

Material Name: SAFETY-KLEEN USED ANTIFREEZE

### **Section 1 - PRODUCT AND COMPANY IDENTIFICATION**

**Material Name** 

SAFETY-KLEEN USED ANTIFREEZE

**Product Code** 

Prefix 09

**Synonyms** 

1,2-Ethanediol; 1,2-Ethylene glycol; 2-Hydroxyethanol; Ethylene alcohol

**Product Use Recommended Use** 

Used automotive coolant. 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/SUPPLIER

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IMPORTER/DISTRIBUTOR

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SDS ID: 82912

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**Issue Date** 

April 11, 2017

**Supersedes Issue Date** 

November 10, 2015

**Original Issue Date** 

October 31, 1988

### **Section 2 - HAZARDS IDENTIFICATION**

Classification in accordance with Schedule 1 of Canada's Hazardous Products Regulations (HPR) (SOR/2015-17) and paragraph (d) of 29 CFR 1910.1200 in the United States

Skin Corrosion/Irritation – Category 2

Eye Damage/Irritation - Category 2A

Acute Toxicity - Oral - Category 4

Reproductive Toxicity - Category 1B

Specific Target Organ Toxicity - Single Exposure - Category 1, Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1

### **GHS Label Elements**

Symbol(s)



Signal Word

**DANGER** 

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### **Hazard Statement(s)**

Causes skin irritation and serious eye irritation.

Harmful if swallowed.

Suspected of damaging fertility or the unborn child.

May cause respiratory irritation.

Causes damage to organs.

May cause damage to organs through prolonged or repeated exposure.

### **Precautionary Statement(s)**

### Prevention

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

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### Response

IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor 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 it before use. IF IN EYES: Rinse cautiously for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

### Storage

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

### **Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Statement(s) of Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown acute toxicity.

### Other hazards

None known.

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
7732-18-5	Water	30-87
107-21-1	Ethylene glycol	2-68
57-55-6	1,2-Propylene glycol	4-44
111-46-6	Diethylene glycol	1-2

### **Section 4 - FIRST AID 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. Get medical attention, if needed. Take off contaminated clothing and wash it before reuse.

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### 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: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

### **Most Important Symptoms/Effects**

### Acute

Respiratory tract, skin, and eye irritation, central nervous system depression and damage, and heart, kidney, and respiratory system damage.

### **Delayed**

Reproductive effects, nervous system, kidney, central nervous system, heart, respiratory, and liver damage.

### Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Ethylene glycol is metabolized by alcohol dehydrogenase to various metabolites including glycoaldehyde, glycolic acid, and oxalic acid. The signs and symptoms in ethylene glycol poisoning are those of metabolic acidosis, central nervous system depression, and kidney damage. The currently recommended medical management of ethylene glycol poisoning includes elimination of ethylene glycol and metabolites, correction of metabolic acidosis, and prevention of kidney injury. As a competitive substrate for alcohol dehydrogenase, ethanol is antidotal when given in the early stages of intoxication because it blocks the formation of nephrotoxic metabolites. Pulmonary edema with hypoxia has been described in a number of patients following ethylene glycol poisoning. Respiratory support with mechanical ventilation and positive end expiratory pressure may be required. There may be cranial nerve involvement in the later stages of toxicity from swallowing ethylene glycol. Effects have been reported presenting bilateral facial paralysis, diminished hearing, and dysphagia.

### **Section 5 - FIRE FIGHTING MEASURES**

### **Extinguishing Media**

### **Suitable Extinguishing Media**

Carbon dioxide, alcohol-resistant foam, dry chemical, water spray, or water fog. Water or foam may cause frothing.

### **Unsuitable Extinguishing Media**

Do not use high-pressure water streams.

### **Special Hazards Arising from the Chemical**

Slight fire hazard.

### **Hazardous Combustion Products**

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

### **Fire Fighting Measures**

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Stay upwind and keep out of low areas.

### Special Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

### **Section 6 - ACCIDENTAL RELEASE MEASURES**

### Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment. Avoid release to the environment.

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### Methods and Materials for Containment and Cleaning Up

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 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**

### **Precautions for Safe Handling**

Wash thoroughly after handling. Wear protective gloves/clothing and eye/face protection. Do not eat, drink or smoke when using this product. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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, shoes. Do not smoke while using this product.

### Conditions for Safe Storage, Including any Incompatibilities

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

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.

### **Incompatible Materials**

Acids, alkalis, oxidizing materials, reactive metals.

# Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### **Component Exposure Limits**

Ethylene glycol	107-21-1				
Alberta	100 mg/m3 Ceiling				
British Columbia	10 mg/m3 TWA particulate; 100 mg/m3 Ceiling aerosol; 50 ppm Ceiling vapor; 20 mg/m3 STEL particulate				
Manitoba	25 ppm TWA vapor fraction				
New Brunswick, Northwest Territories, Nunavut	100 mg/m3 Ceiling aerosol				
Nova Scotia, Prince Edward Island	25 ppm TWA vapor fraction; 50 ppm STEL vapor fraction; 10 mg/m3 STEL inhalable particulate matter, aerosol only				
Ontario	100 mg/m3 Ceiling aerosol only				

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Quebec	50 ppm Ceiling mist and vapor ; 127 mg/m3 Ceiling mist and vapor
Saskatchewan	100 mg/m3 Ceiling aerosol
Yukon	10 mg/m3 TWA particulate; 100 ppm TWA vapor; 250 mg/m3 TWA vapor; 10 ppm STEL particulate; 20 mg/m3 STEL particulate; 125 ppm STEL vapor; 325 mg/m3 STEL vapor
ACGIH	25 ppm TWA vapor fraction; 50 ppm STEL vapor fraction; 10 mg/m3 STEL inhalable particulate matter, aerosol only
1,2-Propylene glycol	57-55-6
Ontario	10 mg/m3 TWA (for assessing the visibility in a work environment where 1,2- Propylene glycol aerosol is present ) aerosol only ; 50 ppm TWA aerosol and vapor ; 155 mg/m3 TWA aerosol and vapor

### ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

### **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 Protection Measures, such as Personal Protective Equipment Eye/face protection

Wear safety glasses. Additional protection like goggles, face shields, or respirators may be needed dependent upon anticipated use and concentrations of mists or vapors. Eye wash fountain and emergency showers are recommended. Contact lens use is not recommended.

### **Respiratory Protection**

A respiratory protection program which meets USA's OSHA General Industry Standard 29 CFR 1910.134 or Canada's CSA Standard Z94.4-M1982 requirements must be followed whenever workplace conditions warrant a respirator's use. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

### **Glove Recommendations**

Where skin contact is likely, wear chemical impervious protective gloves; use of polyvinyl alcohol (PVA) 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.

### **Protective Materials**

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.

# Section 9 - PHYSICAL AND CHEMICAL PROPERTIES Appearance Green liquid Physical State Liquid Odor Sweet odor Color Green

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Odor Threshold	Not available	pH	6 - 10	
<b>Melting Point</b>	Not available	<b>Boiling Point</b>	>148.9 °C (300 °F)	
<b>Boiling Point Range</b>	Not available	Freezing point	Not available	
<b>Evaporation Rate</b>	Not available	Flammability (solid, gas)	Not available	
Autoignition Temperature	398 °C (748 °F Ethylene glycol )	Flash Point	>93.3 °C (200 °F)	
Lower Explosive Limit	3.2 vol% (Ethylene glycol)	Decomposition temperature	Not available	
Upper Explosive Limit	15.3 vol% (Ethylene glycol)	Vapor Pressure	<0.1 mmHg @ 68 °F (20° C)	
Vapor Density (air=1)	>1 (Air = 1)	Specific Gravity (water=1)	>1 (Water = 1)	
Water Solubility	(Complete )	Partition coefficient: n- octanol/water	Not available	
Viscosity	Not available	Solubility (Other)	Not available	
Density	Not available	Molecular Weight	Not available	

### **Section 10 - STABILITY AND REACTIVITY**

### Reactivity

No reactivity hazard is expected.

# **Chemical Stability**

Stable under normal temperatures and pressures.

### **Possibility of Hazardous Reactions**

Will not polymerize.

### **Conditions to Avoid**

Acids, alkalis, oxidizing materials, reactive metals.

### **Hazardous decomposition products**

None under normal temperatures and pressures.

# **Section 11 - TOXICOLOGICAL INFORMATION**

### **Information on Likely Routes of Exposure**

# Inhalation

May cause respiratory tract irritation, headache, drowsiness, dizziness, loss of coordination, and central nervous and respiratory system damage.

### **Skin Contact**

May cause skin irritation, headache, drowsiness, dizziness, loss of coordination, and central nervous system, hear, liver, kidney, and nervous system damage.

### **Eye Contact**

May cause eye irritation.

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### Ingestion

May cause respiratory tract irritation, headache, drowsiness, dizziness, loss of coordination, central nervous system damage, and respiratory system damage.

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### **Acute and Chronic Toxicity**

### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Water (7732-18-5)

Oral LD50 Rat >90 mL/kg

Ethylene glycol (107-21-1)

Oral LD50 Rat 4700 mg/kg; Dermal LD50 Rat 10600 mg/kg

**1,2-Propylene glycol** (57-55-6)

Oral LD50 Rat 20 g/kg; Dermal LD50 Rabbit 20800 mg/kg

Diethylene glycol (111-46-6)

Oral LD50 Rat 12565 mg/kg; Dermal LD50 Rabbit 11890 mg/kg

### **Product Toxicity Data**

### **Acute Toxicity Estimate**

Dermal	> 2000 mg/kg
Inhalation - Vapor	> 20 mg/L
Oral	> 2000 mg/kg

### **Immediate Effects**

Respiratory tract, skin, and eye irritation, central nervous system depression and damage, and heart, kidney, and respiratory system damage.

### **Delayed Effects**

Reproductive effects, and nervous system, kidney, central nervous system, heart, respiratory system, and liver damage.

### **Irritation/Corrosivity Data**

May cause respiratory tract irritation, skin irritation, eye irritation.

### **Respiratory Sensitization**

No information available for the product.

### **Dermal Sensitization**

No information available for the product.

