Safety Data Sheet

Material Name: SAFETY-KLEEN USED ANTIFREEZE **SDS ID: 82912**

* * * Section 1 - Identification * * *

Product Identifier

SAFETY-KLEEN USED ANTIFREEZE

Product Code

Prefix 09

Synonyms

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

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 Information

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

Classification in Accordance with 29 CFR 1910.1200.

Skin Corrosion/Irritation, Category 2
Eye Damage/Irritation, Category 2A
Toxic to Reproduction, Category 1B
Specific Target Organ Toxicity – Single Exposure, Category 1 (central nervous system, heart, kidneys, and respiratory system)
Specific Target Organ Toxicity – Repeated Exposure, Category 1 (nervous system, kidneys, central nervous system, heart, respiratory system, and liver)

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

DANGER!

Hazard Statement(s)

Causes skin irritation.
Causes serious eye irritation.
May damage fertility or the unborn child.
Causes damage to central nervous system, heart, kidneys, and respiratory system.

Causes damage to nervous system, kidneys, central nervous system, heart, and respiratory system through prolonged or repeated exposure.

Precautionary Statement(s)

Prevention

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

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 it 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.

Storage

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

Disposal

Dispose of in accordance with all applicable federal, state and local regulations.

Hazard(s) Not Otherwise Classified

None known.

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

CAS	Component	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 * * *

Description of Necessary Measures

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position 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: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

Most Important Symptoms/Effects

Acute

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

Delayed

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

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

For inhalation, consider oxygen. Treat symptomatically and supportively.

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

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media

Do not use high-pressure water streams.

Specific 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.

Special Protective Equipment and Precautions for Firefighters

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

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.

NFPA Ratings: Health: 1 **Fire:** 1 **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.

Methods and Materials for Containment and Clean 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, 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 * * *

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, and shoes. Do not smoke while using this product.

Conditions for Safe Storage, Including Any Incompatibilities

Store in a well-ventilated place. 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.

Incompatibilities

Acids, alkalis, oxidizing materials, reactive metals

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

Component Exposure Limits

Ethylene glycol (107-21-1)

ACGIH: 100 mg/m3 Ceiling (aerosol only)

OSHA Vacated: 50 ppm Ceiling; 125 mg/m3 Ceiling

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 dependent upon anticipated use and concentrations of mists 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 gloves impervious to product; 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 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.

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

Appearance/Odor :	Liquid, green sweet odor	**pH:**	6-10
Boiling Point:	>300ºF(148.9ºC)	**Odor Threshold:**	Not available
Solubility (H2O):	Complete	**Melting Point:**	Not available.
Density:	Not available.	**Specific Gravity:**	>1 (water = 1)
Evaporation Rate:	Not available.	**Octanol/H2O Coeff.:**	Not available
LFL:	3.2 VOL% (Ethylene glycol)	**Auto Ignition Temperature:**	Not available
UFL:	15.3 VOL% (Ethylene glycol)	**Flash Point:**	>200ºF (>93.3ºC)
Vapor Pressure:	<0.1 mmHg at 68ºF (20ºC)	**Viscosity:**	Not available

Other Property Information

No information is available.

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

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions To Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

Avoid contact with strong oxidizing agents and acids.

Hazardous Decomposition Products

None under normal temperatures and pressures.

* * * Section 11 - Toxicological Information * * *

Toxicity Data and Information

Component Analysis - LD50/LC50

Ethylene glycol (107-21-1)

Dermal LD50 Rat 10600 mg/kg; Oral LD50 Rat 4000 - 10200 mg/kg

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

Dermal LD50 Rabbit 20800 mg/kg; Oral LD50 Rat 20000 mg/kg

Diethylene glycol (111-46-6)

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

Information on Likely Routes of Exposure

Inhalation

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

Ingestion

May cause reproductive effects, headache, drowsiness, dizziness, loss of coordination, central nervous system damage, heart damage, kidney damage, liver damage, and nervous system damage.

Skin Contact

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

Eye Contact

May cause eye irritation.

Immediate Effects

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

Delayed Effects

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

Irritation/Corrosivity

Respiratory tract irritation, skin irritation, eye irritation

Respiratory Sensitization

No information available for the product.

Skin Sensitization

No information available for the product.

Carcinogenicity

Component Carcinogenicity

Ethylene glycol (107-21-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Germ Cell Mutagenicity

No information available for the product.

Teratogenicity

No information available for the product.

Reproductive Effects

Available data characterizes this substance as a reproductive hazard.

Specific Target Organ Effects - Single Exposure

Respiratory system, central nervous system, heart, kidneys

Specific Target Organ Effects - 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.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

Component Analysis - Ecotoxicity - Aquatic Toxicity

Ethylene glycol (107-21-1)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	41000 mg/L	
96 Hr LC50 Oncorhynchus mykiss	14 - 18 mL/L [static]	
96 Hr LC50 Lepomis macrochirus	27540 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	40761 mg/L [static]	
96 Hr LC50 Pimephales promelas	40000 - 60000 mg/L [static]	
96 Hr LC50 Poecilia reticulata	16000 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	6500 - 13000 mg/L	
48 Hr EC50 Daphnia magna	46300 mg/L	

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

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Oncorhynchus mykiss	51600 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	41 - 47 mL/L [static]	
96 Hr LC50 Pimephales promelas	51400 mg/L [static]	
96 Hr LC50 Pimephales promelas	710 mg/L	
96 Hr EC50 Pseudokirchneriella subcapitata	19000 mg/L	
48 Hr EC50 Daphnia magna	>1000 mg/L [Static]	

Diethylene glycol (111-46-6)

Duration/Test/Species	Concentration/Conditions	Notes
96 Hr LC50 Pimephales promelas	75200 mg/L [flow-through]	
48 Hr EC50 Daphnia magna	84000 mg/L	

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

Dispose of in accordance with all applicable federal, state 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.

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 - Transport Information * * *

Transportation Regulations

DOT **Shipping Name:** Not regulated as a hazardous material.

Additional Information: Bulk Shipments: 5000 lbs or greater of ethylene glycol ~500 gallons of ethylene glycol: UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol), RQ 9; PG III

TDG Not regulated as dangerous goods.

* * * Section 15 - Regulatory Information * * *

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

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.

Ethylene glycol (107-21-1)	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):

Ethylene glycol (107-21-1)	5000 lb final RQ; 2270 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
Water	7732-18-5	Yes
Ethylene glycol	107-21-1	Yes
1,2-Propylene glycol	57-55-6	Yes
Diethylene glycol	111-46-6	Yes

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
Ethylene glycol	107-21-1	Yes	Yes	Yes	Yes	Yes
1,2-Propylene glycol	57-55-6	No	No	Yes	Yes	Yes
Diethylene glycol	111-46-6	No	No	Yes	No	Yes

No component(s) are listed under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).

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
Water	7732-18-5	DSL
Ethylene glycol	107-21-1	DSL
1,2-Propylene glycol	57-55-6	DSL
Diethylene glycol	111-46-6	DSL

Canadian WHMIS Information

Class D2B, Class D2A

Component Analysis - WHMIS IDL

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

Ethylene glycol (107-21-1) 1 %

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

* * * Section 16 - Other Information * * *

Revision Information

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

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 82912