

MATERIAL SAFETY DATA SHEET

DeMenno / Kerdoon

Recycling For A Cleaner Environment

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS Standards, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Union standards

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): Trinity N245P Pre-Diluted Heavy Duty Antifreeze (50%)
CHEMICAL NAME/FAMILY: Ethylene Glycol solution of salts
MANUFACTURER'S NAME: **DeMenno/Kerdoon**
ADDRESS: 2000 North Alameda Street
Compton, CA 90222 USA
BUSINESS PHONE: (310) 537-7100
EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)
DATE ISSUED: November 8, 2010
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2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: Product Description: This product is a clear, slightly viscous, green colored liquid with a mild odor. **Health Hazards:** Warning! May cause irritation. Contains ethylene glycol. Harmful if swallowed. May cause damage to the brain, kidneys, or liver. Avoid breathing vapor or mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. **Flammability Hazards:** This product is non-flammable. **Reactivity Hazards:** Toxic fumes may be emitted by thermal decomposition or combustion **Environmental Hazards:** This product may be harmful to aquatic life if released into the environment. **Emergency Considerations:** Emergency responders must wear the proper personal protective equipment suitable for the situation to which they are responding.

EU LABELING AND CLASSIFICATION: This product meets the definition of the following hazard class as defined by the European Economic Community Guidelines.

Hazard Classification: [Xn] Harmful;

Risk Phrases: R22: Harmful if swallowed

Safety Phrases: S2: Keep out of the reach of children; S46: If swallowed seek advice immediately and show container or label.

Annex II Hazard Symbol:



HEALTH HAZARDS OR RISKS FROM EXPOSURE:

Acute

Contact with eyes may cause irritation or inflammation. Prolonged unprotected exposure to skin can cause mild to moderate skin irritation. Respiratory tract irritation may occur if exposed to fumes or mist. Inhalation of excessive vapor concentrations may have adverse effects on the blood-forming system and nervous system. Harmful if swallowed.

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Chronic

Prolonged or repeated inhalation exposure may produce signs of central nervous system involvement, particularly dizziness and jerking eye movements. Prolonged or repeated skin contact may cause skin sensitization and an associated dermatitis in some individuals. Ethylene glycol has been found to cause birth defects in laboratory animals. The significance of this finding to humans has not been determined.

3. COMPOSITION and INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS #	EINECS #	ICSC #	WT %	HAZARD CLASSIFICATION; RISK PHRASES
Ethylene Glycol	107-21-1	203-473-3	0270	40 - 55%	HAZARD CLASSIFICATION: [Xn] HARMFUL RISK PHRASES: R22
Diethylene Glycol	111-46-6	203-872-2	0619	<5%	HAZARD CLASSIFICATION: [Xn] HARMFUL RISK PHRASES: R22
Hydrated Inorganic Acids, Sodium Salts	Proprietary	Proprietary	Not Listed	<5%	HAZARD CLASSIFICATION: [Xn] HARMFUL RISK PHRASES: R22
Water	7732-18-5	231-791-2	Not Listed	<50%	HAZARD CLASSIFICATION: NOT CLASSIFIED RISK PHRASES: NONE
Each of the other components are present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens)					HAZARD CLASSIFICATION: NOT CLASSIFIED RISK PHRASES: NONE

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2004 format. 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, EU Directives and the Japanese Industrial Standard *JIS Z 7250: 2000*.

See Section 2 for full text of Ingredient Risk Phrases and Safety Phrases

4. FIRST-AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with contaminated individual.

EYE CONTACT: If product is in eyes, open victim's eyes while under gentle running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Seek medical attention if irritation or pain persists.

SKIN CONTACT: Wash contact areas immediately with soap and water. Remove contaminated clothing and place in closed container for storage until laundered. Thoroughly clean contaminated clothing before reuse. Get medical attention if irritation develops.

INHALATION: If chemical or vapors are inhaled or breathing difficulties develop remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Get medical attention immediately.

INGESTION: If chemical is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. If spontaneous vomiting occurs, keep head below hips to avoid aspiration into lungs. Seek immediate medical attention.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Personnel with pre-existing skin disorders should avoid contact with this product.

RECOMMENDATIONS TO PHYSICIANS: The principal toxic effects of ethylene glycol, when swallowed, are kidney damage and metabolic acidosis. The combination of metabolic acidosis, an osmol gap and oxalate crystals in the urine is evidence of ethylene glycol poisoning.

