.35	4.69	7.18	10.34
			0.850	0.890	0.790	0.775	0.777	0.776	0.802	0.819	0.792	0.802	0.793	0.827

Waste Premium Gold Pa s Washer Solvent (150)

90 UCL for the 50th Percentile	Waste Code	SITE ⇨ Reg Limit	2083715	2083719	2085316	2090897	2091977	2092408	2093900	2094175	2094383	2097348	2100674	2107128
		78 SAMPLES	2083715	2083719	2085316	2090897	2091977	2092408	2093900	2094175	2094383	2097348	2100674	2107128
		YEAR	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
		SITE ⇨	N AMITYVILLE, NY	N AMITYVILLE, NY	CLACKAMAS, OR	OKLAHOMA CITY, OK	TULSA, OK	LONGVIEW, TX	PINEVILLE, LA	FARMINGTON , NM	ST CHARLES, MO	AVON, NY	DODGE CITY, KS	ASHLAND, KY
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
ND	D005	100	2.07	2.14	<0.500	<0.500	3.08	1.56	1.59	<0.500	<0.500	<0.500	1.41	<0.500
ND	D006	1	0.510	<0.500	<0.500	<0.500	<0.500	<0.500	0.720	<0.500	<0.500	<0.500	0.686	<0.500
ND	D007	5	<0.500	<0.500	<0.500	0.784	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D008	5	<4.00	4.06	<4.00	<4.00	<4.00	4.95	<4.00	<4.00	<4.00	<4.00	4.08	<4.00
ND	D009	0.2	<0.10	<0.100	<0.10	<0.10	<0.10	<0.100	<0.10	<0.100	<0.10	<0.10	<0.10	<0.10
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<1.6	<1.6	<0.40	<2.0	<0.80	<0.40	<1.6	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D028	0.5	<0.80	<0.80	<0.20	<1.0	<0.40	<0.20	<0.80	<0.20	<0.20	<0.20	<0.20	<0.20
1	D027	7.5	<2.0	<2.0	<0.50	<2.5	<1.0	<0.50	<2.0	<0.50	1.2	0.99	0.63	0.9
0.23	D018	0.5	<0.80	**F 1.5**	<0.20	**F 1**	**F 0.8**	<0.20	<0.80	0.24	0.3	<0.20	**F 0.5**	<0.20
ND	D019	0.5	<0.80	<0.80	<0.20	<1.0	<0.40	<0.20	<0.80	<0.20	<0.20	<0.20	<0.20	<0.20
ND	D021	100	<0.80	<0.80	<0.20	<1.0	<0.40	<0.20	<0.80	<0.20	<0.20	<0.20	<0.20	<0.20
ND	D022	6	<0.80	<0.80	<0.20	<1.0	<0.40	<0.20	<0.80	<0.20	<0.20	<0.20	<0.20	<0.20
ND	D035	200	<2.0	<2.0	<0.50	<2.5	<1.0	3.2	2.6	1.2	1.1	1.2	<0.50	<0.50
3.2	D039	0.7	**F 116**	**F 774**	0.37	**F 3.2**	**F 12.4**	**F 8**	**F 497**	**F 28.6**	0.22	0.41	**F 130**	**F 42.9**
0.2	D040	0.5	**F 630**	**F 1.8**	<0.20	**F 164**	**F 2**	<0.20	<0.80	<0.20	<0.20	<0.20	**F 2**	<0.20
ND	D043	0.2	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
ND	D041	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
ND	D023	200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D024/25	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D032	0.13	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D037	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D038	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
158	D001	140	162	148	156	156	160	164	166	158	144	152	160	158
7.1	D002	2-12.5	9.52	7.72	6.44	6.21	6.62	5.70	7.92	7.59	7.49	5.76	5.95	7.46
			0.801	0.797	0.805	0.800	0.798	0.796	0.800	0.834	0.784	0.815	0.806	0.940

