

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Hydrochloric Acid 20%

HY200-25

SECTION 01: PRODUCT INFORMATION AND COMPANY INFORMATION

MANUFACTURER:	Same as above	
PREPARED BY:	Production Department	
VERSION DATE:	15-Dec-14	
TELEPHONE NO.:	(519) 451-1614	
EMERGENCY PHONE NO.:	(613) 996-6666	
CHEMICAL FAMILY	Not Available	CHEMICAL FORMULA Not Applicable
MOLECULAR WEIGHT	Not Applicable	MATERIAL USE: Please Refer to technical literature
SYNONYMS:	Muriatic acid	

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	Conc. Approx. %	C.A.S. #	LD/50 (RTE/SPEC)	LC/50 (RTE/SPEC)	TLV
Hydrogen Chloride Anhydrous	18-22	7647-01-0	N.Av.	3124 ppm	N.Av.

SECTION 03: HAZARD IDENTIFICATION

ROUTE OF ENTRY

Eyes: Corrosive. Vapours are moderately irritating to the eyes. Concentrated vapour, mist or splashed liquid can cause severe irritation, burns and permanent blindness.

Skin: Corrosive. Contact with liquid can cause severe irritation, burns, and permanent scarring or even death. Vapour or mist may cause redness, irritation and burns if contact is prolonged.

Inhalation Corrosive to respiratory passages. Causes irritation of the respiratory tract, experienced as nasal discomfort and discharge, with chest pain and coughing. May cause ulceration of the nose and throat. Vapours may cause pulmonary edema. Symptoms can be delayed for several hours.

Ingestion: Corrosive. May be fatal if swallowed. Causes burns to the mouth, throat and stomach. Causes vomiting, nausea, and diarrhea. Aspiration of material into lungs can cause chemical pneumonitis which can be fatal.

SECTION 04: FIRSTAID

Skin Contact: Flush skin with water. Wash contaminated clothing before reuse.

Eye Contact: Flush contaminated eye with lukewarm running water for 30 minutes, holding eyelid open. Take care to not rinse contaminated Water into unaffected eye. If irritation persists, repeat flushing. Neutral saline solution may be used for a further 30 minutes of irrigation. Seek medical attention immediately. Do not transport victim until the recommended flushing period is completed, unless flushing can be continued during transport.

Inhalation, Acute If symptoms are experienced, remove source of contamination or move victim to fresh air. If symptoms persist, get medical attention. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. In situations where administering oxygen is appropriate, first aiders must be trained in the safe use and handling of oxygen. It is preferable to

administer oxygen under a doctor's supervision or advice. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately. Immediate medical assistance is required.

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. Administer artificial respiration if breathing has stopped. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately. If conscious, wash out mouth with water.

Notes to physician: Treatment based on sound judgment of physician and individual reactions of patient.

SECTION 05: FIRE EXPLOSION HAZARD AND FIRE FIGHTING MEASURES

FLAMMABLE?	No
IF YES, UNDER WHICH CONDITIONS?	
FLASH POINT (TCC) (C):	NONE
FLAMMABLE LIMITS:	LEL(% BY VOL.): Not Available UEL(% BY VOL.): Not Available
AUTO IGNITION TEMPERATURE (C)	Not Available
EXTINGUISHING MEDIA	Use extinguishing media appropriate for surrounding fire.
SPECIAL PROCEDURES:	Reacts with metals to generate flammable hydrogen gas. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure build-up which could result in container rupture. Use water spray or fog to reduce or direct vapours.
HAZARDOUS COMBUSTION PRODUCTS:	Not Available
UNUSUAL FIRE AND EXPLOSION HAZARDS	Not Available
SENSITIVITY TO STATIC DISCHARGE	Not Available
SENSITIVITY TO MECHANICAL IMPACT:	Not Available

SECTION 06: ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedure: Personal Precautionary Measures: Wear appropriate protective equipment.
Environmental Precautionary Measures: Prevent entry into sewers or streams, dike if needed. Consult local authorities.
Procedure for Clean Up: Isolate spill and stop leak where safe. Restrict access to unprotected personnel. Ventilate area. Neutralize with lime slurry, limestone, or soda ash.
Absorb with an inert dry material and place in an appropriate waste disposal container. Flush area with water to remove trace residue