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5. FIRE-FIGHTING MEASURES

FLASH POINT: Non-Flammable >40% water

AUTOIGNITION TEMPERATURE: 752°F for ethylene glycol

FLAMMABLE LIMITS (in air by volume, %): Lower 3.2% Upper 15.3

FIRE EXTINGUISHING MATERIALS: Limited water spray, carbon dioxide, foam, dry chemical, halon, other "B" type

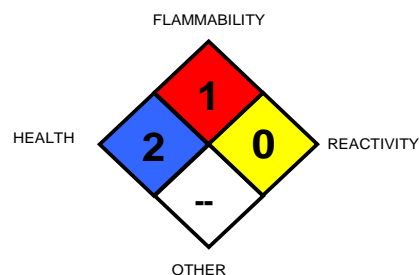
UNUSUAL FIRE AND EXPLOSION HAZARDS: A solid stream of water or foam directed into hot, burning liquid can cause frothing.

Explosion Sensitivity to Mechanical Impact: Not Sensitive

Explosion Sensitivity to Static Discharge: Not Sensitive

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING



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

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Proper protective equipment should be used. Personnel should be trained for spill response operations.

SPILLS: Trained personnel following pre-planned procedures should handle non-incident releases. Remove all ignition sources. Stop leak if you can do so without risk. Ventilate area and avoid breathing vapor or mist. Absorb spilled material using polypads or other suitable absorbent material. Prevent material from entering sewer or confined spaces, waterways, soil or public waters. Place all spill residue in an appropriate container and seal. Decontaminate the area thoroughly. Do not mix with wastes from other materials. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations). For spills on water, contain, minimize dispersion and collect. Dispose of recovered material and report spill per regulatory requirements.

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing mists or sprays generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: Store product in properly labeled, closed containers in cool location. protect from physical damage. Residual material may exist in "empty" containers of this product. Keep containers closed when not in use.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below. Use local exhaust ventilation, and process enclosure if necessary, to control airborne dust. Ensure eyewash/safety shower stations are available near areas where this product is used.

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EXPOSURE LIMITS/GUIDELINES:

<u>Chemical Name</u>	<u>CAS#</u>	<u>ACGIH-TLV's</u>	<u>OSHA PEL's</u>	<u>NIOSH- TLV's</u>	<u>Other</u>
Ethylene Glycol	107-21-1	Not Established	Not Established	Not Established	Check local Regulations
Diethylene Glycol	111-46-6	Not Established	Not Established	Not Established	Check local Regulations
Hydrated Inorganic Acids, Sodium Salts	Proprietary	Not Established	Not Established	Not Established	Check local Regulations
Water	7732-18-5	Not Established	Not Established	Not Established	Check local Regulations

Currently, International exposure limits are established for the components of this product. Please check with competent authority in each country for the most recent limits in place.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: If exposure limits are exceeded, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under U.S. Federal OSHA's Respiratory Protection Standard (1910.134-1998) or the regulations of various U.S. States, Canada, EU Member States, or those of Japan. Air-purifying respirators with dust/mist/fume filters are recommended if operations may produce mists or sprays from this product.

EYE PROTECTION: Splash goggles or safety glasses with side shields recommended. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

HAND PROTECTION: Compatible protective gloves recommended. Wash hands after removing gloves. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.

BODY PROTECTION: Use body protection appropriate for task. Coveralls, rubber aprons, or chemical protective clothing made from natural rubber are generally acceptable, depending upon the task. If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136

9. PHYSICAL and CHEMICAL PROPERTIES

VAPOR DENSITY: 2.1

SPECIFIC GRAVITY @ 20°C: 1.12 (water=1)

VAPOR PRESSURE, mm Hg @ 100°F: No Data

ODOR THRESHOLD: No Data Available

APPEARANCE, ODOR and COLOR: This product is a clear, slightly viscous, green liquid with a characteristic odor

EVAPORATION RATE (n-BuAc=1): Not Established

SOLUBILITY IN WATER: Infinitely miscible

pH: 7.9 (30% water solution)

10. STABILITY and REACTIVITY

STABILITY: Stable under normal conditions

DECOMPOSITION PRODUCTS: When heated to decomposition may produce carbon monoxide, and carbon dioxide.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Normally unreactive, however, avoid strong bases at high temperatures, strong acids, strong oxidizing agents, and materials reactive with hydroxyl compounds.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Excessive heat, incompatible materials.

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11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The specific toxicology data available for components greater than 1% in concentration are as follows.

