



Safety Data Sheet

Material Name: RECYCLED PERCHLOROETHYLENE
(DRY CLEANING GRADE)

SDS ID: 82683

*** Section 1 - Identification ***

Product Identifier

RECYCLED PERCHLOROETHYLENE (DRY CLEANING GRADE)

Product Code

1021627, 1021737

Synonyms

Tetrachloroethene, 1,1,2,2-Tetrachloroethylene

Recommended Use

For dry-cleaning clothing. If this product is used in combination with other products, refer to the Safety Data Sheet for those products.

Restrictions on Use

None known.

Manufacturer Information

Safety-Kleen Systems, Inc.
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Richardson, TX 75080

Phone: 1-800-669-5740

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Emergency # 1-800-468-1760

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February 3, 2014

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May 13, 2009

*** Section 2 - Hazard(s) Identification ***

Classification in Accordance with 29 CFR 1910.1200.

Skin Corrosion / Irritation, Category 2

Serious Eye Damage/Eye Irritation, Category 2B

Carcinogenicity, Category 2

Toxic to Reproduction, Category 2

Specific Target Organ Toxicity - Single Exposure, Category 1 (central nervous system, liver, and respiratory system)

Specific Target Organ Toxicity - Single Exposure, Category 3 (central nervous system)

Specific Target Organ Toxicity - Repeated Exposure, Category 1 (liver, nervous system, and respiratory system)

Specific Target Organ Toxicity - Repeated Exposure, Category 2 (kidneys)

Hazardous to the aquatic environment - acute hazard, Category 2

Hazardous to the aquatic environment - chronic hazard, Category 2

GHS LABEL ELEMENTS**Symbol(s)****Signal Word**

DANGER!

Hazard Statement(s)

Causes skin irritation

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Causes eye irritation
Suspected of causing cancer
Suspected of damaging fertility or the unborn child
Causes damage to central nervous system, liver, and respiratory system.
May cause drowsiness and dizziness
Causes damage to liver, nervous system, and respiratory system through prolonged or repeated exposure.
May cause damage to kidneys through prolonged or repeated exposure.
Toxic to aquatic life with long lasting effects

Precautionary Statement(s)

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapor or mist. Use only outdoors or in a well-ventilated area. Do not eat, drink, or smoke when using this product. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling. Avoid release to the environment.

Response

IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Collect spillage.

Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal

Dispose in accordance with all applicable local regulations.

Hazard(s) Not Otherwise Classified

No additional information is available.

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

CAS	Component	Percent
127-18-4	Perchloroethylene	100
71-55-6	Methyl chloroform	0-0.1

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

Description of Necessary Measures

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

IF SWALLOWED: Get medical attention.

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Most Important Symptoms/Effects

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 cancer, reproductive effects, and kidney damage.

Indication of Immediate Medical Attention and Special Treatment Needed, If Needed

IF exposed: Call a POISON CENTER or doctor/physician. 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 ***

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Specific Hazards Arising from the Chemical

This material will not burn.

Hazardous Combustion Products

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

Special Protective Equipment and Precautions for Firefighters

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

Fire Fighting Measures

Move container from fire area if it can be done without risk. Keep storage containers cool with water spray.

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

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

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

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment. Collect spillage.

Methods and Materials for Containment and Clean Up

Do not touch or walk through spilled product. Stop leak if you can do it without risk. 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 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 ***

Precautions for Safe Handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use clean tools. Do not breathe vapor or mist. Use in a well ventilated area. Do not get in eyes, on skin or clothing. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling. Avoid release to the environment.

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Conditions for Safe Storage, Including Any Incompatibilities

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.

Incompatibilities

Avoid acids, alkalis, oxidizing agents, and reactive metals.

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

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

Methyl chloroform (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)

Appropriate 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.

Individual Protective Measures, such as Personal Protective Equipment

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to regulatory requirements. The following PPE should be considered the minimum required: safety glasses, gloves, and lab coat or apron.

Eyes/Face Protection

Safety glasses with side shields should be worn at a minimum. Additional protection such as goggles, face shields, or respirators may be needed depending upon anticipated use and concentrations of mist or vapors. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. Contact lens use is not recommended.

Skin Protection

Where skin contact is likely, wear chemical 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.

Respiratory Protection

Use NIOSH-certified, air-supplied respirators (self-contained breathing apparatus or air-line) or full-face air purifying respirator with organic vapor cartridges up to the maximum use concentration 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.

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

Appearance/Odor : Liquid, clear and colorless,
mild ether-like odor.

pH: Not applicable

Boiling Point: 250°F (121°C)

Odor Threshold: 50 ppm

Solubility (H2O): Insoluble

Melting Point: -2°F (-19°C)

Density: 13.5 LB/US gal (1620 g/l)

Specific Gravity: 1.62 (water = 1)

Evaporation Rate: 2.8 (butyl acetate = 1)

Octanol/H2O Coeff. 2.53-2.88 @ 68°F (20°C)

LFL: Not applicable

Auto Ignition Temperature: Not applicable

UFL: Not applicable

Flash Point: Not available

Vapor Pressure: 14 mmHg at 68°F (20°C)

Viscosity: Not available

Vapor Density: 5.7 (air = 1)

Other Property Information

No additional information is available.

