Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	Personal protective equipment
	**Class B-2: Flammable liquid** **Class D-2B: Material causing other toxic effects (Toxic).**	

Section 1. Product and Company Identification

Product name / Trade name	Premium R.V. Plumbing Antifreeze -50°C	**Associated Product's Item Code**	15-385
Synonym	Not available.	**CAS #**	Not applicable.
Chemical family	Aqueous media.	**Validation date**	Nov. 02 2010
Chemical formula	Not applicable.	**Print date**	Nov. 02 2010
Manufacturer/Supplier	Recochem Inc. 850 Montee de Liesse Montreal, Quebec H4T 1P4 (514) 341-3550 www.recochem.com	**In case of emergency**	Recochem Inc. Communications and Regulatory Affairs Department (905) 878-5544
Material uses	Consumer products: Antifreeze		

Section 2. Hazards identification

Emergency Overview	WARNING! FLAMMABLE LIQUID AND VAPOR. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. Flammable liquid. Keep away from heat, sparks and flame. Avoid breathing vapor or mist. Avoid contact with skin and clothing. Contains material that may cause target organ damage, based on animal data. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use.
Potential Acute Health Effects	**See section 11 for more detailed information on health effects and symptoms.** Slightly hazardous by the following route of exposure: of skin contact (irritant), of eye contact (irritant), of ingestion. Non-irritant to lungs.
Note to Physician	Not available.

Section 3. Composition, information on ingredients

Canada

Name	CAS number	Conc. (% w/w)
Ethanol	64-17-5	10 - 30
1,2-Propanediol	57-55-6	9 - 12

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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Section 4. First aid measures

Eye contact	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ingestion	Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Never give anything by mouth to an unconscious person. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Notes to physician	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 5. Fire-fighting measures

Products of combustion	Decomposition products may include the following materials: carbon dioxide carbon monoxide
Fire-fighting media and instructions	Use dry chemical, CO_2, water spray (fog) or foam.
Fire Hazards	Not available.
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	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
Large spill and leak	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

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Section 7. Handling and Storage

Handling

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Personal protection

Eyes Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles

Body Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): nitrile rubber

United States

Product name	Exposure limits
Ethanol	**ACGIH TLV (United States, 1/2008).** TWA: 1000 ppm 8 hour(s). TWA: 1880 mg/m³ 8 hour(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s). **NIOSH REL (United States, 6/2008).** TWA: 1000 ppm 10 hour(s). TWA: 1900 mg/m³ 10 hour(s).

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1,2-Propanediol	**OSHA PEL (United States, 11/2006).** TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m³ 8 hour(s). **AIHA WEEL (United States, 1/2008).** TWA: 10 mg/m³ 8 hour(s).

Canada
Occupational exposure limits

Ingredient	List name	TWA (8 hours) ppm	TWA (8 hours) mg/m³	TWA (8 hours) Other	STEL (15 mins) ppm	STEL (15 mins) mg/m³	STEL (15 mins) Other	Ceiling ppm	Ceiling mg/m³	Ceiling Other	Notations
Ethanol	US ACGIH 1/2008	1000	1880	-	-	-	-	-	-	-	
	AB 6/2008	1000	1880	-	-	-	-	-	-	-	
	BC 6/2008	1000	-	-	-	-	-	-	-	-	
	ON 6/2008	1000	1900	-	-	-	-	-	-	-	
	QC 6/2008	1000	1880	-	-	-	-	-	-	-	
1,2-Propanediol	ON 6/2008	-	10	-	-	-	-	-	-	-	[a]
		50	155	-	-	-	-	-	-	-	[b]
	US AIHA 1/2008	-	10	-	-	-	-	-	-	-	

Form: [a]aerosol [b]total vapour and aerosol

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%]	**Colour**	Pink.
Boiling/condensation point	Not available.	**Volatility**	98% (w/w)
Melting/freezing point	Not available.	**Evaporation rate**	Not available.
Relative density	0.96 to 0.98	**Odour Threshold**	Not available.
Vapour Pressure	Not available.	**Viscosity**	Not available.
Vapour Density	Not available.	**Solubility**	Easily soluble in the following materials: cold water, hot water and methanol.
VOC Content	20 % (w/w)	**Other Properties**	Not available.

