PMC WATER SYSTEMS SERVICES INC.
124 CONNIE CRES. UNIT 9 CONCORD, ONTARIO.
TEL 905 669 8262, FAX 905 669 8252, EMAIL info@pmcwatersystems.com, www.pmcwatersystems.com

SAFETY DATA SHEET
C-1009

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
Manufacture's Phone #	:	(905) 669-8262
24 Emergency Phone #	:	Canutec (613) 996-6666
Product Identifier	:	C-1009
Product Use	:	Water Treatment

SECTION 2 – COMPOSITION/INGREDIENTS OF MATERIAL

Ingredients	Concentration	CAS #	LD_{50}	LC_{50}
Potassium Hydroxide	8-15%	1310-58-3	273 mg/kg, (oral – rat)	No Data Available

SECTION 3 – HAZARDS IDENTIFICATION

Hazard Statements Harmful if swallowed, Harmful in contact with skin. Harmful if inhaled. Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life.

Precautionary Statements Do not breathe dust/fume/gas/mist/vapours/spray. Wash thoroughly after handling. Wear protective gloves/ protective clothing/eye protection/face protection. If swallowed - Rinse mouth. Do NOT induce vomiting. If on skin (or hair) - Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes - Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. If inhaled - Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor/physician. Wash contaminated clothing before reuse. Avoid release to the environment. Store locked up. Dispose of contents/container in accordance with local/regional national/international regulations.

SECTION 4 – FIRST AID MEASURES

Eye Contact Flush eyes with water for at least 15 minutes while holding eyelids open. Check for and remove any contact lenses. Cold water may be used. Get medical attention immediately.

Skin Contact Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing and thoroughly clean shoes before reuse. Get medical attention immediately.

Inhalation Move victim to fresh air. If breathing stops, administer artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep victim's head below hips to prevent inhalation of vomited material. Never give anything by mouth to an unconscious person. Get medical attention immediately.

SECTION 5 – FIRE FIGHTING MEASURES

Flammability Not Flammable

Flash Point Not Applicable

Autoignition Temperature Not Applicable

Extinguishing Media Does not burn. Use extinguishing media appropriate for surrounding fire. Water is not recommended, but may be applied in large quantities as a fine spray when other extinguishing agents are not available.

Special Firefighting Procedures/Equipment Evacuate nonessential personnel from fire area. Product reacts with water, possibly violently. Reaction may produce heat and/or gases. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Contact with some metals (particularly magnesium, aluminum and galvanized zinc). Can

rapidly generate hydrogen. Fire fighters must wear full face, positive pressure, self-contained breathing apparatus and appropriate protective clothing.

Explosion Data Not Applicable

Hazardous Combustion Products Sodium oxide, peroxides, carbonates may form in fire. Potentially explosive reaction with bromoform + crown ethers, chlorine dioxide, nitrobenzene, nitromethane, nitrogen trichloride, peroxidized tetrahydrofuran, 2,4,6-trinitrotoluene. Reaction with ammonium hexachloroplatiate(2-) + heat forms heat sensitive explosive product. Potassium hydroxide will cause explosive decomposition of maleic anhydride. Detonation will occur when potassiuim hydroxide is mixed with n-methyl-nitroso urea and methylene chloride. Nitrogen trichloride explodes on contact with potassium hydroxide.

NFPA Ratings Health 3, Flammability 0, Instability 1 **HMIS Ratings** Health 3, Flammability 0, Reactivity 1

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions Safety eye googles. Wear protective clothing and equipment.

Environment Precautions Avoid discharge to natural waters and sewers.

Spill Response/Cleanup Small Spill: Dilute with water and mop up, or absorb with an inert dry material. Place in an appropriate waste disposal container. Large Spill: Stop leak if without risk. Absorb with dry earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. If necessary, neutralize the residue with a dilute solution of acetic acid. Prevent entry into sewers, basements or confined areas; dike if needed.

SECTION 7 – HANDLING AND STORAGE

Handling Corrosive material. Avoid contact with eyes, skin and clothing. Do not ingest. Do not inhale vapour or mist. Use appropriate personal protective equipment. Use with adequate ventilation. Handle in accordance with good industrial hygiene and safety practices. Never add water to this product. Keep containers closed when not in use. Empty product containers may contain residue.