Waste Premium G. . Parts Washer Solvent (150)

90 UCL for the 50th Percentile	Waste Code	78 SAMPLES / YEAR / SITE ⇨ Reg Limit	2107905	2107909	2107914	2108193	2108196	2108372	2108373
		YEAR	2001	2001	2001	2001	2001	2001	2001
		SITE ⇨	ASHLAND, KY	ASHLAND, KY	ASHLAND, KY	EAGAN, MN	EAGAN, MN	ASHLAND, KY	ASHLAND, KY
ND	D004	5	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
ND	D005	100	<0.500	2.56	0.776	0.79	0.88	<0.500	<0.500
ND	D006	1	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D007	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D008	5	<4.00	4.94	<4.00	<4.00	**F 5.25**	<4.00	<4.00
ND	D009	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D010	1	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45
ND	D011	5	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
ND	D029	0.7	<0.40	<2.0	<2.0	<0.40	<0.40	<0.40	<0.40
ND	D028	0.5	<0.20	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20
1	D027	7.5	1.3	4.3	<2.5	2.7	3.1	1.4	0.65
0.23	D018	0.5	<0.20	**F 4.1**	**F 86.7**	**F 3.4**	**F 3.2**	**F 0.58**	0.42
ND	D019	0.5	<0.20	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20
ND	D021	100	<0.20	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20
ND	D022	6	<0.20	<1.0	<1.0	<0.20	<0.20	<0.20	<0.20
ND	D035	200	0.76	<2.5	<2.5	3.5	4.8	<0.50	<0.50
3.2	D039	0.7	**F 11.6**	**F 1180**	**F 7610**	**F 700**	**F 746**	0.39	**F 297**
0.2	D040	0.5	<0.20	**F 40.8**	**F 32.2**	**F 73.6**	**F 72.2**	<0.20	<0.20
ND	D043	0.2	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
ND	D041	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D042	2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
ND	D030	0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
ND	D023	200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D024/25	400	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D032	0.13	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
ND	D033	0.5	<0.10	0.24389	<0.10	<0.10	<0.10	<0.10	<0.10
ND	D034	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ND	D036	2	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
ND	D037	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ND	D038	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
158	D001	140	162	148	146	155	155	157	158
7.1	D002	2-12.5	6.93	7.28	6.54	7.1	7.19	7.01	6.77
			0.810	0.820	0.830	0.800	0.800	0.810	0.810

ATTACHMENT No. 2

Phoenix Chemical Laboratory, Inc.

FUEL AND LUBRICANT TECHNOLOGISTS
3953 SHAKESPEARE AVENUE
CHICAGO, ILL. 60647-3497

January 20, 2000

RECEIVED FROM Safety-Kleen Corp.
P.O. Box 92050
Elk Grove Village, IL 60009
Attn: Anne O'Donnell

SAMPLE OF Spent Mineral Spirits LABORATORY NO. 00 1 5 11-29

MARKED See below

Lab. No.	00 1 5 11	00 1 5 12	00 1 5 13	00 1 5 14
Marked	A-1	A-2	A-3	A-4

Vapor Pressure by Isoteniscope (ASTM D2879)

Temperature, °F	Vapor Pressure, torr			
32	3.7	4.9	2.7	-
50	5.8	7.4	4.6	0.18
68	8.8	11.0	7.4	0.36
100	17.0	20.0	16.2	1.1
150	44	48	49	5.3
200	96	99	120	19.0
250	190	185	260	57
300	335	320	530	150
325	-	-	720	-
350	580	520	-	370
375	-	630	-	530

Phoenix Chemical Laboratory, Inc.

FUEL AND LUBRICANT TECHNOLOGISTS
3953 SHAKESPEARE AVENUE
CHICAGO, ILL. 60647-3497

January 20, 2000

RECEIVED FROM Safety-Kleen Corp.

