



PMC WATER SYSTEMS SERVICES INC.

124 CONNIE CRES. UNIT 9 CONCORD, ONTARIO.

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MATERIAL SAFETY DATA SHEET NITRIC ACID

Protection Required



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	:	Nitric Acid
Product Use	:	Water Treatment
WHMIS Class	:	[C] Oxidizing [D1A] Very Toxic [E] Corrosive
TDG Class	:	Class 8, Nitric Acid, UN 2031, PG II

HAZARDOUS INGREDIENTS OF MATERIAL

Ingredients	Concentration	CAS #	LD ₅₀	LC ₅₀
Nitric Acid	60-100%	7697-37-2	244 ppm (Rat 1 hour)	130 mg/m ³ 4 h (inhalation rat)

The remaining ingredients are not classified as hazardous according to the DSL.

PHYSICAL DATA FOR PRODUCT

Physical State	:	Liquid
Odour and Appearance	:	Pungent antiseptic like odour; brownish yellow
Odour Threshold	:	0.27 ppm
Specific Gravity (Water = 1)	:	1.40 – 1.42 g/cc at 15°C
Vapour Pressure (mmHg)	:	~47 at 20°
Vapour Density (Air = 1)	:	2.2
Evaporation Rate	:	No Data Available
Boiling Point	:	~121°C, ~249.8°F
Freezing Point	:	-20 to -35°C, -4 to 30°F
pH	:	<1 (10% solution water)
Coefficient Water/Oil Distribution	:	No Data Available
Solubility in Water	:	Soluble in cold or hot water

FIRE AND EXPLOSION HAZARD OF PRODUCT

Flash Point And Method of Determination	:	Not Applicable, not flammable
Conditions of Flammability	:	Not Flammable
Means of Extinction	:	Cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosion. Use extinguishing media suitable for surrounding materials. Use water on fires involving nitric acid to dilute the acid and to absorb.
Upper Explosion Limit	:	Not Applicable
Lower Explosion Limit	:	Not Applicable
Auto-Ignition Temperature	:	Not Applicable
Hazardous Combustion Products	:	Nitrogen oxides (NO, NO ₂). Slightly flammable in the presence of reducing materials, combustible materials and organic materials.

REACTIVITY DATA

Stability	:	Stable
Incompatible Materials	:	Corrosive to mild metals such as copper, aluminum, brass, iron and mild steel. Not corrosive to 304L or 316 stainless steel.
Conditions of Reactivity	:	Avoid other reducing agents and combustible organic materials. Corrosive to most metals. Will release flammable and potentially explosive hydrogen gas on contact with amphoteric metals. Heating may cause release of nitrogen oxides.
Hazardous Decomposition Products	:	With nitric acid mist and vapour – can be produced upon decomposition or reaction of nitric acid. Hazardous polymerization will not occur

TOXICOLOGICAL PROPERTIES

Routes of Entry:		
Skin Contact	:	Yes
Skin Absorption	:	Yes
Eye Contact	:	Yes
Ingestion	:	Yes
Inhalation	:	Yes
Acute or Over Exposure Effects	:	Will irritate mucous membranes
Chronic Exposure Effects	:	No Data Available
Exposure Limit	:	Not Applicable
Irritancy	:	Strong
Sensitization	:	No Data Available
Carcinogenicity	:	None Known
Teratogenicity	:	No Data Available
Mutagenicity	:	No Data Available
Reproductive Effects	:	No Data Available

PREVENTATIVE MEASURES

Personal Protective Equipment	:	Use neoprene gloves, rubber boots and safety glasses
Respiratory Protection	:	Not normally required
Ventilation Requirements	:	Normal room ventilation
Spill and Leak Procedures	:	Isolate spill and stop leak were safe. Isolate hazard area. Contain spill with sand or inert materials. Neutralize with lime slurry, limestone or soda ash. Flush area with water.
Storage Requirements	:	Store in a cool, dry, well ventilated area. Place away from incompatible materials. Will corrode incompatible metals and many plastic materials.
Special Handling Information	:	Industrial use only. Handle and open containers with care. Keep closed when not in use.

FIRST AID MEASURES

Eye Contact: Flush eyes with gently flowing water for at least 30 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 30 minutes. Get medical attention. Remove contaminated clothing and launder before reuse. **Inhalation:** Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention. **Ingestion:** Do not induce vomiting. Rinse mouth with water. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing. Guard against aspiration into lungs by having the individual turn on to their left side. Seek immediate medical attention. **Notes to Physician:** Treatment based on sound judgement of physician and individual reactions of patient. Exposed person should be observed for 24 – 48 hours for delayed onset of pulmonary edema.

PREPARATION INFORMATION

Prepared By	:	Lab Services, PMC Water Systems Services Inc. 124 Connie Crescent, Unit 9, Concord, ON, L4K 1L7
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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.