

UNIVERSAL 50/50 DI IONIZED ANTIFREEZE

Safety Data Sheet

Material Name: ANTIFREEZE & COOLANT – PREDILUTED 50/50 BLEND

*** Section 1 - Identification ***

Product Identifier

ANTIFREEZE & COOLANT – PREDILUTED 50/50 BLEND

Product Code

904062

Synonyms

Ethylene Glycol Based Antifreeze; Extended Life Hybrid Organic Acid Technology (HOAT) formulation for automobiles, light duty trucks and heavy duty diesels. Prediluted 50/50 Blend. Fully formulated.

Formulated with a combined concentration of ≥ 780 ppm molybdate (as MO4-2) and nitrite (as NO2-) to meet ASTM D6240 fully formulated heavy duty engine coolant specification requirements.

Recommended Use

Antifreeze. 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

Siegel Oil Company
1380 Zuni Street
Denver, CO 80204

Phone: 303-893-3211
www.siegeloil.com
Emergency # 1-800-633-8253

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June 3, 2004

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

Classification in Accordance with 29 CFR 1910.1200.

Acute Toxicity (Oral), Category 4 (~30% unknown)

Eye Damage / Irritation, Category 2A

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

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

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

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

DANGER!

Hazard Statement(s)

Harmful if swallowed.

Causes serious eye irritation.

Causes damage to central nervous system, heart, kidneys, and respiratory system.

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

Precautionary Statement(s)

Prevention

Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Wear protective gloves and eye/face protection. Wash thoroughly after handling.

This product contains 30-50 ppm (0.003-0.005%) denotonium benzoate bittering agent which has been added to help prevent ingestion by humans and animals.

Response

IF exposed: Call a POISON CENTER or doctor/physician. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. 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 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
107-21-1	Ethylene glycol	40-60
65-85-0	Benzoic acid	0.4-5
Not Available	Other Glycols	0-2.5

*** 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

Harmful if swallowed, mild skin irritation, eye irritation, central nervous system damage, kidney damage, heart damage, respiratory system damage.

This product contains 30 to 50 ppm (0.003 to 0.005%) denotonium benzoate bittering agent which has been added to help prevent ingestion by humans and animals.

Delayed

Central nervous system damage, heart damage, respiratory system damage, blood damage, kidney damage, liver damage.

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

IF exposed: Call a POISON CENTER or doctor/physician. Treat symptomatically and supportively. Call 1-800-468-1760 for additional information.

*** 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. Avoid friction, static electricity and sparks. Empty containers may contain product residue.

Hazardous Combustion Products

Decomposition and combustion materials may be toxic. Burning may produce carbon dioxide, carbon monoxide, aromatic hydrocarbons, phenols, and unidentified organic compounds. Potential decomposition gases have not been fully determined but may include: oxides of carbon, phenols, and/or aromatic hydrocarbons.

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. 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. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Apply water from a protected location or from a safe distance. Dike for later disposal.

NFPA Ratings: Health: 2 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.

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

Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Wear protective gloves and eye/face protection. Wash thoroughly after handling.

Conditions for Safe Storage, Including Any Incompatibilities

Store and handle in accordance with all current regulations and standards. See **Section 14: Transportation Information** for Packing Group information.

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Incompatibilities

Avoid contact with strong oxidizing agents and acids.

*** 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 : Clear, yellowish green liquid, mild odor

pH: 7.9-8.9

Boiling Point: ~229°F @atmospheric pressure (109°C)

Odor Threshold: Not available

Solubility (H₂O): Complete

Melting Point: -34°F (-37°C)

Density: 8.86 to 9.11 lb/US gal

Specific Gravity: 1.060-1.090 @ 68°F

Evaporation Rate: Less than 1 (butyl acetate = 1)

Octanol/H₂O Coeff.: Not available

LFL: Not available

Auto Ignition Not available

UFL: Not available

Temperature:

Vapor Pressure: 18 mm Hg at 68°F (20°C)

Flash Point: Not available

Viscosity: Not available

Other Property Information

No information is available.

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

Reactivity

No reactivity hazard is expected.

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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 ***
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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

Benzoic acid (65-85-0)

Inhalation LC50 Rat >26 mg/m³ 1 h; Oral LD50 Rat 1700 mg/kg

Information on Likely Routes of Exposure

Inhalation

May cause central nervous system damage, heart damage, kidney damage, respiratory system damage, blood damage, and liver damage.

Ingestion

Harmful if swallowed. May cause vomiting and nausea.

Skin Contact

Causes mild skin irritation.

Eye Contact

Causes serious eye irritation.

Immediate Effects

Mild skin irritation, eye irritation, central nervous system damage, heart damage, kidney damage, respiratory system damage.

Delayed Effects

Central nervous system damage, heart damage, respiratory system damage, blood damage, kidney damage, liver damage.

Irritation/Corrosivity

Mild 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

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.

Reproductive Effects

No information available for the product.

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Specific Target Organ Effects - Single Exposure

Central nervous system, heart, kidneys, respiratory system

Specific Target Organ Effects - Repeated Exposure

Central nervous system, heart, respiratory system, blood, liver, kidneys

Aspiration Hazard

No information available for the product.

Medical Conditions Aggravated by Exposure

Central nervous system disorders, eye disorders, kidney disorders, respiratory disorders, heart disorders, skin disorders and allergies.

*** 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	

Benzoic acid (65-85-0)

Duration/Test/Species	Concentration/Conditions	Notes
48 Hr EC50 Daphnia magna	860 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

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 (~1070 gallon blended product)

UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol), RQ 9; PG III

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TDG Not regulated as dangerous goods.

*** Section 15 - Regulatory Information ***

Volatile Organic Compounds (As Regulated)

46-51 WT%; 4.1-4.6 LB/US gal;495-548g/l
As per 40 CFR Part 51.100(s).
Non-photochemically reactive per SCAQMD Rule 102
VOC Vapor Pressure Approx 0.06 mmHg @ 20 °C (approximate)

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
Benzoic acid (65-85-0) 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
Ethylene glycol	107-21-1	Yes
Benzoic acid	65-85-0	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
Benzoic acid	65-85-0	Yes	Yes	No	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 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.

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Component Analysis

Component	CAS #	CAN
Ethylene glycol	107-21-1	DSL
Benzoic acid	65-85-0	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 %

Benzoic acid (65-85-0) 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

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