Ethylene Glycol: LD50 Oral Rat: 4700 mg/kg
LD50 Skin Rabbit: 9530 mg/kg
Diethylene Glycol: LD50 Oral Rat: 12,565 mg/kg
LD50 Skin Rabbit: 11,890 mg/kg

SUSPECTED CANCER AGENT: The components of this product greater than 0.1% are not listed by agencies tracking the carcinogenic potential of chemical compounds as follows: Benzene

Carcinogeny

NTP Regulated	No
IARC Regulated	No
OSHA Regulated	No

IRRITANCY OF PRODUCT: Airborne mists and vapors of this product can irritate respiratory system.

SENSITIZATION TO THE PRODUCT: These products are not known to cause human skin or respiratory sensitization.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: The components of this product are reported to produce mutagenic effects in humans.

Embryotoxicity: The components of this product are not reported to produce embryotoxic effects in humans.

Teratogenicity: The components of this product are not reported to produce embryotoxic effects in humans.

Reproductive Toxicity: The components of this product are not reported to produce reproductive effects in humans.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

Ecotoxicity	Ethylene Glycol: LC50 Goldfish: 5,000 mg/L/24 hr. at 20 C static conditions.
BOD5 and COD	No data available
Products of Biodegradation	No data available
Toxicity	No data available

Other Ecological Remarks Take care to prevent chemicals from entering the ground, water courses, or drainage systems. This product is toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

Dispose of waste in a RCRA permitted hazardous waste disposal facility.

14. TRANSPORTATION INFORMATION

US DOT, IATA, IMO, ADR:

DOT Classification

U.S. DOT HAZARD CLASSIFICATION: Not Regulated (unless package contains a reportable quantity)

Note: IF A SHIPMENT OF A REPORTABLE QUANTITY (5,260 LBS/553 GAL.) IN A SINGLE PACKAGE IS INVOLVED, THE FOLLOWING INFORMATION APPLIES:

PROPER SHIPPING NAME: RQ, Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol) UN NUMBER: UN3082 PACKING GROUP: III
LABELS REQUIRED: Class 9

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DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS: This product is classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product is classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA): This product is classified as Dangerous Goods, by rules of IATA:

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION: This product is classified as Dangerous Goods by the International Maritime Organization.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This product is classified by the United Nations Economic Commission for Europe to be dangerous goods.

15. REGULATORY INFORMATION

UNITED STATES REGULATIONS:

SARA Reporting Requirements SARA 302 or 304: None
SARA 313 Reporting Requirements: Ethylene Glycol CAS# 107-21-1 <55%
SARA 311/312:
Acute: Yes Chronic: Yes Fire: No Reactivity: No

Marine Pollutant This product contains no component listed as a Marine Pollutant under 49 CFR 172.101, Appendix B.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Ethylene Glycol CAS# 107-21-1; 5,000 Lbs.

U.S. TSCA INVENTORY STATUS: All of the components of this product are listed in the TSCA Inventory or have quantity exemption.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): This product does contain any component above the 0.1% level which is listed as a California Proposition 65 chemical.

WARNING! This product contains a component that is known to the State of California to cause cancer or reproductive harm.

Ethylene glycol monomethyl ether CAS# 109-86-4 <0.0009%

CANADIAN REGULATIONS:

CANADIAN DSL/NDL INVENTORY STATUS: All of the components of this product are not on the DSL Inventory

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: No component of this product is on the CEPA First Priorities Substance Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: Class D-2B: Materials causing other toxic effects.



EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU LABELING AND CLASSIFICATION: This product meets the definition of the following hazard class as defined by the European Economic Community Guidelines.

Hazard Classification: [Xn] Harmful;

Risk Phrases: R22: Harmful if swallowed

Safety Phrases: S2: Keep out of the reach of children; S46: If swallowed seek advice immediately and show container or label.

Annex II Hazard Symbol:



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AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: All components of this product are listed on the AICS.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: All of the components of this product are listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Asia-Pac: Not all components Listed

Australian Inventory of Chemical Substances (AICS): All components Listed

Korean Existing Chemicals List (ECL): All components Listed

Japanese Existing National Inventory of Chemical Substances (ENCS): All components Listed

Philippines Inventory of Chemicals and Chemical Substances (PICCS): All components Listed

Swiss Giftlist List of Toxic Substances: All components Listed

U.S. TSCA: Listed or have quantity exemption

16. OTHER INFORMATION

PREPARED BY: Paul Eigbrett

MSDS Authoring Services

DATE OF PRINTING: November 11, 2010

All chemicals may pose unknown hazards and should be used with cautions. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, DeMenno/Kerdoon assumes no responsibility for the completeness or accuracy of the information contained herein. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and protection of the environment