



# PMC WATER SYSTEMS SERVICES INC.

124 CONNIE CRES. UNIT 9 CONCORD, ONTARIO.

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## SAFETY DATA SHEET

B-3208

### Protection Required



### SECTION 1 - MATERIAL IDENTIFICATION AND USE

<b>Manufacturer's Name</b>	:	PMC Water Systems Services Inc.
<b>Manufacturer's Address</b>	:	124 Connie Crescent, Unit 9, Concord, ON L4K 1L7
<b>Manufacturer's Phone #</b>	:	(905) 669-8262
<b>24 Emergency Phone #</b>	:	Canutec (613) 996-6666
<b>Product Identifier</b>	:	B-3208
<b>Product Use</b>	:	Water treatment/return-line protection

### SECTION 2 – COMPOSITION/INGREDIENTS OF MATERIAL

Ingredients	Concentration	CAS #	LD <sub>50</sub>	LC <sub>50</sub>
Morpholine	10-30%	110-91-8	1050 mg/kg (oral – rat)	No Data Available
Cyclohexylamine	10-30%	108-91-8	156 mg/kg (oral – rat)	No Data Available
Diethylaminoethanol	7-13%	100-37-8	1300 mg/kg (oral – rat)	4.6 mg/l, 4h (rat)

### SECTION 3 – HAZARDS IDENTIFICATION

<b>Hazard Statement</b>	Flammable liquid and vapour. Toxic in contact with skin. May cause an allergic skin reaction. Causes severe skin burns and eye damage. Harmful if swallowed or if inhaled.
<b>Precautionary Statement</b>	Keep away from heat, hot surfaces, sparks, open flames and ignition sources. Ground and bond container and receiving equipment. Use non-sparking tools. Prevent static discharges. In case of fire: Use water spray, dry powder, foam or carbon dioxide for extinction. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapours/spray. Keep container tightly closed. Store in a well-ventilated place. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Dispose of contents/container in accordance with local/regional/national/international regulations. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash with plenty of soap and water thoroughly after handling. Wash contaminated clothing before reuse. If swallowed: Rinse mouth. Do NOT induce vomiting. Call a Poison Center/doctor if you feel unwell. If inhaled: Remove person to fresh air and keep comfortable for breathing.

### SECTION 4 – FIRST AID MEASURES

<b>Eye Contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing. Hold eyelids open during flushing.
<b>Skin Contact</b>	Immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.
<b>Inhalation</b>	Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.
<b>Ingestion</b>	Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Slowly dilute with 1-2 glasses of water and seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.
<b>Notes to Physician</b>	Absorption of this product into the body leads to the formation of methemoglobin, which in sufficient concentration causes cyanosis. Skin absorption symptoms may be delayed. Since reversion of methemoglobin to hemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures such as bed rest and oxygen inhalation. Thorough cleansing of the entire contaminated body area is of utmost importance. Due to the severely irritating or corrosive nature of the material, swallowing may lead to ulceration and inflammation of the upper alimentary tract with hemorrhage and fluid loss. Also, perforation of the esophagus or stomach may occur, leading to mediastinitis or peritonitis and the resultant complications. Aspiration may cause severe lung damage. Evacuate stomach in a way which avoids aspiration.

## SECTION 5 - FIRE FIGHTING MEASURES

<b>Flammability</b>	Combustible
<b>Flash Point</b>	57°C, 135°F
<b>Autoignition Temperature</b>	Not Determined
<b>Extinguishing Media</b>	Water, water spray, carbon dioxide, foam or dry chemicals.
<b>Special Firefighting Procedures and Equipment</b>	Firefighters should wear full protective clothing, including self-contained breathing equipment. Vapors are heavier than air and may travel a long distance accumulating in low lying areas. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure build-up which could result in container rupture. Static electricity will accumulate and may ignite vapors. Prevent a possible fire hazard by bonding and grounding.
<b>Hazardous Combustion Products</b>	Carbon monoxide. Carbon dioxide. Oxides of nitrogen. Ammonia. Irritating aldehydes and ketones may be formed on burning in a limited air supply.
<b>NFPA Ratings</b>	HEALTH 3, FLAMMABILITY 2, INSTABILITY 0
<b>HMIS Ratings</b>	HEALTH 3, FLAMMABILITY 2, REACTIVITY 0

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Safety goggles. Wear protective clothing and equipment.
<b>Environment Precautions</b>	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.
<b>Spill Response/Cleanup</b>	Isolate hazard area and restrict access. Eliminate all ignition sources. Absorb with an inert dry material and place in an appropriate waste disposal container. Avoid direct contact with material. Try to work upwind of spill.

