



PMC WATER SYSTEMS SERVICES INC.

124 CONNIE CRES. UNIT 9 CONCORD, ONTARIO.

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MATERIAL SAFETY DATA SHEET C-2009-P

Protection Required



SECTION 1 - MATERIAL IDENTIFICATION AND USE

Manufacturer's Name : PMC Water Systems Services Inc.
Manufacturer's Address : 124 Connie Crescent, Unit 9, Concord, ON L4K 1L7
Manufacturer's Phone # : (905) 669-8262
24 Emergency Phone # : Canutec (613) 996-6666
Product Identifier : C-2009-P
Product Use : Closed System Freeze Protectant

SECTION 2 – COMPOSITION/INGREDIENTS OF MATERIAL

Ingredients	Concentration	CAS #	LD ₅₀	LC ₅₀
Propylene Glycol (1,2-propanediol)	100%	57-55-6	21800mg/kg, oral - rat	No Data Available

SECTION 3 – HAZARDS IDENTIFICATION

Classification WARNING
Emergency Overview May cause mild skin and eye irritation. May cause irritation to the respiratory system.
Potential Health Effects **Signs and Symptoms of Short-Term (Acute) Exposure**
Eyes Direct contact may cause very mild, temporary irritation and redness.
Skin Direct skin contact may cause slight or mild transient irritation.
Inhalation High concentrations of vapours or mists may cause coughing and mild, temporary irritation.
Ingestion May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic Effects Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin.
Signs and Symptoms Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Ingestion of large amounts may cause nausea, vomiting, diarrhea as well as depression of the central nervous system. High concentrations of vapours or mists may cause coughing and mild temporary irritation.

SECTION 4 – FIRST AID MEASURES

Eye Contact Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact Immediately flush skin with plenty of water. Immediately remove all contaminated clothing. Obtain medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
Inhalation Move victim to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Seek immediate medical attention/advice if needed.
Ingestion Seek immediate medical attention/advice. Do not induce vomiting. Drink one to two glasses of water. Never give anything by mouth to an unconscious or convulsing person. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.

SECTION 5 - FIRE FIGHTING MEASURES

Flammability Container may explode in heat of fire.
Flash Point 231.8°F, 111.0°C Closed Cup
Autoignition 748°F, 397.78°C
Temperature

Extinguishing media	Use alcohol resistant foam, water fog, dry chemical powder and carbon dioxide (CO2). Do not use water jet as an extinguisher; it will spread the fire.
Special Firefighting Procedures/Equipment	Fire may produce irritating, corrosive and/or toxic gases. In case of fire and/or explosion, do not breathe fumes. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots and, in enclosed spaces, SCBA. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.
Explosion Data	Not expected to be sensitive to mechanical impact or static discharge.
Hazardous Combustion Products	Carbon oxides. Other irritating fumes and smoke.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions	Ventilate the contaminated area. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. For personal protection, see Section 8.
Environment precautions	For large (industrial) releases, prevent spill from entering a waterway.
Spill Response/Cleanup	Remove all sources of ignition and ventilate contaminated area. Stop leak if safe to do so. Dike the spilled material where possible. Use water spray to reduce vapours or divert vapour cloud drift. Absorb spilled liquid with non-combustible, inert absorbent material (eg sand). Prevent entry into waterways, sewer, basements or confined areas.

SECTION 7 – HANDLING AND STORAGE

Handling	Do not use in areas without adequate ventilation. Keep away from heat/sparks/open flames/hot surfaces – no smoking. Protect material from direct sunlight. Wear appropriate personal protection. Avoid breathing mist or vapour. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
Storage Requirements	Store in a closed container away from incompatible materials. Store in original tightly closed container. Keep in a cool, dry well-ventilated area out of direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation	General ventilation (typically 10 air changes per hour) should be used. If applicable, use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.
Respiratory Protection	Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known or any other circumstances where air-purifying respirators may not provide adequate protection.
Skin Protection	Impervious gloves, apron and boots. Butyl rubber gloves are recommended.
Eye/Face Protection	Chemical splash goggle; full face shield may be necessary
Other Comments	Chemical resistant clothing and boots. An eyewash station and safety shower should be available

ACGIH Threshold Limit Values	Type	Value	Form
Propylene Glycol	TWA	10mg/m ³	Aerosol

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	Liquid
Odour and Appearance	:	Odourless; colourless or nearly colourless viscous liquid
Odour Threshold	:	Not Available
Specific Gravity (Water = 1)	:	1.04 at 25°C
Vapour Pressure (mmHg)	:	0.07 at 20°C
Vapour Density (Air = 1)	:	2.6
Evaporation Rate	:	Not Available
Boiling Point	:	370.76°F, 188.2°C
Freezing/Melting Point	:	-76°F, -60°C
pH	:	Not available
Solubility in Water	:	100% soluble

SECTION 10 – STABILITY AND REACTIVITY

Stability/Reactivity	Stable and non-reactive under normal conditions of use, storage and transport.
Conditions for Chemical Instability	Heat, open flame and direct sunlight. Avoid contact with incompatible materials.
Incompatible Materials	Strong oxidizing agents, perchloric acid, nitric acid, silver nitrate.
Hazardous Decomposition Products	None known refer to hazardous combustion products in Section 5. Carbon oxides may be released during a fire.
Hazardous Polymerization	Hazardous polymerization does not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of Entry	: Eyes, skin, respiratory and digestive system
Effects of Acute Exposure	: Harmful or fatal if swallowed
Skin Contact	: Direct skin contact may cause slight or mild transient irritation.
Eye Contact	: Direct contact may cause very mild, temporary irritation and redness.
Ingestion	: Harmful or fatal if swallowed.
Inhalation	: High concentrations of vapours or mists may cause coughing and mild, temporary irritation.
Chronic Exposure Effects	: Chronic skin contact with low concentrations may cause dermatitis.
Irritancy	: Direct skin contact may cause slight or mild transient irritation.
Sensitization	: Not expected to be a skin or respiratory sensitizer.
Carcinogenicity	: Not considered to be a carcinogen by ACGIH, IARC, OSHA or NTP.
Teratogenicity	: Not expected to be a teratogen.
Mutagenicity	: Not expected to be mutagenic.
Reproductive Effects	: Not expected to cause reproductive or developmental effects.

SECTION 12 – ECOLOGICAL INFORMATION

General Comments	This product should not be allowed to enter drains, water courses or the soil. High water solubility indicates a high mobility in soil.
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SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water suppliers. Dispose in accordance with federal, provincial or local government requirements. Contact your local, provincial or federal environmental agency for specific regulations.
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SECTION 14 – TRANSPORT INFORMATION

TDG Shipping Regulations	Not TDG Regulated as dangerous goods
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SECTION 15 – REGULATORY INFORMATION

WHMIS Classification	Class D1B: Toxic Material Class D2A: Very Toxic Material
Domestic Substances List	All ingredients are listed on the DSL or are not required to be listed.

SECTION 16 – OTHER INFORMATION

Prepared by:	Lab Services PMC Water Systems Services Inc. 124 Connie Crescent, Unit 9 Concord Ontario L4K 1L7
Preparation Date:	November 8, 2015

While all the data presented is believed to be accurate at the time of preparation, PMC Water Systems Services Inc. makes no warranty; the data is offered for your consideration, investigation and verification.