### **Component Carcinogenicity**

Ethylene glycol	107-21-1				
ACGIH:	A4 - Not Classifiable as a Human Carcinogen				

### **Germ Cell Mutagenicity**

No information available for the product.

### **Tumorigenic Data**

No information available for the product.

### **Reproductive Toxicity**

Available data characterizes this substance as a reproductive hazard.

### Specific Target Organ Toxicity - Single Exposure

Respiratory system, central nervous system, heart, kidneys.

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# **Specific Target Organ Toxicity - Repeated Exposure**

Nervous system, kidneys, central nervous system, heart, respiratory system, liver.

### **Aspiration hazard**

No information available for the product.

# **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.

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### **Additional Data**

No additional information is available.

# **Section 12 - ECOLOGICAL INFORMATION**

**Component Analysis - Aquatic Toxicity** 

Ethylene glycol	107-21-1
Fish:	LC50 96 h Oncorhynchus mykiss 41000 mg/L; LC50 96 h Oncorhynchus mykiss 14 - 18 mL/L [static]; LC50 96 h Lepomis macrochirus 27540 mg/L [static]; LC50 96 h Oncorhynchus mykiss 40761 mg/L [static]; LC50 96 h Pimephales promelas 40000 - 60000 mg/L [static]; LC50 96 h Poecilia reticulata 16000 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata 6500 - 13000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 46300 mg/L IUCLID
1,2-Propylene glycol	57-55-6
Fish:	LC50 96 h Oncorhynchus mykiss 51600 mg/L [static]; LC50 96 h Oncorhynchus mykiss 41 - 47 mL/L [static]; LC50 96 h Pimephales promelas 51400 mg/L [static]; LC50 96 h Pimephales promelas 710 mg/L
Algae:	EC50 96 h Pseudokirchneriella subcapitata 19000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L [Static ] EPA
Diethylene glycol	111-46-6
Fish:	LC50 96 h Pimephales promelas 75200 mg/L [flow-through ]
Invertebrate:	EC50 48 h Daphnia magna 84000 mg/L IUCLID

### **Persistence and Degradability**

No information available for the product.

### **Bioaccumulative Potential**

No information available for the product.

### Mobility

No information available for the product.

### **Other Toxicity**

No additional information is available.

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### **Section 13 - DISPOSAL CONSIDERATIONS**

### **Disposal Methods**

Dispose in accordance with federal, state, provincial, and local regulations. Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product. Contact Safety-Kleen regarding proper recycling or disposal.

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### Section 14 - TRANSPORT INFORMATION

### **US DOT Information:**

UN/NA #: Not regulated as a hazardous material.

Additional Information: Bulk Shipments: 5000 lbs or greater of ethylene glycol (~1070 gallons of ethylene glycol): UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol), RO 9, PG III

### **IATA Information:**

**UN#:** Not regulated as dangerous goods.

**IMDG Information:** 

UN#: Not regulated as dangerous goods.

**TDG Information:** 

UN#: Not regulated as dangerous goods.

### **International Bulk Chemical Code**

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

Ethylene glycol	107-21-1					
IBC Code:	Category Y					
1,2-Propylene glycol	57-55-6					

### Section 15 - REGULATORY INFORMATION

### **Canada Regulations**

### **CEPA - Priority Substances List**

Ethylene glycol 107-21-1						
	Priority Substance List 2 (substance not considered toxic)					

### **Ozone Depleting Substances**

None of this product's components are on the list

### Council of Ministers of the Environment - Soil Quality Guidelines

Ethylene glycol	107-21-1
Residential and Parkland	960 mg/kg (dry weight)

### Council of Ministers of the Environment - Water Quality Guidelines

None of this product's components are on the list

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### **U.S. Federal Regulations**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

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Ethylene glycol	107-21-1
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ ; 2270 kg final RQ

# SARA Section 311/312 (40 CFR 370 Subparts B and C) 2016 reporting categories

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

### **Component Analysis - Inventory**

Water (7732-18-5)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	-	KR KECI - Annex 2	REACH	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	No	Yes	Yes	Yes	Yes

### Ethylene glycol (107-21-1), Diethylene glycol (111-46-6)

US	CA	EU	AU	РН	JP - ENCS	JP - ISHL	KECI -	KR KECI - Annex 2	REACH	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes

### **1,2-Propylene glycol** (57-55-6)

US	CA	EU	AU	РН	JP - ENCS	JP -	KECI	_	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes

### **Section 16 - OTHER INFORMATION**

### **NFPA Ratings**

Health: 1 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe1

### **Summary of Changes**

Revision to comply with WHMIS 2015.

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA -

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California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS - Chemical Abstracts Service; CFR -Code of Federal Regulations (US); CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD -Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC -European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; 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; IDLH -Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP -Japan; Kow - Octanol/water partition coefficient; KECI - Korea Existing Chemicals Inventory; KECL -Korea Existing Chemicals List; KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts<sup>TM</sup> - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; NDSL – Non-Domestic Substance List (Canada); 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; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID -European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); WHMIS - Workplace Hazardous Materials Information System (Canada).

# Other Information 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 supplied to the user.

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