SAMPLE OF Spent Mineral Spirits

LABORATORY NO. 00 1 5 11-29

MARKED See below

Lab. No.	00 1 5 15	00 1 5 16	00 1 5 17	00 1 5 18
Marked	A-5	A-6	A-7	A-8

Vapor Pressure by Isoteniscope (ASTM D2879)

Temperature, °F	Vapor Pressure, torr			
32	-	5.0	0.37	-
50	0.19	7.7	0.68	-
68	0.38	11.2	1.2	0.20
100	1.1	20.0	3.0	0.62
150	5.3	49	10.6	3.2
200	18.5	99	30	12.4
250	55	180	75	40
300	145	315	165	110
350	345	510	340	280
375	490	620	-	-
400	-	-	630	630

Phoenix Chemical Laboratory, Inc.

FUEL AND LUBRICANT TECHNOLOGISTS
3953 SHAKESPEARE AVENUE
CHICAGO, ILL. 60647-3497

January 20, 2000

RECEIVED FROM Safety-Kleen Corp.

SAMPLE OF Spent Mineral Spirits

LABORATORY NO. 00 1 5 11-29

MARKED See below

Lab. No.	00 1 5 19	00 1 5 20	00 1 5 21	00 1 5 22
Marked	A-9	A-10	A-11	A-12

Vapor Pressure by Isoteniscope (ASTM D2879)

Temperature, °F	Vapor Pressure, torr			
32	0.16	0.26	0.11	0.31
50	0.32	0.50	0.23	0.61
68	0.60	0.91	0.46	0.92
100	1.7	2.4	1.3	2.5
150	7.3	9.3	6.2	10.0
200	23	29	22	31
250	65	75	65	82
300	160	275	170	195
350	365	380	400	425
375	505	520	570	570

PHOENIX CHEMICAL LABORATORY, INC.

Phoenix Chemical Laboratory, Inc.

FUEL AND LUBRICANT TECHNOLOGISTS
3953 SHAKESPEARE AVENUE
CHICAGO, ILL. 60647-3497

January 20, 2000

RECEIVED FROM Safety-Kleen Corp.

SAMPLE OF Spent Mineral Spirits LABORATORY NO. 00 1 5 11-29

MARKED See below

Lab. No.	00 1 5 23	00 1 5 24	00 1 5 25	00 1 5 26
Marked	A-13	A-14	A-15	A-16

Vapor Pressure by Isoteniscope (ASTM D2879)

Temperature, °F	Vapor Pressure, torr			
32	0.27	-	0.16	0.21
50	0.52	0.19	0.33	0.42
68	0.96	0.37	0.64	0.78
100	2.5	1.1	1.8	2.1
150	10.0	5.0	7.6	8.9
200	32	17.0	25	29
250	84	50	70	78
300	200	130	170	190
350	440	305	390	415
375	600	640	540	570

PHOENIX CHEMICAL LABORATORY, INC.

JAN 20 '00 15:50

Phoenix Chemical Laboratory, Inc.

FUEL AND LUBRICANT TECHNOLOGISTS
3953 SHAKESPEARE AVENUE
CHICAGO, ILL. 60647-3497

January 20, 2000

RECEIVED FROM Safety-Kleen Corp.

SAMPLE OF Spent Mineral Spirits

LABORATORY NO. 00 1 5 11-29

MARKED See below

Lab. No.	00 1 5 27	00 1 5 28	00 1 5 29
Marked	A-17	A-18	A-19

Vapor Pressure by Isoteniscope (ASTM D2879)

Temperature, °F	Vapor Pressure, torr		
32	0.15	-	0.10
50	0.30	0.19	0.23
68	0.57	0.38	0.46
100	1.6	1.1	1.3
150	6.7	5.5	5.8
200	22	20.0	20.0
250	60	59	59
300	150	157	152
350	330	370	355
375	-	530	500
400	660	-	-

Arthur A. Krawetz

PHOENIX CHEMICAL LABORATORY, INC. REG.

