



PMC WATER SYSTEMS SERVICES INC.

124 CONNIE CRES. UNIT 9 CONCORD, ONTARIO.

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MATERIAL SAFETY DATA SHEET

C-2008-P-CONC

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-2008-P-CONC
Product Use : Antifreeze

SECTION 2 – COMPOSITION/INGREDIENTS OF MATERIAL

Ingredients	Concentration	CAS #	LD ₅₀	LC ₅₀
Methyl Alcohol	30-70%	67-56-1	5628 mg/kg, oral – rat	>4.1 mg/l/4h, rat (vapour)
Propylene Glycol	10-30%	57-55-6	21800mg/kg, oral - rat	No Data Available

SECTION 3 – HAZARDS IDENTIFICATION

Emergency Overview DANGER! Combustible liquid and vapor. Vapors may cause flash fires. POISON. Cannot be made non-poisonous. May be fatal or cause blindness if swallowed. Harmful by inhalation and contact with skin. May cause central nervous system effects. Causes eye irritation. Prolonged or repeated overexposure may cause liver effects. Teratogenic.

Eyes Causes eye irritation.

Skin Harmful in contact with skin. May cause mild skin irritation. May be absorbed and cause symptoms similar to those for inhalation.

Inhalation May be harmful if inhaled. Toxic effects exerted upon nervous system, particularly the optic nerve. May cause irritation of respiratory tract.

Ingestion Toxic if swallowed. Even small amounts (30-250 ml methanol) may be fatal. Symptoms are stomach ache, nausea, vomiting, dullness, visual disorder and blindness.

Target Organs Central nervous system. Eyes. Gastro-intestinal tract. Respiratory system. Skin.

Chronic Effects Pregnant women or women of child-bearing age should not be exposed to this product. May cause birth defects. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Prolonged or repeated overexposure may cause liver effects.

Signs and Symptoms Causes moderate eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause mild skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin. May cause respiratory irritation. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. May be fatal or cause blindness if swallowed. Cannot be made non-poisonous. Ingestion of large amounts may cause nausea, vomiting, diarrhea, as well as depression of the central nervous system.

SECTION 4 – FIRST AID MEASURES

Eye Contact Immediately flush eyes with plenty of water for at least 20 minutes. Seek immediate medical attention.

Skin Contact Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse.

Inhalation Move to fresh air. Oxygen or artificial respiration if needed. Get medical attention, if needed.

Ingestion Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Notes to Physician Treat symptomatically. Immediate medical attention is required. This product is a CNS depressant. Onset of symptoms may be delayed for 18 to 24 hours after ingestion. Medical supervision for minimum 48 hours. Administration of ethanol can slow the metabolism of methanol, thus reducing the potential for harmful effects.

SECTION 5 – FIRE FIGHTING MEASURES

Flammability Highly flammable liquid and vapour. Can ignite at room temperature. Heat may cause the containers to explode. Vapors are heavier than air and may spread along floors. Vapors may travel considerable distance to a source of ignition and flash back.

Flash Point 107 °C, 225 °F Closed Cup

Autoignition Not Available

Temperature

Extinguishing Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO₂). Do not use water jet as an extinguisher, as this will spread the fire.

Media

Specific Hazards Fire may produce irritating, corrosive and/or toxic gases.

Special Firefighting In case of fire/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. Ventilate the contaminated area. Evacuate area and fight fire from a safe distance. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Prevent fire extinguishing water from contaminating surface water or the ground water system. Cool containers exposed to flames with water until well after the fire is out. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Firefighters should wear full protective equipment including self-contained breathing apparatus.

Procedures/Equipment

Explosion Data May be sensitive to static discharge. Vapours in the flammable range may be ignited by a static discharge or sufficient energy. Not expected to be sensitive to mechanical impact.

Hazardous Combustion Carbon oxides. Formaldehyde. Other unidentified organic compounds.

Products

NFPA Ratings Health: 1 Flammability: 3 Instability: 0

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions Keep people away from/upwind of spill/leak. Consider initial downwind evacuation for at least 500 meters. Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained.

Environment Precautions Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for Containment Eliminate all ignition sources. Stop leak if safe to do so. If leak is irreparable, move cylinder to a safe and open area. If possible, dike spilled material. Prevent entry into waterways, sewers, basements or confined areas.

