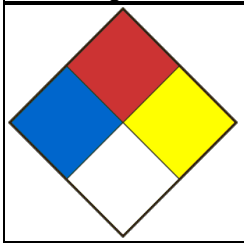
Centre Anti-Poison pour le Québec: (800) 463-5060
Tél. (Qc): (418) 660-8666 / 800-890-8666
Fax. (Qc): (418) 660-8998

SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier HYDROCHLORIC ACID (5.0N/M)		**Product Use** Laboratory use	
Chemical formula HCl		**Product code** CS-0850	**Molar weight** 36,46
Chemical name / Commercial name / Synonymous ACIDE CHLORHYDRIQUE, HYDROCHLORIC ACID, ACIDE MURIATIQUE, MURIATIC ACID			
Supplier's name Laboratoire MAT		**Address-Street** 610, Adanac Street	
City Québec		**Province** Québec	
Postal code G1C 7B7	**Internet** www.labmat.com	**Phone number** 418-660-8666 / 800-890-8666	
Emergency phone	CANUTEC: 613-996-6666	CENTRE ANTI-POISON DU QUÉBEC 800-463-5060	
Date SDS 11/7/2022	**SDS Prepared by** Laboratoire MAT	**E-Mail** labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	Corrosive to metals-Category 1 Serious eye damage/eye irritation - Serious eye damage category 1 Specific target organ toxicity - Single exposure category 3 Skin corrosion/irritation - Skin corrosion category 1
Signal Word	DANGER
Hazards statements (H)	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H335 May cause respiratory irritation.
Precautionary statements (P)	P234 Keep only in original container. P260 Do not breathe dust / fume / gas / mist / vapors / spray. P261 Avoid breathing dust / fume / gas / mist / vapors / spray. P264 Wash the areas of the body that have been in contact with the product after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection. P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/physician. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P321 Specific treatment (see section 4 of the SDS and on this label). P363 Wash contaminated clothing before reuse. P390 Absorb spillage to prevent material damage. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P406 Store in a corrosion resistant container / or a container with corrosion resistant liner. P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company.
PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)
	**Health** 2 **Fire** 0 **Reactivity** 0 **Special danger**

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Acide chlorhydrique	7647-01-0	16

SECTION 04 - FIRST AID MEASURES

Eye contact	Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. If irritation persists, seek medical attention.
Skin contact	Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention.
Inhalation	Move the unwell person to the fresh air. If breathing is difficult, give oxygen. Consult a physician.
Ingestion	If the person is conscious, give water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.
Most important symptoms and effects (acute and delayed)	The product is a material corrosive. Main symptoms of high exposure: Chemical burns of the skin, eyes and respiratory and digestive mucous membranes. The corrosive effect will outweigh the toxicity for the concentrated product. Ref. section 11.
Immediate medical attention and special treatment, if necessary	In case of medical consultation, keep this sheet available.
General advice	Show this safety data sheet to the doctor in attendance.

SECTION 05 - FIREFIGHTING MEASURES

Flammability	No
Ignition conditions	Not flammable or combustible.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media	Not applicable.
Hazardous combustion products	Hazardous combustion products formed under fire conditions: - Hydrogen chloride gas
Special fire and explosion hazards	May react violently with incompatible products (Ref Section 10).
Special protective equipment and precautions for firefighters	Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus.

SECTION 06 - ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up / Personnal precautions, protective equipment	Evacuate personnel to safe areas. Absorb the product with sand or vermiculite. Dilute residues with water, clean and rinse. Ensure a good ventilation of the premises. Dispose of residues in a container for disposal of hazardous materials. When handling, wear suitable safety equipment. Use breathing apparatus if necessary.

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Store away from heat and light. Store away from incompatible products. Do not store in metal containers.
Methods of handling	Avoid inhalation of vapor or mist. Avoid contact with the skin, eyes and clothes. This product is corrosive to metals. Bottle in the glass preferably.NOTE: this product attacks certain types of plastics and rubbers. Wear personal protective equipment when handling. Always ensure good ventilation. Transport according to TDG (ref Section 14)

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Hydrochloric acid	7647-01-0	(c)	2.000000 ppm 3.000000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		C	2.000000 ppm	Canada. British Columbia OEL
		C	5.000000 ppm 7.500000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	A substance which may not be recirculated in accordance with section 108			
		(c)	2 ppm 3 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required			
		C	2 ppm	Canada. British Columbia OEL
		C	5 ppm 7.5 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
	A substance which may not be recirculated in accordance with section 108			
		C	2.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		C	2 ppm	USA. ACGIH Threshold Limit Values (TLV)

Data source	Sigma-Aldrich (Millipore Sigma)
Ventilation	Use fan.
Respiratory	If work under the hood is not possible, or if the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply.
Gloves	Handle with gloves.
Eyes	Safety goggles with safety shutters.
Shoes	Safety shoes.
Clothing	Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Engineering control	Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values.