ATTACHMENT No. 3

safety-kleen corp.

MEMORANDUM

To: Desi Chari, Gary Olsen, Catherine McCord

From: Anne O'Donnell

Date: August 2, 2000

Subject: **Vapor Pressure of Spent Mineral Spirits Solvents**

cc: John Schmitz

Several EHS field personnel had been asked to prove that the vapor pressure of the waste mineral spirits solvent that is bulked and stored at the Branches and at the Recycle Centers is below the 0.3 kPa (2.25 Torr) limit. Because regulators in several parts of the country have been insisting on actual test data rather than knowledge of the waste, we acquired a representative set of samples and submitted them for vapor pressure determination.

Each Recycle Center sent samples from two incoming truckloads of spent mineral spirits. These samples were sent to the Tech Center using the standard TCLP sampling kits and protocols. The vapor pressures were determined by Phoenix Chemical Laboratory, Inc. according to ASTM Standard Test Method D 2879 - 96, **Vapor Pressure – Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope.**

Table I identifies all the samples received and lists the vapor pressure data at 68 °F as reported by Phoenix Chemical Laboratory. Three of the samples were submitted it triplicate to establish the precision of the analysis.

Because the vapor pressure of interest for air regulations is the **VOC composite partial pressure**, the partial pressure due to the water in spent mineral spirits needs to be excluded from the total vapor pressure measured. Data from five of the samples were not used to calculate a mean because the calculated partial pressure for the water content of the sample was greater than the reported total pressure. Part of the discrepancy was due to the difficulty in accurately sampling a two-phase system for analysis. The flash point data on these samples is additional evidence that the higher vapor pressures measured were due to water and not due to VOCs. The water content for the remaining samples was less than 1%, and no correction was made for the calculated partial pressure of water as it was less than 1 Torr. Thus the vapor pressures listed are maximum VOC composite partial pressures.

For the 14 samples without excessive water, the mean vapor pressure at 68 °F was 0.57 Torr (0.08 kPa), with a standard deviation of 0.24. The mean flash point for these samples was 139 °F, and for all samples was 141 °F. These results correlate well with the mean vapor pressures at 68°F for our clean mineral spirits products, as determined by the same procedure in 1998:

SK Premium Gold Solvent:	0.15 Torr (n = 19)	(150°F mean flash point)
SK 105 Solvent Recycled:	0.39 Torr (n = 13)	(134°F mean flash point)
SK 105 Solvent Virgin	0.81 Torr (n = 6)	(106°F mean flash point)

The isoteniscope analysis reports for all samples, which list vapor pressures at multiple temperatures, are available if needed.

Table I - Vapor Pressure of Spent Mineral Spirits Solvents

Receiving Recycle Center	Source Branch	Sample Date	TDA#	VP @ 68°F Torr	FlashPoint °F	Phoenix #
Lexington	Tanker Composite	11/1/99	99-1272	8.8*	147	00-1-5-11
Lexington	Tanker Composite	11/1/99	99-1273	1.2*	148	00-1-5-17
Denton	Orange	11/3/99	99-1319	11*	148	00-1-5-12
Denton	Wheatland	11/3/99	99-1320	0.60	140	00-1-5-19
Dolton	Elgin	11/9/99	99-1353	7.4*	133	00-1-5-13
				0.64		00-1-5-25
				0.78		00-1-5-26
Dolton	Greenwood	11/11/99	99-1381	0.91	134	00-1-5-20
Hebron	Youngstown	11/11/99	99-1382	0.36	143	00-1-5-14
Hebron	Wheeling	11/11/99	99-1383	0.46	139	00-1-5-21
Linden	Baltimore	11/1/99	99-1492	0.38	145	00-1-5-15
Linden	Avon	11/3/99	99-1493	0.92	137	00-1-5-22
				0.96		00-1-5-23
				0.38		00-1-5-28
Reedley	Chandler	12/16/99	99-1517	11.2*	139	00-1-5-16
Reedley	Santa Ana	12/17/99	99-1518	0.20	137	00-1-5-18
				0.37		00-1-5-24
				0.57		00-1-5-27
Reedley	Boise	12/17/99	99-1519	0.46	137	00-1-5-29
			# samples:	14	13	
			Mean:	0.57	140.5	
			Std Dev:	0.24	5.2	

