







Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	Personal Protective Equipment
 	Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). Class D-2B: Material causing other toxic effects (TOXIC).	 

Section 1. Product and Company Identification

Product Name / Trade name	Economical R.V. Plumbing Antifreeze -50°C	Associated Product's Item Code	15-334
Synonym	Not available.	CAS #	Mixture.
Chemical Family	Aqueous media.	Validation Date	Mar. 09 2007
Chemical Formula	Not applicable.	Print Date	Mar. 12 2007
Manufacturer	Recochem inc. 850 Montée de Liesse Montréal (Québec) (514) 341-3550 www.recochem.com	In Case of Emergency	Recochem Inc. Communications and Regulatory Affairs Department (905) 791-1788
Material Uses	Consumer products: Antifreeze		

Section 2. Hazardous Ingredients

Name	CAS #	% by Weight	Exposure Limits	
			Canadian Values (ACGIH)	U.S. Values (OSHA)
Ethyl Alcohol 95%	64-17-5	10 - 30	ACGIH TLV (Canada, 2003). TWA: 1000 ppb 8 hour(s).	Ethyl Alcohol 95% OSHA PEL (United States, 2003). TWA: 1000 ppm 8 hour(s).
Propylene glycol	57-55-6	1 - 5	Not available.	

Section 3. Hazard Identification

Emergency Overview	DANGER! FLAMMABLE LIQUID AND VAPOR. Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation.
Potential Acute Health Effects	See Section #11: "Toxicological Information" for further human health effects. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion. Non-irritant for lungs.
Note to Physician	Not available.

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**Section 4. First Aid Measures**

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.
Skin Contact	Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Section 5. Fire Fighting Measures

Products of Combustion	These products are carbon oxides (CO, CO ₂).
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.
Fire Hazards	Explosive in the form of vapour when exposed to heat or flame. Vapour may travel considerable distance to source of ignition and flash back. When heated to decomposition it emits acrid smoke and irritating fumes. (Alcohol ethyl)
Explosion Hazards	(Alcohol ethyl) Container explosion may occur under fire conditions or when heated. Containers may rupture from pressure build-up.

Section 6. Accidental Release Measures

Small Spill and Leak	Absorb with an inert material and place in an appropriate waste disposal container.
Large Spill and Leak	Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed.

Section 7. Handling and Storage

Handling	Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.
Storage	See Section #10 for applicable incompatible materials. Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8. Exposure Controls, Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Personal Protection	
<i>Eyes</i>	Safety glasses.
<i>Body</i>	No special protective clothing is required.
<i>Respiratory</i>	Wear appropriate respirator when ventilation is inadequate.
<i>Hands</i>	Impervious gloves.

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**Section 9. Physical and Chemical Properties**

Physical State and Appearance	Liquid.	Odour	Lemon like. (Slight.)
Molecular Weight	Not applicable.	Taste	Not available.
pH	7.5 to 8.5 (Conc. (% w/w): 100) [Basic.]	Colour	Pink.
Boiling/Condensation Point	The lowest known value is 78°C (172.4°F) (Alcohol ethyl).	Volatility	98% (w/w).
Melting/Freezing Point	May start to solidify at -114°C (-173.2°F) based on data for: Alcohol ethyl.	Evaporation Rate	2.4 (Alcohol ethyl) compared to Butyl acetate.
Specific Gravity	0.96 to 0.98 (Water = 1)	Odour Threshold	The lowest known value is 100 ppm (Alcohol ethyl)
Vapour Pressure	The highest known value is 5.7 kPa (43 mm Hg) (at 20°C) (Alcohol ethyl).	Viscosity	Dynamic: The highest known value is 1.17 to 1.21 cP (Alcohol ethyl)
Vapour Density	The highest known value is 1.59 (Air = 1) (Alcohol ethyl).	Solubility	Easily soluble in cold water, hot water, methanol.
VOC Content	98 (%)	Other Properties	Not available.

The Product is: Flammable.

Auto-ignition Temperature The lowest known value is 363°C (685.4°F) (Alcohol ethyl).