The product is:	Flammable.
Auto-ignition temperature	Not available.
Flash Point	Closed cup: 35°C (95°F)
Flammable limits	Not available.
Fire hazards in the presence of various substances	Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge. Non-flammable in the presence of the following materials or conditions: heat and shocks and mechanical impacts.

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Section 10. Stability and reactivity

Stability	The product is stable.
Conditions of instability	Not available.
Incompatibility with various substances	Slightly reactive or incompatible with the following materials: oxidizing materials, metals, acids and alkalis.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Canada

Acute toxicity

Ethanol	LD50 Oral	Rat	7 g/kg	-
	LD50 Oral	Rat	7060 mg/kg	-
	LDLo Dermal	Rabbit	20 g/kg	-
1,2-Propanediol	LD50 Dermal	Rabbit	20800 mg/kg	-
	LD50 Oral	Mouse	22 g/kg	-
	LD50 Oral	Rat	20 g/kg	-
	LD50 Subcutaneous	Rat	28000 mg/kg	-

Conclusion/Summary Not available.

Chronic toxicity

Conclusion/Summary Not available.

Carcinogenicity

Conclusion/Summary Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Section 12. Ecological information

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

Ecotoxicity : No known significant effects or critical hazards.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure

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Ethanol	Acute EC50 2000 ug/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 ug/L Marine water	Crustaceans - Artemia franchiscana - LARVAE	48 hours
	Acute LC50 42000 ug/L Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC <6.3 g/L Fresh water	Daphnia - Daphnia magna	48 hours
1,2-Propanediol	Acute LC50 >1000 mg/L Marine water	Crustaceans - Chaetogammarus marinus - Young - 5 mm	48 hours
	Acute LC50 1020000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia - <=24 hours	48 hours
	Acute LC50 710000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours
	Chronic NOEC 660000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia - <=24 hours	48 hours
	Chronic NOEC 600000 ug/L Fresh water	Fish - Pimephales promelas - <=7 days	96 hours

Conclusion/Summary : Not available.

Biodegradability

Conclusion/Summary : Not available.

Section 13. Disposal considerations

Waste information The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport information

Canada TDG Classification

Class	Class 3: Flammable liquid.
Subsidiary class	-
Proper Shipping Name (Canada) TDG	Alcohols, n.o.s. (Ethanol)
UN number	1987
Packing Group	III
Special provisions	In containers of 450L or less, this product meets the requirements for exemption under TDG regulation special provisions, part 1, section 1.36b: Class 3, Flammable liquids: Alcohol Exemption.

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IMDG Classification

Class	Class 3: Flammable liquid.
Subsidiary class	-
Proper Shipping Name IMDG	Alcohols, n.o.s. (Ethanol)
UN number	1987
Packing Group	III
Marine pollutant	Not a pollutant.
Special provisions	-

No placard (handling and hazard label) required.

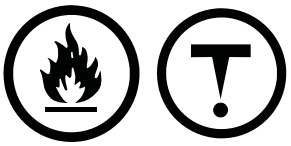
United States DOT (Classification)

Class	Combustible liquid.
Subsidiary class	-
Proper Shipping Name (United States) DOT	Alcohols, n.o.s. (Ethanol)
UN number	1987
Packing Group	III
Special provisions	In containers of 450L of less, 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. Regulatory information

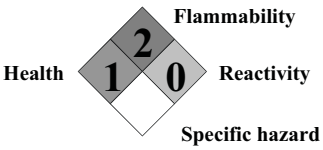
WHMIS Classification (Canada)	Class B-2: Flammable liquid Class D-2B: Material causing other toxic effects (Toxic).
Canada Domestic Substances List (DSL) Status	This product and/ or all of its components are on the DSL.
HCS Classification (U.S.A.)	Flammable liquid Target organ effects
U.S.A. Regulatory 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.)



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Section 16. Other information

Validated and verified by Compliance and Technical Information Manager ph.# 905-878-5544. Nov. 02 2010

Printed Nov. 02 2010

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