* vapor pressure data not used due to high partial pressure of water

Exhibit N-4

Example Leak Detection and Repair Record

LEAK DETECTION AND REPAIR RECORD

Equipment Identification Number_____ Branch Name or Number_____
Description_____
Tank System_____

How was potential or actual leak detected? **Date** **Inspector's Signature**

_____ _____ _____

Describe the potential or actual leak: _____
_____

Instrument Monitoring Within 5 Days:

	Monitoring Results	Repair Attempt	Method	Results	Date	Inspector's Signature
1.	_____	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____	_____

Date of Successful Report (must be completed within 15 days) **Date** **Inspector's Signature**

_____ _____

	Method	Results	Date	Inspector's Signature
4.	_____	_____	_____	_____

Followup Monthly Monitoring for Valves

	Results	Date	Inspector's Signature
5.	_____	_____	_____
6.	_____	_____	_____

Monitoring Summary **Reference Number – See Above**

	1	2	3	4	5	6
Instrument #/Operator	_____	_____	_____	_____	_____	_____
Calibration	_____	_____	_____	_____	_____	_____
Background Reading	_____	_____	_____	_____	_____	_____
Reading at Equipment	_____	_____	_____	_____	_____	_____
Leak Detected?	_____	_____	_____	_____	_____	_____