*** Section 10 - Stability & Reactivity ***

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions

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

Conditions To Avoid

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

Incompatible Materials

Avoid acids, alkalis, oxidizing agents, and reactive metals.

Hazardous Decomposition Products

None under normal temperatures and pressures.

*** Section 11 - Toxicological Information ***

Toxicity Data and Information

Component Analysis - LD50/LC50

Perchloroethylene (127-18-4)

Oral LD50 Rat 2629 mg/kg; Dermal LD50 Mouse 2800 mg/kg; Inhalation LC50 Rat 27.8 mg/L 4 h

Methyl chloroform (71-55-6)

Oral LD50 Rat 9600 mg/kg; Dermal LD50 Rabbit >15800 mg/kg; Inhalation LC50 Rat 18000 ppm 4 h

Information on Likely Routes of Exposure

Inhalation

Irritation, nausea, vomiting, headache, dizziness, loss of coordination, numbness, liver damage, kidney damage, cancer, reproductive effects.

Ingestion

Irritation, nausea, vomiting, dizziness, drowsiness, unconsciousness, coma, death.

Skin Contact

Skin irritation.

Eye Contact

Eye irritation.

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Immediate Effects

Causes skin irritation, eye irritation, central nervous system damage, liver damage, and respiratory system damage. May cause central nervous system depression.

Delayed Effects

Prolonged or repeated inhalation may cause toxic effects as noted under Acute Effects for 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), Contains material which may cause reproductive effects., May cause liver damage, nervous system damage, respiratory system damage, and kidney damage.

Irritation/Corrosivity

Causes skin irritation and eye irritation.

Respiratory Sensitization

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

Skin Sensitization

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

Carcinogenicity

Component Carcinogenicity

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 [2014]; Monograph 63 [1995]; Supplement 7 [1987] (Group 2A (probably carcinogenic to humans))

Methyl chloroform (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))

Germ Cell Mutagenicity

Methyl chloroform has demonstrated animal effects of mutagenicity.

Based on best current information, the other component, perchloroethylene, listed in **Section 2** is not a mutagen.

Teratogenicity

Perchloroethylene and methyl chloroform have demonstrated experimental effects of teratogenicity.

Reproductive Effects

Perchloroethylene and methyl chloroform have demonstrated animal effects of reproductive toxicity.

Specific Target Organ Effects - Single Exposure

Central nervous system, liver, respiratory system.

Specific Target Organ Effects - Repeated Exposure

Liver, nervous system, respiratory system, kidneys.

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.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

Toxic to aquatic life with long lasting effects.

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Component Analysis - Ecotoxicity - Aquatic Toxicity

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	
48 Hr EC50 Daphnia magna	6.1 - 9.0 mg/L [Static]	

Methyl chloroform (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 Pseudokirchneriella subcapitata	>500 mg/L	
48 Hr LC50 Daphnia magna	>530 mg/L	
48 Hr EC50 Daphnia magna	2384 mg/L	
48 Hr EC50 Daphnia magna	9.7 - 12.8 mg/L [Static]	

Persistence and Degradability

No information available for the product.

Bioaccumulation Potential

No information available for the product.

Mobility in Soil

No information available for the product.

Other Adverse Effects

No additional information is available.

*** Section 13 - Disposal Considerations ***

Disposal Methods

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.
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 - Transport Information ***

Emergency Response Guide Number

Reference *North American Emergency Response Guidebook* 160

Transportation Regulations

DOT Shipping Name: Tetrachloroethylene
UN/NA #: UN1897 **Hazard Class:** 6.1 **Packing Group:** III
Required Label(s): 6.1

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TDG Shipping Name: Tetrachloroethylene
UN/NA #: UN1897 **Hazard Class:** 6.1 **Packing Group:** III
Required Label(s): 6.1

*** Section 15 - Regulatory Information ***

Volatile Organic Compounds (As Regulated)

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

Federal Regulations

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 311/312 Hazardous Categories

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

Acute Health: Yes **Chronic Health:** Yes **Fire:** No **Pressure:** No **Reactive:** No

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.

Perchloroethylene (127-18-4) 0.1 % de minimis concentration

Methyl chloroform (71-55-6) 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):

Perchloroethylene (127-18-4) 100 lb final RQ; 45.4 kg final RQ

Methyl chloroform (71-55-6) 1000 lb final RQ; 454 kg final RQ

TSCA Inventory

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
Perchloroethylene	127-18-4	Yes
Methyl chloroform	71-55-6	Yes

U.S. State Regulations

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

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

Component	CAS	MA	MN	NJ	PA	CA
Perchloroethylene	127-18-4	Yes	Yes	Yes	Yes	Yes
Methyl chloroform	71-55-6	Yes	Yes	Yes	Yes	Yes

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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 #	
Perchloroethylene	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
Perchloroethylene	127-18-4	DSL
Methyl chloroform	71-55-6	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:

Perchloroethylene (127-18-4) 1 %
Methyl chloroform (71-55-6) 0.1 %

*** Section 16 - Other Information ***

Revision Information

Reformat to OSHA HazCom 29 CFR 1910.1200 adoption of GHS Revision 3.

Updated: March 23, 2015

Key/Legend

ACGIH - American Conference of Governmental Industrial Hygienists; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

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 82683