



PMC WATER SYSTEMS SERVICES INC.

124 CONNIE CRES. UNIT 9 CONCORD, ONTARIO.

TEL 905 669 8262, FAX 905 669 8252, EMAIL pmcwater@aol.com, www.pmcwatersystems.com

MATERIAL SAFETY DATA SHEET

C-2007

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-2007
Product Use : Water Treatment

SECTION 2 – COMPOSITION/INGREDIENTS OF MATERIAL

Ingredients	Concentration	CAS #	LD ₅₀	LC ₅₀
Potassium Hydroxide	8-12%	1310-58-3	800 mg/kg (oral – rat)	No Data Available

SECTION 3 – HAZARDS IDENTIFICATION

Acute Health Effects Caution: potassium hydroxide burns can be painless and may not warn of dangerous injury

Eye Contact Corrosive to eye tissue and may cause severe damage and blindness.

Skin Contact Corrosive. May cause moderate skin irritation. May cause skin burns. Prolonged contact with dilute solutions or dust of potassium hydroxide has a destructive effect on tissue.

Inhalation Causes severe respiratory irritation. Inhalation of dust may cause coughing and sneezing. High concentrations can cause lung damage.

Ingestion May cause burns of the mouth, throat and stomach. May cause pain, nausea, vomiting and diarrhea. Severe scarring of tissue and death may result.

Chronic Health Effects Repeated or prolonged contact with spray mist may produce chronic eye irritation, severe skin irritation and respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

SECTION 4 – FIRST AID MEASURES

Eye Contact Flush eyes with gently flowing water for at least 15 minutes or until the chemical is removed, while holding the eyelid(s) open. Take care not to rinse the contaminated water into the unaffected eye or face. Seek immediate medical attention.

Skin Contact Immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and laundry before reuse.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion Seek immediate medical attention. Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. If breathing has stopped, trained personnel should begin artificial respiration (AR) immediately. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately.

Notes to Physician NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The risk and danger of this is greater than the risk of poisoning through absorption of this product. *Moreover, this product can damage the esophagus on the way down and will cause further damage in the reverse direction!* The stomach should be emptied under medical supervision after the installation of an airway to protect the lungs.

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	Potassium oxide, peroxides, carbonates may form in fire
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 goggles. Wear protective clothing and equipment.
Environment Precautions	Avoid discharge to natural waters and sewers.
Spill Response/Cleanup	Isolate hazard area and restrict access. Stop leak if without risk. Dike and contain spill with inert material (sand, earth, etc.) and transfer liquid and solid separately to containers for recovery or disposal. Neutralize with lime or soda ash. Sweep or shovel material into waste container. Flush residue with water.

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. Keep containers closed when not in use. Empty product containers may contain residue. Follow label warnings even after container is emptied.
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. Product has a shelf life of 24 months. Storage Temperature: >16°C (>60.8°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 goggles; 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	2mg/m ³ ceiling	

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	Liquid
Odour and Appearance	:	Odourless; colourless to slight yellow
Odour Threshold	:	Not Available
Specific Gravity (Water = 1)	:	1.16 to 1.19 g/cc
Vapour Pressure (mmHg)	:	Not Available
Vapour Density (Air = 1)	:	Not Available
Evaporation Rate	:	Not Available
Boiling Point	:	110° C, 230° F
Freezing/Melting Point	:	-2° C, 28.4° F
pH	:	10.5 – 13 (1% solution)
Coefficient Water/Oil Distribution	:	Not Applicable
Solubility in Water	:	Soluble

SECTION 10 – STABILITY AND REACTIVITY

Stability/Reactivity	Stable
Conditions for Instability	Heat, water, moisture or humidity.
Incompatible Materials	Reacts violently with many chemicals including: water, organic acids, inorganic acids, oxidizing agents and glycols. Corrosive to alloys of aluminum, zinc, tin and copper releasing hydrogen. Damages leather, wool and some other textiles. Contact with water causes violent frothing and spattering. Flammable hydrogen may be generated from contact with metals such as: aluminum, brass, tin, zinc. Avoid contact with acids, halogenated organics, organic nitro compounds, glycols. Caustic soda solution reacts readily with various reducing sugars (fructose, galactose, maltose, dry whey solids) to produce carbon monoxide.
Hazardous Decomposition Products	Oxides of potassium
Hazardous Polymerization	Hazardous polymerization will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of Entry	:	Eyes. Respiratory system. Skin. Gastro-intestinal tract.
Skin Contact	:	Brief contact may cause severe skin burns
Eye Contact	:	Causes severe burns. Small quantities can result in permanent damage and/or loss of vision
Ingestion	:	Can cause severe burns to mouth, esophagus and stomach
Inhalation	:	Can cause damage to upper respiratory tract and lung tissue
Chronic Exposure Effects	:	Chronic skin contact with low concentrations may cause dermatitis.
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.
-------------------------	--

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 1730, Corrosive Liquid, N.O.S. (Potassium Hydroxide), Class 8, PG III
---------------------------------	--

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification	CLASS D2B: 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 24, 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.