EXAMPLE

Exhibit N-5

Example BB Inspection Log

EXAMPLE

Exhibit N-5

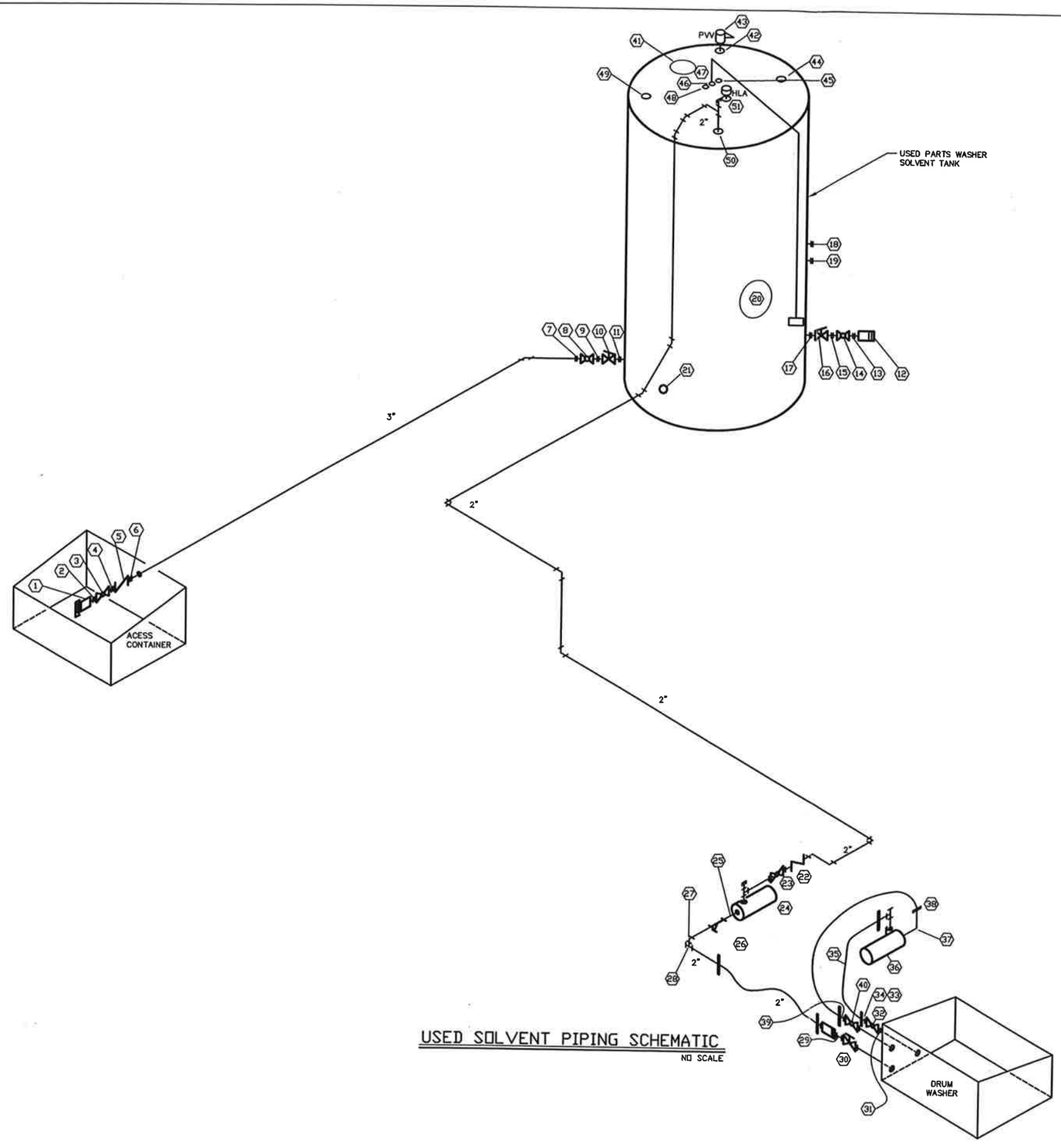
CO Tank Sys BB Equipment

Form Code: 42

Compliance Header	
Inspector Name	
Inspection Date	
Area of Inspection	
CO Tank System BB Equipment Instruction	
Note condition of inspection items. Inspect all tagged and non-tagged points per area plan or system drawing specification. All unsatisfactory findings must be explained. Include any repairs, changes or corrective actions.	
CO Tank System BB Equipment Inspection Items	
Inspect all tagged and non-tagged tank system identified BB equipment points per area plan - Check for evidence of failure. (e.g., all inclusive review of all equipment pumps, valves, flanges, connections, unions, couplings or caps for potential leaks, active leaks, sticking, wear, does not operate smoothly, other).	
Each open-ended valve or line is equipped with a cap, blind flange, plug, or a second valve, which seals the open end at all times except when hazardous waste flows through the open ended valve or line. [264.1056/ 265.1056]	
Pieces of equipment found to be leaking, usually by visual means, are repaired within 15 calendar days and the first attempt to repair is made within 5 calendar days. [264.1058(c)/ 265.1058(c)]	
When a leak is detected, a weatherproof identification tag is attached to the leaking equipment with ID # and the date leak was detected. The identification may be removed after repair. [264.1064(c)/ 265.1064(c)]	
Compliance Footer	
Inspector Signature	
Attach Photo	
On Demand Work Ticket	

Exhibit N-6

Piping Schematic



USED SOLVENT PIPING SCHEMATIC

NO SCALE

E-13

SYMBOL LIST

	CAMLOC COUPLING
	90° CAMLOC COUPLING
	BUTTERFLY VALVE
	GATE VALVE
	INTERNAL EMERGENCY VALVE
	BALL VALVE
	CHECK VALVE
	STRAINER
	PUMP
	REDUCER/INCREASER
	SCREWED UNION
	CAP
	HOSE CLAMP
	FLEXIBLE HOSE
	PIPE PENETRATION/ATTACHMENT TO EQUIPMENT
	DIRECTION OF FLOW
	FLANGED
	JOINT