Storage Requirements Store in a cool, dry, well-ventilated area, away from heat and ignition sources. Store in original tightly closed container to prevent moisture absorption and/or contamination. Place away from incompatible materials such as acids. Do not store above 23°C (73.4°F).

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation Good general ventilation should be sufficient for most conditions.

Respiratory Protection Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use a NIOSH approved air-purifying respirator.

Skin Protection Polyethylene, neoprene or natural rubber gloves, impervious footwear, rubber safety boots.

Eye/Face Protection Chemical safety googles; face shield.

Other Comments An eyewash station and safety shower should be available

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Potassium Hydroxide	2 mg/m^3 Ceiling	2 mg/m^3 Ceiling	10 mg/m^3

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	Liquid
Odour and Appearance	:	Mild odour; dark amber
Odour Threshold	:	Not Available
Specific Gravity (Water = 1)	:	1.10 to 1.16 at 15°C
Vapour Pressure (mmHg)	:	Not Available
Vapour Density (Air = 1)	:	Not Available
Evaporation Rate	:	Not Available
Boiling Point	:	110° C, 230° F
Freezing/Melting Point	:	-4° C, 24.8° F
pH	:	12 - 13
Coefficient Water/Oil Distribution	:	Not Applicable
Solubility in Water	:	Soluble

SECTION 10 – STABILITY AND REACTIVITY

Stability Stable

Reactivity/Incompatibility Hygroscopic (absorbs moisture from air). Generates heat when dissolved in water or alcohol or when solution is treated with acid. Reacts violently with acids, halogens, halogenated hydrocarbons, maleic anhydride, organic anhydrides, isocyanates, alkylene oxides, epichlorhydrin, aldehydes, alcohols, gylcols,

	phenols, cresols, caprolactum solution. Highly reactive with acids, oxidizing agents and reducing agents. Slightly reactive with organic materials and metals. Incompatible with sodium, potassium, acetic anhydride, carbonates, hydroxides, magnesium, zinc, aluminum, nitro compounds (nitrobenzene, nitromethane, nitrogen trichloride), organic materials, acid anhydrides, acid chlorides, magnesium, peroxidized tetrahydrofuran, chlorine dioxide, maleic dicarbide and sugars. Extremely corrosive in presence of aluminum and zinc. Non-corrosive in presence of glass, of copper, of stainless steel(304/316). When wet attacks metals such as aluminum, tin, lead, and zinc producing flammable hydrogen gas.
Conditions for Instability	Heat, water, moisture or humidity.
Hazardous Decomposition Products	Oxides of sodium
Hazardous Polymerization	Hazardous polymerization will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of Entry	:	Eyes, skin, respiratory and digestive system Absorbed through skin.
Skin Contact	:	Causes severe skin irritation with possible burns. Harmful if absorbed through skin.
Eye Contact	:	Causes severe eye irritation with possible burns.
Ingestion	:	Harmful if swallowed. Causes irritation of the digestive tract and mucous membranes with possible burns
Inhalation	:	Causes irritation and possible burns of the respiratory and mucous membranes.
Chronic Exposure Effects	:	Chronic inhalation exposure may lead to respiratory disorders, such as emphysema and chronic bronchitis. Chronic skin contact may cause dermatitis. Contains material which may cause damage to the upper respiratory tract and skin
Irritancy	:	Irritant
Sensitization	:	Not Available
Carcinogenicity	:	Not Available
Teratogenicity	:	Not Available
Mutagenicity	:	Not Available
Reproductive Effects	:	Not Available

SECTION 12 – ECOLOGICAL INFORMATION

General Comments	Toxic to aquatic life. May increase pH of waterways and adversely affect aquatic life.
Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. The products of degradation are less toxic than the product itself.

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.

SECTION 14 – TRANSPORT INFORMATION

TDG Shipping Regulations	UN 3266, Corrosive Liquid, Basic, Inorganic, Class 8, PG III

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification	Class D1B: Toxic Material Class E: Corrosive 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 1, 2018