



# PMC WATER SYSTEMS SERVICES INC.

## 124 CONNIE CRES. UNIT 9 CONCORD, ONTARIO.

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### SAFETY DATA SHEET SULPHURIC ACID

#### 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** : Sulphuric Acid  
**Product Use** : Water Treatment

#### SECTION 2 – COMPOSITION/INGREDIENTS OF MATERIAL

Ingredients	Concentration	CAS #	LD <sub>50</sub>	LC <sub>50</sub>
Sulphuric Acid	15-45%	7664-93-9	2140 mg/kg (oral - rat)	510 mg/m <sup>3</sup> (rat – 2hrs)

#### SECTION 3 – HAZARDS IDENTIFICATION

**Signal Word** DANGER!

**Hazard Statement** May be corrosive to metals. Fatal if inhaled. Causes severe skin burns and eye damage. Corrosive to the respiratory tract.

**Precautionary Statement** Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear respiratory protection. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Immediately take off all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep only in original packaging. Absorb spillage to prevent material damage. Store in a closed container. Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other hazards which do not result in classification** Ingestion may cause severe irritation to the mouth, throat and stomach. Contact with metals may release small amounts of flammable hydrogen gas. Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin. Prolonged or repeated inhalation of fumes or vapours, may cause chronic lung effects, such as bronchitis, and tooth enamel erosion. Chronic skin contact with low concentrations may cause dermatitis.

#### SECTION 4 – FIRST AID MEASURES

**Eye Contact** Immediately flush eyes with plenty of water for at least 20 minutes while holding eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Remove contact lenses, if present and easy to do. Get medical attention immediately. Do not transport victim until the recommended flushing period is completed, unless flushing can be continued during transport.

**Skin Contact** Immediately remove all contaminated clothing. Flush skin with running water for at least 20 minutes. Cover wound with sterile dressing. Do not rub area of contact. Consult a physician immediately. Do not transport victim until the recommended flushing period is completed, unless flushing can be continued during transport. Discard or wash contaminated clothing before reuse.

**Inhalation** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen by qualified medical personnel. If breathing has stopped, give artificial respiration. Seek immediate medical attention.

**Ingestion** If conscious, rinse out mouth with water. 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. Get medical attention immediately.

## SECTION 5 - FIRE FIGHTING MEASURES

<b>Flammability</b>	Not Flammable
<b>Flash Point</b>	Not Applicable
<b>Autoignition Temperature</b>	Not Applicable
<b>Extinguishing media</b>	Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical. Use water with caution. Contact with water will generate considerable heat.
<b>Special Procedures</b>	Not considered flammable. Vapors are heavier than air and may spread along floors. Contact with most metals will generate flammable hydrogen gas. Reacts violently with water with evolution of heat. Contact with combustible material may cause fire. Reacts violently with a wide variety of organic and inorganic chemicals including alcohol, carbides, chlorates, picrates, nitrates and metals. Toxic fumes, gases or vapours may evolve on burning. Firefighters should wear full protective clothing including self-contained breathing equipment.
<b>Hazardous Combustion Products</b>	Toxic fumes, gases or vapours may evolve on burning. Corrosive and toxic sulphuric dioxide and sulphur trioxide gas.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Immediately evacuate personnel to safe areas. Wear appropriate protective equipment.
<b>Environment precautions</b>	Ensure spilled product does not enter sewers or streams; dike if needed.
<b>Spill Response/Cleanup</b>	Ventilate area and remove sources of ignition. Stop leak if safe to do so. Neutralize with lime slurry, limestone or soda ash. Absorb with inert dry material and place in appropriate waste disposal container. Clean surface thoroughly to remove residual contamination.

## SECTION 7 – HANDLING AND STORAGE

<b>Handling</b>	For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. Use only in well ventilated areas. Wash thoroughly after handling. Use extreme care when diluting with water. ALWAYS ADD ACID TO WATER.
<b>Storage Requirements</b>	Store in a cool, dry, well-ventilated area. Elevated temperatures will increase the corrosion rate of most metals as well as cause build-up of pressure due to sulphuric dioxide generation. Keep containers tightly closed when not in use. Avoid storage with incompatible materials. Store away from sources of ignition.

