



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material name** Trinity Pre-Diluted Fully Formulated Heavy Duty Antifreeze/Coolant  
**Version #** 01  
**Issue date** 03-18-2013  
**Revision date** -  
**Supersedes date** -  
**CAS #** Mixture  
**Product code** DK245P  
**Product use** Antifreeze / Coolant.  
**Manufacturer/Supplier** Demenno/Kerdoon  
2000 N Alameda ST  
Compton, CA 90222  
(310) -537-7100  
**Emergency** 1-800-424-9300 (CHEMTREC)

## 2. Hazards Identification

**Physical state** Liquid.  
**Appearance** Green or fuchsia, viscous liquid.  
**Emergency overview** WARNING!  
Harmful if swallowed. May cause eye, skin and respiratory tract irritation. May cause damage to the kidneys. May cause central nervous system effects. Possible reproductive hazard that may cause adverse reproductive effects based on animal data.  
**OSHA regulatory status** This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).  
**Potential health effects**  
**Routes of exposure** Eye contact. Skin contact. Inhalation. Ingestion.  
**Eyes** May cause eye irritation.  
**Skin** May cause skin irritation. A few cases of sensitization have been reported.  
**Inhalation** May cause central nervous system effects. May cause respiratory tract irritation.  
**Ingestion** Harmful if swallowed. May cause central nervous system effects. Large quantities: May cause harm to the unborn child.  
**Target organs** Eyes. Skin. Respiratory system. Central nervous system. Kidney. Reproductive system. Cardiovascular system.  
**Chronic effects** May adversely affect the developing fetus. Can cause cardiovascular system damage.  
**Signs and symptoms** Eye contact: May cause redness and pain.  
**Potential environmental effects** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Ethylene glycol	107-21-1	45-50
Hydrated Inorganic Salts	Proprietary	<5
Diethylene glycol	111-46-6	<3

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First Aid Measures

### First aid procedures

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids wide apart. Get medical attention immediately. Continue to rinse.

<b>Skin contact</b>	Remove contaminated clothes and rinse skin thoroughly with water for at least 15 minutes. Get medical attention if irritation develops and persists.
<b>Inhalation</b>	Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Do not induce vomiting unless told to do so by a poison control center or doctor. Get medical attention immediately.
<b>Notes to physician</b>	Treat symptomatically. Symptoms may be delayed.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	No unusual fire or explosion hazards noted.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Extinguish with foam, carbon dioxide, dry powder or water fog.
<b>Unsuitable extinguishing media</b>	None.
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Fire fighting equipment/instructions</b>	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers exposed to heat with water spray and remove container, if no risk is involved.
<b>Hazardous combustion products</b>	Carbon dioxide. Carbon monoxide.

## 6. Accidental Release Measures

<b>Personal precautions</b>	Avoid inhalation of vapors and contact with skin and eyes. Wear suitable protective clothing. See Section 8 of the MSDS for Personal Protective Equipment.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground unless authorized by permit.
<b>Methods for cleaning up</b>	Absorb spillage with suitable absorbent material. For waste disposal, see Section 13 of the MSDS.

## 7. Handling and Storage

<b>Handling</b>	Pregnant women should not work with the product, if there is the least risk of exposure. Local exhaust is recommended. Avoid inhalation of vapors and contact with skin and eyes. Wear approved safety goggles. Wear protective gloves and appropriate clothing to prevent skin contact. Use Personal Protective Equipment recommended in section 8 of the MSDS. Observe good industrial hygiene practices.
<b>Storage</b>	Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures.

## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m3

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.
		50 ppm	Vapor.
	STEL	20 mg/m3	Particulate.
	TWA	10 mg/m3	Particulate.

**Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)**

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.

**Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)**

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	127 mg/m3	Vapor and mist.
		50 ppm	Vapor and mist.

**Mexico. Occupational Exposure Limit Values**

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol.

**Engineering controls** Provide adequate ventilation and minimize the risk of inhalation of vapors. Provide easy access to water supply and eye wash facilities.

**Personal protective equipment**

**Eye / face protection** Wear approved safety goggles.

**Skin protection** Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier. Wear appropriate clothing to prevent repeated or prolonged skin contact.

**Respiratory protection** If engineering measures are not sufficient to maintain concentrations of aerosol particulates below the OEL, suitable respiratory protection must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.

## 9. Physical & Chemical Properties

<b>Appearance</b>	Green or fuchsia, viscous liquid.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Green or fuchsia.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	25 ppm
<b>pH</b>	9 min.
<b>Vapor pressure</b>	0.008 kPa (0.06 mm Hg)
<b>Vapor density</b>	2.1 (Air = 1)
<b>Boiling point</b>	264.2 °F (129 °C)
<b>Melting point/Freezing point</b>	-34.6 °F (-37 °C)
<b>Solubility (water)</b>	Soluble in water, methanol, diethyl ether.
<b>Specific gravity</b>	1.06 - 1.09

<b>Flash point</b>	Not applicable.
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>VOC</b>	103.7 % w/w (ISO 11890-1)
<b>Evaporation rate</b>	0.01 (Butyl acetate = 1)
<b>Viscosity</b>	21 mPa·s Dynamic (21 cP)
<b>Percent volatile</b>	Not available.