GENERAL NOTES

1. NUMBERS IN THE EQUIPMENT SCHEDULE INDICATE NUMBERED TAGS ATTACHED TO VALVES/EQUIPMENT IN FIELD.

EQUIPMENT SCHEDULE

MARK	DESCRIPTION
1	3" FLANGED CAMLOC COUPLING
2	3" FLANGED CONNECTION
3	3" FLANGED VALVE
4	3" FLANGED CONNECTION
5	3" FLANGED CHECK VALVE
6	FLANGED CONNECTION
7	3" FLANGED CONNECTION
8	3" FLANGED VALVE
9	3" FLANGED CONNECTION
10	3" FLANGED EXTERNAL EMERGENCY VALVE
11	3" FLANGED CONNECTION
12	3" FLANGED CAMLOC COUPLING
13	3" FLANGED CONNECTION
14	3" FLANGED VALVE
15	3" FLANGED CONNECTION
16	3" FLANGED EXTERNAL EMERGENCY VALVE
17	3" FLANGED CONNECTION
18	3" CAPPED FLANGE
19	3" CAPPED FLANGE
20	SIDE MANHOLE COVER
21	3" CAPPED FLANGE
22	2" FLANGED CHECK VALVE
23	2" FLANGED BALL VALVE
24	USED SOLVENT PUMP
25	2"-1 1/2" REDUCER
26	STRAINER
27	2" ELBOW
28	2" THREADED CONNECTION TEE
29	2" THREADED CAMLOC COUPLING
30	2" THREADED GATE VALVE
31	45 DEGREE ELBOW
32	1" INTAKE VALVE
33	1" UNION
34	1 1/2" -1" REDUCER
35	1 1/2" THREADED FLEX HOSE
36	USED SOLVENT RECIRCULATION PUMP
37	1 1/2" ELBOW
38	FLANGE
39	1 1/2" UNION
40	1 1/2" THREADED DISCHARGE VALVE
41	TOP MANHOLE COVER
42	3" FLANGE
43	PRESSURE VACUUM VENT
44	3" CAPPED FLANGE
45	2" CAPPEED FLANGE
46	2" FLANGE
47	TANK GAUGE CONNECTION
48	2" CAPPED FLANGE
49	3" CAPPED FLANGE
50	3" FLANGE
51	6" FLANGE

PROPRIETARY STATEMENT

THIS DRAWING IS THE EXCLUSIVE PROPERTY OF SAFETY-KLEEN SYSTEMS, INC. AND IS PROPRIETARY AND CONFIDENTIAL INFORMATION. THIS DRAWING AND THE INFORMATION CONTAINED THEREIN MUST NOT BE DUPLICATED, USED, DIVULGED, REPRODUCED, COPIED, DISCLOSED OR APPROPRIATED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAT AS EXPRESSLY AUTHORIZED BY SAFETY-KLEEN SYSTEMS, INC. THIS DRAWING MUST BE RETURNED PROMPTLY UPON REQUEST.

TITLE

PART BB TAGGING PLAN PIPING SCHEMATIC

SAFETY-KLEEN SYSTEMS, INC.
2600 N. CENT. EXPRESSWAY STE 400 RICHARDSON, TX. 75080
PHONE 800-669-5740

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
NONE	QuesTec	GPM			4/28/93

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
BOISE, ID.	7114-4100-300	8

REVISIONS

NO.	DESCRIPTION	BY	CHK	APPR	DATE
8	REVISE TAGGING/FITTINGS	JEK	NC	NC	040518
7	REVISE TAGGING/FITTINGS	JEK	NC	NC	011415
6	REMOVE DUMPSTER & FITTINGS	JEK	GD		110205
5	INSPECTION UPDATE	GAS	GD		092105
4	INSPECTION UPDATE	JKM	GD		081601
3	PERMIT REVISIONS; RETAGGED VALVES	JKM	GD		031301
2	PERMIT REVISIONS; RETAGGED VALVES	RD	KJM		072693
1	REVISE PER ASBUILT CONDITIONS	TYJ	GPM		042893