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Ventilation</b>	Use only in well ventilated areas. Use local exhaust if mist or spray is generated.
<b>Respiratory Protection</b>	Wear a NIOSH-approved air purifying respirator equipped with acid gas/fume, dust and mist cartridges for concentrations up to 10 mg/m <sup>3</sup> .
<b>Skin Protection</b>	Neoprene or PVC gloves. Chemical resistant clothing and boots
<b>Eye/Face Protection</b>	Chemical splash google and/or full face shield to protect eyes and face.
<b>Other Comments</b>	An eyewash station and safety shower should be available

Ingredients	Exposure Limit – ACGIH	Exposure Limit – OSHA	Immediately Dangerous to Life and Health – IDLH
Sulphuric Acid	0.2 mg/m <sup>3</sup> TLV-TWA	1 mg/m <sup>3</sup> TWA	15 mg/m <sup>3</sup>

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	:	Liquid
<b>Odour and Appearance</b>	:	Strong pungent odour; oily liquid, pale yellow to amber colour
<b>Odour Threshold</b>	:	1 mg/m <sup>3</sup>
<b>Specific Gravity (Water = 1)</b>	:	1.835
<b>Vapour Pressure (mmHg)</b>	:	0.3 mm Hg at 25°C
<b>Vapour Density (Air = 1)</b>	:	3.4
<b>Evaporation Rate</b>	:	Not Available
<b>Boiling Point</b>	:	315-338°C, 599-640.4°F
<b>Freezing Point</b>	:	-2°C, 28.4°F (98% purity); -31°C, -23.8°F (93% purity)
<b>pH</b>	:	<1.0
<b>Coefficient Water/Oil Distribution</b>	:	Not Available
<b>Solubility in Water</b>	:	Soluble

## SECTION 10 – STABILITY AND REACTIVITY

<b>Stability/Reactivity</b>	Stable under normal conditions. Decomposes at ~ 340°C to form sulphur trioxide.
<b>Incompatible Materials</b>	Metals, bases, water, strong oxidizing agents, strong acids, alcohols, carbides, picrates, chlorates and nitrates.
<b>Conditions of Reactivity</b>	Avoid excessive heat, sparks and open flames. Incompatible materials.
<b>Hazardous Decomposition Products</b>	Toxic fumes, sulphuric acid, oxides of sulphur. Sulphuric acid vapours may be released upon heating and sulphur dioxide and sulphur trioxide may be released upon decomposition.
<b>Hazardous Polymerization</b>	Will not occur

## SECTION 11 – TOXICOLOGICAL INFORMATION

<b>Routes of Entry</b>	: Inhalation, skin and eye contact, ingestion
<b>Effects of Acute Exposure</b>	: Fatal if inhaled. Can cause severe respiratory irritation. Inhalation could result in pulmonary edema (fluid accumulation). Causes severe skin burns and eye damage. May cause severe irritation and corrosive damage in the mouth, throat and stomach.
<b>Skin Contact</b>	: Corrosive! Causes skin burns. Direct contact may cause corrosive skin burns, deep ulcerations and possible permanent scarring.
<b>Skin Absorption</b>	: Not absorbed - <b>destroys skin and other tissue before absorption can occur</b>
<b>Eye Contact</b>	: Corrosive to eye tissue and may cause severe damage and blindness.
<b>Ingestion</b>	: Harmful if swallowed. Causes burns to mouth, throat and stomach.
<b>Inhalation</b>	: Inhalation of mists may produce severe irritation of respiratory tract characterized by coughing, choking or shortness of breath. May be fatal if inhaled.
<b>Chronic Exposure Effects</b>	: Chronic skin contact with low concentrations may cause dermatitis. In extreme cases, tooth erosion could result. Possible cancer hazard.
<b>Exposure Limit</b>	: No Data Available
<b>Irritancy</b>	: Extremely hazardous in case of skin contact, ingestion and inhalation.
<b>Carcinogenicity</b>	: IARC – Group 1 (occupational exposure carcinogenic to humans); ACGIH – A2 (suspected human carcinogen)
<b>Teratogenicity</b>	: Not Available
<b>Mutagenicity</b>	: <i>Not expected to be mutagenic</i>
<b>Reproductive Effects</b>	: <i>reproductive effector in rodents; no effects documented in humans</i>

## SECTION 12 – ECOLOGICAL INFORMATION

**General Comments** Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams or public waterways. Harmful to aquatic life at low concentrations.

Ingredient	Ecotoxicity – Fish Species Data	Acute Crustaceans Toxicity	Ecotoxicity – Freshwater Algae Data
Sulphuric Acid	LC50 (Brachydanio rerio) 500 mg/L LC50 (Oncorhynchus mykiss) 2.8 ug/L (96hr)	Not Available	Not Available

## SECTION 13 – DISPOSAL CONSIDERATIONS

**Waste Disposal** Dispose in accordance with federal, provincial or local government requirements. Do not allow this product to drain into sewers/water supplies.

## SECTION 14 – TRANSPORT INFORMATION

**Shipping Regulations** UN 2796, Sulphuric Acid, 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

**WHMIS Classification**      Class D1A: Very Toxic Material  
Class D2A: Very 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, ON L4K 1L7

**Date Prepared:**          September 5, 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.

