



PMC WATER SYSTEMS SERVICES INC.

124 CONNIE CRES. UNIT 9 CONCORD, ONTARIO.

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MATERIAL SAFETY DATA SHEET

B-3601

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 : B-3601
Product Use : Alkalinity Adjuster

SECTION 2 – COMPOSITION/INGREDIENTS OF MATERIAL

| Ingredients | Concentration | CAS # | LD ₅₀ | LC ₅₀ |
|------------------|---------------|-----------|----------------------|-------------------|
| Sodium Hydroxide | 15-35% | 1310-73-2 | 400mg/kg, oral - rat | No Data Available |

SECTION 3 – HAZARDS IDENTIFICATION

Acute Health Effects Caution: Sodium Hydroxide burns can be painless and may not warn of dangerous injury
Eye Contact CORROSIVE. Contact causes severe burns with redness, swelling, pain and blurred vision. Causes eye burns. Irreversible damage to the eyes.
Skin Contact CORROSIVE. Contact can cause pain, itching, redness, scaling, burns, and blistering. Permanent scarring can result. Severe exposure can cause death. Burns may not be immediately painful; onset of pain may be delayed minutes to hours.
Inhalation Not expected to be an inhalation hazard unless it becomes an airborne dust or mist. Can cause severe irritation of the mucous membranes of the eyes, mouth and respiratory tract.
Ingestion Can burn the lips, tongue, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea. Can cause death.
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 Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is any irritation.
Skin Contact Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.
Inhalation Remove victim to fresh air. If breathing stops, administer artificial respiration and seek medical aid promptly. If breathing is difficult, get immediate medical attention.
Ingestion Give plenty of water to dilute product. Do not induce vomiting. Keep victim quiet. If vomiting occurs, keep victim's head below hips to prevent inhalation of vomited material. **Seek medical help 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

B-3601

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Page 1/3

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| Autoignition | Not Applicable |
| Temperature | |
| 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 |
| NFPA Ratings | Health 3, Flammability 0, Instability 1 |
| HMIS Ratings: | Health 3, Flammability 0, Reactivity 1 |

SECTION 6 – ACCIDENTAL RELEASE MEASURES

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| Personal Precautions | Safety 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

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| 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

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| 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 |
|------------------|------------------------|-----------------------|------------------------------------------------|
| Sodium Hydroxide | 2 mg/m3 Ceiling | 2 mg/m3 Ceiling | 10 mg/m3 |

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

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| Physical State | : | Liquid |
| Odour and Appearance | : | Odourless; colourless to slight yellow |
| Odour Threshold | : | Not Available |
| Specific Gravity (Water = 1) | : | 1.24 |
| Vapour Pressure (mmHg) | : | 1.5 @ 20°C |
| Vapour Density (Air = 1) | : | Not Available |
| Evaporation Rate | : | Not Available |
| Boiling Point | : | 120° C, 248° F |
| Freezing/Melting Point | : | -18°C, 0°F |
| pH | : | 12 (0.05% solution); 13 (0.5% solution); 14 (5% solution) |
| Coefficient Water/Oil Distribution | : | Not Applicable |
| Solubility in Water | : | Soluble |

SECTION 10 – STABILITY AND REACTIVITY

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| Stability/Reactivity | Stable. Water content of product prevents ignition. |
| Conditions for Instability | Heat, water, moisture or humidity. |

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| 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 sodium |
| Hazardous Polymerization | Hazardous polymerization will not occur. |

SECTION 11 – TOXICOLOGICAL INFORMATION

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| Routes of Entry | : Eyes, skin, respiratory and digestive system Absorbed through skin. |
| 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 inhalation exposure may lead to respiratory disorders, such as emphysema and chronic bronchitis. Chronic skin contact 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

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| General Comments | Toxic to aquatic life. May increase pH of waterways and adversely affect aquatic life. |
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SECTION 13 – DISPOSAL CONSIDERATIONS

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| Waste Disposal | 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

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| TDG Shipping Regulations | UN 1824, Sodium Hydroxide Solution, Class 8, PG II |
| Domestic Substances List | All ingredients are listed on the DSL or are not required to be listed. |

SECTION 15 – REGULATORY INFORMATION

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| WHMIS Classification | CLASS E: Corrosive Material |
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SECTION 16 – OTHER INFORMATION

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| Prepared by: | Lab Services PMC Water Systems Services Inc. 124 Connie Crescent, Unit 9 Concord Ontario L4K 1L7 |
| Preparation Date: | January 3, 2017 |

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.