08-09-93

Exhibit N-7

Tank System BB Equipment

Difficult to Monitor

Exhibit N-7

CO Tank Sys BB Equip Difficult To Monitor

Form Code: 43

Compliance Header	
Inspector Name	
Area of Inspection	
Inspection Date and Time	
CO Tank System BB Equipment Difficult To Monitor Instruction	
Note condition of inspected items. Inspect all difficult to monitor tagged and non-tagged points per area plan or system drawing specification. All unsatisfactory findings must be explained. Include any repairs, changes or corrective actions.	
CO Tank System BB Equipment Difficult To Monitor Inspection Items	
Inspect all difficult to monitor tagged and non-tagged tank system identified BB equipment points per area plan - Check for evidence of failure. (e.g., all inclusive review of all equipment pumps, valves, flanges, connections, unions, couplings or caps for potential leaks, active leaks, sticking, wear does not operate smoothly, other).	
Each open-ended valve or line is equipped with a cap, blind flange, plug, or a second valve, which seals the open end at all times except when hazardous waste flows through the open ended valve or line. [264.1056/ 265.1056]	
Pieces of equipment found to be leaking, usually by visual means, are repaired within 15 calendar days and the first attempt to repair is made within 5 calendar days. [264.1058(c)/ 265.1058(c)]	
When a leak is detected, a weatherproof identification tag is attached to the leaking equipment with ID # and the date leak was detected. The identification may be removed after repair. [264.1064(c)/ 265.1064(c)]	
The liquids in use are heavy liquids. It should be assumed that all hazardous liquids managed in storage tanks contain between 80% and 100% organics.	
Compliance Footer	
Inspector Signature	
Attach Photo	

Inspection Overall Assessment	

Exhibit O-1

Example CC Inspection Log

EXAMPLE

Exhibit O-1

CO Subpart CC Visual Tank Inspection

Form Code: 68

Compliance Header	
Inspector Name	
Area of Inspection	
Inspection Date and Time	
CO - Subpart CC Visual Tank Inspection Instruction	
Complete the visual tank inspection to satisfy the annual inspection required under Subpart CC.	
CO - Subpart CC Visual Tank Inspection Items	
Condition of tank (fixed roof and closure devices): (Check "Pass" if the condition of the tank is acceptable; Check "Fail" if the condition of the tank is not acceptable.) If "Fail", select appropriate reason: not closed under normal operation, other.	
These tanks are designed so that all cover openings can be closed with no visible gaps, holes, cracks, or other open spaces into the interior of the tank. The cover and all cover openings operate with no detectable emissions when in a closed position. Cover openings are maintained in a closed position at all times except when waste is being added to or removed from the tank, or when necessary sampling or repair/maintenance is performed on the tanks.	
Compliance Footer	
Inspector Signature	
Attach Photo	
Inpsection Overall Assessment	

HWMA/RCRA STORAGE PERMIT

for the

SAFETY-KLEEN SYSTEMS, INC., BOISE SERVICE CENTER

ATTACHMENT 10 – PERMIT MODIFICATION/REVISION LOG

EFFECTIVE DATE: JULY 29, 2015
REVISION DATE: MAY 1, 2019

PERMIT MODIFICATION LOG

MODIFICATION/ REVISION NO.	DATE APPROVED	TEXT CHANGES [PAGE(S)]
0	July 29, 2015	Minor editorial changes made by DEQ
1	November 18, 2016	Change of Emergency Coordinator, add Michael Clower and Jennifer Wiley
2	January 17, 2018	Change of Laternate Emergency Coordinator
3	July 20, 2018	Updates to the BB tags and inspections for BB and CC programs
4	March 20, 2019	Change of Primary Emergency Coordinator and addition of Quick Reference Guide
5	May 1, 2019	Update Permit Condition II.M.2. Cost Estimate Annual Adjustment