Flash Point Closed cup: 35°C (95°F).

Flammable Limits The greatest known range is LOWER: 3.3% UPPER: 19% (Alcohol ethyl)

Fire Hazards in Presence of Various Substances Slightly flammable to flammable in presence of open flames, sparks and static discharge.
Non-flammable in presence of shocks, of heat.

Section 10. Stability and Reactivity

Stability The product is stable.

Conditions of Instability Not available.

Incompatibility with Various Substances Slightly reactive to reactive with OXIDIZING AGENTS.

Section 11. Toxicological Information

Routes of Entry Absorbed through skin. Eye contact.

Toxicity to Animals Acute oral toxicity (LD50): 35300 mg/kg (Rat.) (Calculated value for the mixture).

Acute Effects on Humans

Eyes Slightly hazardous in case of eye contact (irritant).

Skin Sensitization of the product: Not available.
Slightly hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Inhalation Non-irritant for lungs.

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Ingestion Slightly hazardous in case of ingestion.**Chronic Effects on Humans**

Slightly hazardous in case of skin contact (irritant), of eye contact (irritant).

CARCINOGENIC EFFECTS: Classified A4 (Not classifiable for human or animal.) by ACGIH [Alcohol ethyl].**MUTAGENIC EFFECTS:** Not available.**TERATOGENIC EFFECTS:** Not available.**DEVELOPMENTAL TOXICITY:** Not available.**Section 12. Ecological Information****Ecotoxicity**

For accidental discharges into environment, see Section #6: "Accidental Release Measures" for suggested instructions.

Not available.

Section 13. Disposal Considerations**Waste Information**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information**Canada Transportation of Dangerous Goods (TDG) Information****Primary Class** Class 3: Flammable liquid.**Subsidiary Class (if applicable)** -**Proper shipping name** Alcohols, n.o.s. (Ethyl Alcohol 95%)**Hazard Identification Number** 1987**Packing Group** III**Special Provisions** This product meets the requirements for exemption under TDG regulation special provisions, part 1, section 1.37: Class 3, Flammable liquids: Alcohol Exemption.**International Maritime Dangerous Goods (IMDG) Transportation Information****Primary Class** Class 3: Flammable liquid.**Subsidiary Class (if applicable)** -**Proper shipping name** Alcohols, n.o.s. (Ethyl Alcohol 95%)**Hazard Identification Number** 1987**Packing Group** III**Marine Pollutant** Not pollutant.**Special Provisions** -

No placard (handling and hazard label) required.

United States Department of Transportation (DOT) Information**Continued on Next Page**

Primary Class Combustible liquid.

Subsidiary class (if applicable) -

Proper shipping name Alcohols, n.o.s. (Ethyl Alcohol 95%)

Hazard Identification Number 1987

Packing Group III

Special Provisions This product meets the requirements of DOT exemption as per 49 CFR, section 173.150 (f).



International Air Transport Association (IATA) For air shipment classification and associated regulations, please refer to the latest edition of IATA Dangerous Goods Regulations.

Section 15. Other Regulatory Information and Pictograms

WHMIS Classification (Canada) Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
Class D-2B: Material causing other toxic effects (TOXIC).

Canada Domestic Substances List (DSL) Status This product and/ or all of its components are on the DSL.



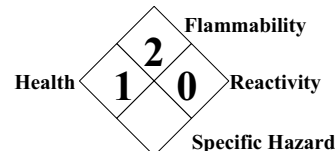
HCS Classification (U.S.A.) Flammable liquid

U.S.A. Regulatory Lists This product and/ or all of its components are on the TSCA inventory list.

Hazardous Material Information System (U.S.A.)

Health	1
Flammability	2
Reactivity	0
Personal Protection	B

National Fire Protection Association (U.S.A.)



Section 16. Other Information

Validated and verified by Compliance and Technical Information Manager on 3/9/2007 ph.# 905-791-1788.

Printed 3/12/2007.

Notice to Reader

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MSDS are available at www.recochem.com