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid.
Appearance	clair, incolore.
Odour	Odeur suffocante..
Odour threshold	Data not available
pH	Solution 1N = pH 0.1 Solution 0.1N = pH 1.1.
Melting point / Freezing point	Data not available
Initial boiling point	Data not available
Boiling range	Data not available
Flash point	Data not available
Evaporation rate	Data not available
Flammability	No
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Vapour pressure	Data not available
Solubility	Miscible avec l'eau en toutes proportions.
Vapour density	Data not available
Relative density	1.078 (théorique)g/ml
Partition coefficient water/n-octanol	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
Viscosity	Data not available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Acid product, reacts strongly with strong bases. Reacts strongly with metals.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	May react violently with incompatible substances.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	Avoid contact with incompatible materials and extreme temperatures.
Incompatible material	Bases, Amines, alkali metals, metals, permanganates, fluorine, metal acetylides, hexalithium disilicide.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas

SECTION 11 - TOXICOLOGICAL INFORMATION

HYDROCHLORIC ACID

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below. The corrosive effect will outweigh the toxicity for the concentrated product.
- Eyes	Severe burns and destruction of ocular tissue that can lead to corneal ulceration and blindness.
- Skin	Severe burns and tissue ulcerations. Perhaps fatal, if the extent of the burns is considerable.
- Inhalation	Spasms, irritation and inflammation of the nose, throat and lungs. Edema of the larynx and bronchi. Chemical pneumonitis and pulmonary edema that can lead to death.
Acute toxicity (Ingestion)	Corrosion and ulceration of the mouth, throat, esophagus, stomach and abdominal wall. Dysphagia, abdominal pain, cramps, diarrhea, melena, hematemesis, possible perforation of the esophagus and stomach, sweating, salivation.
Chronic exposure effects / symptoms	Burning sensation, dermatitis, conjunctivitis, photophobia, lung and eye damage, chest pain, dental enamel abrasion, cough, dyspnoea, laryngitis, tracheobronchitis, headache, dizziness, fever, sweating, salivation , thirst.
DL50 (specify species and route of entry)	LD50 Oral - Rabbit - 900 mg/kg. Dermal 1449 mg/kg-Mouse
CL50 (specify species and route of entry)	LC50 - Inhalation - 3124 ppm/1 h.-Rat

SUMMARY

Acute exposure effects / Symptoms:	By exposure routes below.
Ingestion	To our knowledge, the product has not been fully evaluated
Inhalation	To our knowledge, the product has not been fully evaluated
Skin	To our knowledge, the product has not been fully evaluated
Eyes	To our knowledge, the product has not been fully evaluated
Chronic exposure effects / Symptoms:	To our knowledge, the product has not been fully evaluated
ETA Mix (Estimated Acute Toxicity)	LD50 Oral: 1688 mg/kg - Rat LD50 Dermal: > 5000 mg/kg - Mouse LC50 Inhalation: 19044 ppm - 1h - Rat

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity to fish LC50 - Lepomis macrochirus (Bluegill) - 24.6 mg/l - 96 h (Hydrochloric acid) Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - 4.91 mg/l - 48 h (Hydrochloric acid)
Persistence and degradability	Data not available.
Bioaccumulative potential	Data not available.
Mobility in soil	Data not available.
Other adverse effects	Avoid release to the environment.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method	Neutralize with low sodium hydroxide solution by slowly adding hydrochloric acid to avoid sudden temperature rise and vapor emission. The solution thus neutralized can be disposed as a household waste. Neutralization can cause the formation of heat or vapors that must be controlled by the rate at which solutions are added. For large quantities, contact a specialist waste disposal company.
Contaminated Packaging	Dispose of as unused product.

SECTION 14 - TRANSPORT INFORMATION

UN Number	1789
UN Proper shipping name	ACIDE CHLORHYDRIQUE
Transport hazard class(es)	8 Corrosive substances
Packing group	II
Limited quantity index	1L
ERAP Index	3000
Special precautions	-

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Corrosive to metals-Category 1 Serious eye damage/eye irritation - Serious eye damage category 1 Specific target organ toxicity - Single exposure category 3 Skin corrosion/irritation - Skin corrosion category 1

SECTION 16 - OTHER INFORMATION

Further information

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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