SECTION 07: HANDLING AND STORAGE

Handling Procedures and Storage Requirements

Handling: For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Launder contaminated clothing prior to reuse. Protect against physical damage. Use appropriate personnel protective equipment. Wash thoroughly after handling. When diluting, add this product to water in small amounts to avoid splattering. Never add water to this material. CAUTION: Hydrogen, a highly flammable gas, can accumulate to explosive concentrations inside drums, or any type of steel containers or tanks upon storage. Use nonsparking tools.
Storage: Store in a cool, dry, well ventilated area, away from heat and ignition sources. Keep away from direct sunlight. Protect against moisture, water and physical damage. Store in accordance with good industrial practices. Drums should be vented when received and then at least weekly to relieve internal pressure.

SECTION 08: PERSONAL PROTECTIVE EQUIPMENT / EXPOSURE CONTROLS

GLOVES/TYPE:	Rubber gloves. Neoprene gloves.
RESPIRATOR/TYPE:	If airborne concentrations exceed the Occupational Exposure Limit, use a NIOSH/MSHA approved full facepiece respirator with acid gas cartridges. Under conditions immediately dangerous to life or health, or emergency conditions with unknown concentrations, use a full-face positive pressure air-supplied respirator equipped with an emergency escape air supply unit or use a self-contained breathing apparatus unit. Warning: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.
EYE/TYPE:	Chemical goggles; also wear a face shield if splashing hazard exists.
OTHER/TYPE:	Ensure that eyewash stations and safety showers are proximal to the work-station location.
ENGINEERING CONTROL	Local exhaust ventilation as necessary to maintain exposures to within applicable limits.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE/APPEARANCE: Fuming Liquid, Colorless to pale yellow.

ODOUR:	Sharp Pungent	ODOUR THRESHOLD:	N. Av.
VAPOUR PRESSURE (mm Hg @ 20C):	13.3 kPa	VAPOUR DENSITY (Air=1):	1.268
EVAPORATION RATE (Ether = 1):	N. Av.	SPECIFIC GRAVITY:	1.18
BOILING POINT (C):	108.6 °C	FREEZING POINT (C)	-35 °C
Ph (% SOLUTION):	0.1 (1.0 N), 1.1 (0.1 N), 2.0 (0.01 N)	% VOLATILE (WT):	100%
SOLUBILITY IN WATER (% W/W)	N. Av.		

SECTION 10: STABILITY AND REACTIVITY

CHEMICALLY STABLE? Stable

IF NO, UNDER WHICH CONDITIONS?

INCOMPATIBILITY WITH OTHER SUBSTANCES Yes

IF YES, WITH WHICH ONES: Strong bases. Metals. Metal oxides. Hydroxides. Amines. Carbonates. Alkalies. Cyanides. Sulfides. Sulfites. Formaldehyde.

SPECIAL REACTIVITY AND UNDER WHAT CONDITIONS Heat. Direct sunlight.

HAZARDOUS DECOMPOSITION PRODUCTS: When heated to decomposition, emits toxic hydrogen chloride fumes and will react with water or steam to produce heat and toxic and corrosive fumes. Thermal oxidative decomposition produces toxic chlorine fumes and explosive hydrogen gas.

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL

LC 50 OF MATERIAL, SPECIES AND ROUTE See Sec 2

LD 50 OF MATERIAL, SPECIES AND ROUTE See Sec 2

CARCINOGENICITY OF MATERIAL

REPRODUCTIVE EFFECTS:

IRRITANCY OF MATERIAL

SENSITIZING CAPABILITY OF MATERIAL

SYNERGISTIC MATERIALS

SECTION 12: ECOLOGICAL INFORMATION

AQUATIC TOXICITY This material is expected to be toxic to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.
Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 14: TRANSPORT INFORMATION

TDG CLASSIFICATION Class 8, Hydrochloric Acid Solution

UN NUMBER: 1789

PACKING GROUP: II

Special Provisions for Transport

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION D1A, E
D1A VERY TOXIC MATERIALS
E CORROSIVE MATERIAL

SECTION 16: OTHER INFORMATION

ABBREVIATIONS USED: N.Av. = Not Available
N.App. / N.Ap. = Not Applicable

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SOURCES:

Supplier MSDS

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