Spill Response/Cleanup Extinguish all flames in the vicinity. Should not be released into the environment. This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb residues with a non-combustible absorbent material (e.g. sand, vermiculite) and collect adsorbate for disposal. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. Clean up in accordance with all applicable regulations.

SECTION 7 – HANDLING AND STORAGE

Handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. All equipment used when handling the product must be grounded. Take precautionary measures against static discharges. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Use only in area provided with appropriate exhaust ventilation. Wear appropriate personal protective equipment.

Storage Requirements Observe good industrial hygiene practices. Wash contaminated clothing before reuse. Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

- Ventilation** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. 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 NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Advice should be sought from respiratory protection specialists.
- Skin Protection** Wear appropriate chemical resistant clothing and gloves. Impervious apron is recommended.
- Eye/Face Protection** Chemical goggles are recommended. A full face shield may also be necessary.
- Other Comments** Eye wash facilities and emergency shower must be available when handling this product.

Ingredient	ACGIH Threshold Limit Values		OSHA Threshold Limit Values
	TWA	STEL	
Methyl Alcohol	220ppm	250ppm	PEL 260mg/m ³ 200ppm
Propylene Glycol	10mg/m ³		

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- Physical State** : Liquid
- Odour and Appearance** : Alcohol-like; Pink
- Odour Threshold** : 50 - 100 ppm
- Specific Gravity (Water = 1)** : 0.79 at 20 °C
- Vapour Pressure (mmHg)** : 92 at 20 °C
- Vapour Density (Air = 1)** : > 1.1
- Evaporation Rate** : < 1
- Boiling Point** : 148.46 °F, 64.7 °C, 101.325 kPa
- Freezing/Melting Point** : -144.04 °F, -97.8 °C
- pH** : 9.5 – 11.0
- Solubility in Water** : Soluble
- Flammability limits in air:**
- upper, % by volume** : 36
- lower, % by volume** : 7.3

SECTION 10 – STABILITY AND REACTIVITY

Stability/Reactivity	Stable under normal conditions.
Conditions for Chemical Instability	Heat, open flame and direct sunlight. Keep away from incompatibles. Do not use in areas without adequate ventilation.
Incompatible Materials	Strong oxidizing agents, strong acids, strong bases, perchloric acid.
Hazardous Decomposition Products	None known refer to hazardous combustion products in Section 5. The following may be released during a fire: burning produces obnoxious and toxic fumes. Carbon oxides.
Hazardous Polymerization	Hazardous polymerization does not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of Entry	: Eyes, skin, respiratory and digestive system. Can be absorbed through the skin.
Skin Contact	: May be irritating to the skin.
Eye Contact	: May cause moderate eye irritation.
Ingestion	: May cause irritation of the gastrointestinal tract. May be fatal or cause blindness if swallowed.
Inhalation	: May cause respiratory irritation.
Chronic Exposure Effects	: Chronic skin contact with low concentrations may cause dermatitis. Prolonged or repeated overexposure may cause kidney damage.
Irritancy	: May be irritating to the skin. May cause moderate eye irritation.
Sensitization	: Not expected to be a skin or respiratory sensitizer.
Carcinogenicity	: No components listed as carcinogen by ACGIH, IARC, OSHA or NTP.
Teratogenicity	: Hazardous by WHMIS criteria. Avoid exposure to women during early pregnancy.
Mutagenicity	: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Reproductive Effects	: Contains methanol, which may cause teratogenic effects at doses which are not maternally toxic. Effects were observed following inhalation of high concentrations of methanol, at doses which were not maternally toxic.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity	Not expected to cause hazardous effects to the environment.
Potential Environmental Effects	May cause long-term adverse effects in the environment.
Mobility	High water solubility indicates a high mobility in soil.

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	UN 1230, Methanol, Class 3 (6.1), PG II
Domestic Substances List	All ingredients are listed on the DSL or are not required to be listed.

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification	: Class B2: Flammable Liquid Class D1B: Toxic Material Class D2A: Very Toxic Material Class D2B: Toxic Material
WHMIS Status	: Controlled

SECTION 16 – OTHER INFORMATION

Prepared by:

Lab Services
PMC Water Systems Services Inc.
124 Connie Crescent, Unit 9
Concord, ON L4K 1L7
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Preparation Date:

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.