## SECTION 7 – HANDLING AND STORAGE

<b>Handling</b>	For industrial use only. Avoid contact with eyes, skin and clothing. Do not ingest. Do not inhale vapour or mist. DO NOT handle or store near an open flame, heat, or other sources of ignition. Use with adequate ventilation. Keep containers closed when not in use. Empty product containers may contain residue. Handle in accordance with good industrial hygiene and safety practices. Static electricity will accumulate and may ignite vapours. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. DO NOT pressurize, cut, heat, or weld containers.
<b>Storage Requirements</b>	Store in a cool, dry, well-ventilated area away from direct sunlight. Store tightly closed in original container. Place away from incompatible materials. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid).

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Ventilation</b>	Local exhaust ventilation as necessary to maintain exposures to within applicable limits.
<b>Respiratory Protection</b>	If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved respirator.
<b>Skin Protection</b>	Rubber or plastic gloves. Rubber boots. Chemical resistant clothing.
<b>Eye/Face Protection</b>	Chemical safety goggles; face shield
<b>Other Comments</b>	An eyewash station and safety shower should be available

	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Morpholine	20 ppm TLV-TWA	20 ppm TWA 70 mg/m <sup>3</sup> TWA 105 mg/m <sup>3</sup> STEL 30 ppm STEL	1400 ppm
Cyclohexylamine	10 ppm TLV-TWA	10 ppm TWA 40 mg/m <sup>3</sup> TWA	Not Available
Diethylaminoethanol	2 ppm TLV	10 ppm PEL	Not Available

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	:	Liquid
<b>Odour and Appearance</b>	:	Fishy amine odour; colourless to pale yellow
<b>Odour Threshold</b>	:	Not Available
<b>Specific Gravity (Water = 1)</b>	:	0.96 g/cc
<b>Vapour Pressure (mmHg)</b>	:	Not Available
<b>Vapour Density (Air = 1)</b>	:	Not Available
<b>Evaporation Rate</b>	:	Not Available
<b>Boiling Point</b>	:	127 to 124°C, 261 to 273°F
<b>Freezing/Melting Point</b>	:	-5 to -18°C, 23 to -4°F

pH : 12.5, 10 (1% solution)  
Solubility in Water : Miscible

## SECTION 10 – STABILITY AND REACTIVITY

**Stability/Reactivity** Stable.  
**Conditions for Instability** Avoid excessive heat, open flames and all ignition sources.  
**Incompatible Materials** Oxidizers, strong acids, all copper alloys, lead and oxides of nitrogen  
**Hazardous Decomposition Products** Nitrogen and carbon oxides.  
**Hazardous Polymerization** Hazardous polymerization will not occur.

## SECTION 11 – TOXICOLOGICAL INFORMATION

**Skin Contact** : Skin contact will cause corrosive burns to tissues.  
**Eye Contact** : Eye contact will cause corrosive burns to tissues.  
**Ingestion** : Causes irritation or chemical burns of the mouth and gastrointestinal tract.  
**Inhalation** : Inhalation of vapors or mist will cause burns to the respiratory tract.  
**Chronic Exposure Effects** : Prolonged or repeated exposure may result in lung damage and/or absorption of potentially harmful amounts of material.  
**Irritancy** : No Data Available  
**Sensitization** : No Data Available  
**Carcinogenicity** : Morpholine listed as a group 3 carcinogen by IARC and A4 carcinogen by ACGIH.  
**Teratogenicity** : Not Available  
**Mutagenicity** : Not Available  
**Reproductive Effects** : Not Available

## SECTION 12 – ECOLOGICAL INFORMATION

**General Comments** Expected to slowly biodegrade in the environment. Not expected to bioaccumulate.

## SECTION 13 – DISPOSAL CONSIDERATIONS

**Waste Disposal** Dispose in accordance with federal, provincial or local government requirements. Contact your local, provincial or federal environmental agency for specific regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

## SECTION 14 – TRANSPORT INFORMATION

**TDG Shipping Regulations** UN 2920, Corrosive Liquid, Combustible, N.O.S. (Cyclohexylamine), Class 8 (3, 9.2), 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 B3: Combustible Liquid  
Class D2B: Toxic Material  
Class E: Corrosive Material

## SECTION 16 – OTHER INFORMATION

**Prepared by:** Lab Services  
PMC Water Systems Services Inc.  
124 Connie Crescent, Unit 9  
Concord Ontario L4K 1L7  
**Preparation Date:** June 19, 2018

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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.

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