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Stable under normal temperature conditions.
<b>Conditions to avoid</b>	High temperatures. Incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents. Strong bases. Strong acids.
<b>Hazardous decomposition products</b>	Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide.
<b>Possibility of hazardous reactions</b>	Will not occur.

## 11. Toxicological Information

### Toxicological data

Components	Species	Test Results
Diethylene glycol (CAS 111-46-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	11890 mg/kg
<i>Oral</i>		
LD50	Rat	12565 mg/kg
Ethylene glycol (CAS 107-21-1)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	5.89 g/kg
<b>Sensitization</b>	A few cases of sensitization have been reported.	
<b>Acute effects</b>	May cause central nervous system effects. Harmful if swallowed.	
<b>Local effects</b>	May cause eye, skin and respiratory tract irritation.	
<b>Chronic effects</b>	Can cause cardiovascular system damage.	

### ACGIH Carcinogens

Ethylene glycol (CAS 107-21-1)	A4 Not classifiable as a human carcinogen.
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<b>Mutagenicity</b>	No data available.
<b>Reproductive effects</b>	Possible reproductive hazard that may cause adverse reproductive effects based on animal data.
<b>Symptoms and target organs</b>	Eye contact: May cause redness and pain. May cause damage to the kidneys.

## 12. Ecological Information

### Ecotoxicological data

Components	Species	Test Results
Diethylene glycol (CAS 111-46-6)		
<b>Aquatic</b>		
Fish	LC50	Western mosquitofish ( <i>Gambusia affinis</i> ) > 32000 mg/l, 96 hours

Components	Species		Test Results
Ethylene glycol (CAS 107-21-1)			
<b>Aquatic</b>			
Fish	LC50	Bluegill (Lepomis macrochirus)	27540 mg/l, 96 Hours
		Fathead minnow (Pimephales promelas)	8050 mg/l, 96 hours
<b>Ecotoxicity</b>	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.		
<b>Persistence and degradability</b>	No data available.		
<b>Bioaccumulation / Accumulation</b>	No data available.		
<b>Partition coefficient</b>			
Ethylene glycol (CAS 107-21-1)	-1.36		
<b>Mobility in environmental media</b>	The product is miscible with water. May spread in water systems.		

### 13. Disposal Considerations

<b>Waste codes</b>	Not regulated.
<b>Disposal instructions</b>	Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport Information

#### DOT

##### Basic shipping requirements:

<b>UN number</b>	UN3082
<b>Proper shipping name</b>	Waste Environmentally Hazardous Substance, liquid, n.o.s. (Ethylene glycol)
<b>Hazard class</b>	9
<b>Packing group</b>	III
<b>Additional information:</b>	
<b>Special provisions</b>	8, 146, 335, IB3, T4, TP1, TP29
<b>Packaging exceptions</b>	155
<b>Packaging non bulk</b>	203
<b>Packaging bulk</b>	241

In single containers of 5000 lbs capacity or less this product is exempt from DOT regulations (not regulated). Does not require label or placards.

Reportable Quantity (RQ)= 5000 lbs (2268 kg) (as ethylene glycol)

For bulk shipments equal to or greater than Reportable Quantity (RQ), please adhere to classification as outlined.

#### IATA

Not regulated as dangerous goods.

#### IMDG

Not regulated as dangerous goods.

#### TDG

Not regulated as dangerous goods.

### 15. Regulatory Information

<b>US federal regulations</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.  CERCLA/SARA Hazardous Substances - Not applicable.
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**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Ethylene glycol (CAS 107-21-1)

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration**

Ethylene glycol (CAS 107-21-1) 1.0 %

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance**

Ethylene glycol (CAS 107-21-1) Listed.

**CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)**

Ethylene glycol: 5000

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<b>Hazard categories</b>	Immediate Hazard - Yes
	Delayed Hazard - Yes
	Fire Hazard - No
	Pressure Hazard - No
	Reactivity Hazard - No

<b>Section 302 extremely hazardous substance (40 CFR 355, Appendix A)</b>	No
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<b>Section 311/312 (40 CFR 370)</b>	Yes
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<b>Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)</b>	Not controlled
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<b>Canadian regulations</b>	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
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<b>WHMIS status</b>	Controlled
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<b>WHMIS classification</b>	D2A - Other Toxic Effects-VERY TOXIC D2B - Other Toxic Effects-TOXIC
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**WHMIS labeling****Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

<b>State regulations</b>	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
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**US - California Hazardous Substances (Director's): Listed substance**

Ethylene glycol (CAS 107-21-1) Listed.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**US - New Jersey RTK - Substances: Listed substance**

Ethylene glycol (CAS 107-21-1) Listed.

**US. Massachusetts RTK - Substance List**

Ethylene glycol (CAS 107-21-1) Listed.

**US. New Jersey Worker and Community Right-to-Know Act**

Ethylene glycol (CAS 107-21-1) 500 lbs

**US. Pennsylvania RTK - Hazardous Substances**

Diethylene glycol (CAS 111-46-6) Listed.

Ethylene glycol (CAS 107-21-1) Listed.

<b>Mexico regulations</b>	This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).
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## 16. Other Information

### Further information

HMIS® is a registered trade and service mark of the NPCA.

### HMIS® ratings

Health: 2\*  
Flammability: 1  
Physical hazard: 0

### NFPA ratings

Health: 2  
Flammability: 1  
Instability: 0

### Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.