


Safety Data Sheet

Section 1. Identification		
Product Identifier	Hydrochloric Acid (Murhib)	Version: 6 Effective Date: 10 July, 2017
Other Means Of Identification	None	
Initial Supplier Identifier	Chemfax Products Ltd. 11444 – 42 Street SE Calgary, AB T2C 5C4 Tel: 403-287-2055	
Recommended Use and Restrictions On Use	Inhibited mineral acid, scale remover, pickling liquor, pH control, downhole applications. No restrictions.	
Product Family	Inorganic Acid	
24 Hour Emergency	Canutec (613) 996-6666	

Section 2. Hazard Identification	
Hazard Classification	
Physical Hazards	Corrosive to Metals – Category 1
Health Hazards	Skin Corrosion/Irritation – Category 1B Eye Damage/Irritation – Category 1 Specific Target Organ Toxicity - (Single Exposure) – Category 3 Specific Target Organ Toxicity, (Repeated Exposure) – Category 2
Signal Word	Danger
Hazard Statement	May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation; or may cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.
Precautionary Prevention Statement	Keep only in original packaging. Do not breathe dusts or mists. Wash hands thoroughly after handling. Wear protective gloves, clothing, eye and face protection. Use only outdoors or in a well-ventilated area.
Precautionary Response Statement	Absorb spillage to prevent material damage. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Safety Data Sheet

	<p>IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower if on clothes. Wash contaminated clothing before reuse.</p> <p>IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a doctor if you feel unwell.</p> <p>Specific treatment: do not induce vomiting unless directed by medical personnel.</p> <p>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if you feel unwell.</p>
Precautionary Storage Statement	Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Precautionary Disposal Statement	Dispose of contents/container in accordance with local regulations.
Other Hazards	None

Section 3. Composition / Information on Ingredients

Chemical Name	Common Name or Synonyms	CAS NO. and Other Unique Identifiers	% by weight
Hydrochloric Acid	Muriatic acid	7647-01-0	31 - 37

Section 4. First-Aid Measures

Eye Contact	Flush eyes with water for 15 minutes. Seek medical attention.
Skin Contact	Immediately flush skin with running water. Remove and isolate contaminated clothing and shoes. Get medical attention if irritation develops and persists.
Inhalation	Remove victim to fresh air. If there is difficulty breathing, seek immediate medical attention.
Ingestion	If symptoms develop obtain medical attention or call POISON CONTROL CENTER. Do not induce vomiting unless directed to do so by medical personnel. If spontaneous vomiting occurs, keep head below hips to prevent aspiration of vomitus.
Most Important Symptoms and Effects Both Acute and Delayed	Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

Safety Data Sheet

Immediate Medical Attention and Special Treatment	If in eyes or on skin rinse with plenty of water. If ingested, do not induce vomiting. Call a physician or Poison Control Center immediately.
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Section 5. Fire-Fighting Measures	
Suitable and Unsuitable Extinguishing Media	Use extinguishing media suitable for the surrounding fire.
Hazardous Combustion 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 fumes and explosive hydrogen gas.
Specific Hazards Arising From The Product	Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
Special Protective Equipment and Precautions For Fire-Fighters	Fire-fighters should wear self-contained breathing apparatus and full protective clothing. Use water spray to cool containers and structures exposed to fire. Reacts with metals to generate flammable hydrogen gas. Containers exposed to intense heat from fires should be cooled with water to prevent vapour build up which could result in container rupture. Use water spray or fog to reduce or direct vapours.

Section 6. Accidental Release Measures	
Personal Precautions, Protective Equipment and Emergency Procedures	Chemical resistant (rubber / neoprene) gloves, coveralls and footwear. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental Precautions	Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers.
Methods and Materials for Containment and Clean-Up	Isolate spill and stop leak. Restrict area to required and protected persons only. Ventilate area. Neutralize with lime slurry, limestone or soda ash. Flush area with water to remove residues.

Section 7. Handling and Storage	
Precautions For Safe Handling	Handle with care, corrosive material. Empty containers may contain hazardous residues. Never add water to this material. Do not mix with materials such as Bleach.
Conditions For Safe Storage	Store in a cool, dry, well ventilated area. Avoid direct sunlight. Keep containers closed when not in use. Drums may require venting to release internal pressure.

Safety Data Sheet

Section 8. Exposure Controls / Personal Protection				
Control Parameters	TWA: 8 Hr	STEL: 15 min	Ceiling	IDLH *
Hydrochloric acid	2ppm ACGIH		5ppm OPSHA	50 ppm
* Immediately Dangerous to Life and Health				
Exposure Controls	Local exhaust ventilation			
Appropriate Engineering Controls	Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.			
Individual Protective Measures				
Eye/Face Protection	Wear chemical safety goggles. When transferring material wear face-shield in addition to chemical safety goggles.			
Skin Protections	Wear long sleeves and other protective clothing to prevent repeated or prolonged skin contact.			
Respiratory Protection	Air purifying respirator fitted with cartridges for acid vapours and mists.			

Section 9. Physical and Chemical Properties	
Appearance	Colourless to pale yellow fuming liquid
Odour	Pungent Odour
Odour Threshold	Not available.
pH	<1
Flash Point	Not flammable
Boiling Point and Boiling Range	110°C
Melting Point and Freezing Point	-30°C
Evaporation Rate	No data
Flammability (solid, gas)	Not applicable
Upper and Lower Flammability or Explosive Limits	No data
Vapour Pressure	13.3 kPa @ 20 °C
Vapour Density	1.268 @ 20 °C
Relative Density	1.18
Solubility	Soluble
Auto-ignition Temperature	No data
Decomposition Temperature	No data
Viscosity	No data

Safety Data Sheet

Section 10. Stability and Reactivity	
Reactivity	Reacts with metals and bases.
Chemical Stability	The product is stable
Possibility of Hazardous Reactions	Will not occur. Reaction with some incompatible materials – aldehydes / epoxides, can cause polymerisation. It may react with aluminium with the liberation of flammable hydrogen gas.
Conditions to Avoid	Do not allow vapour to accumulate in low or confined area. Avoid heat and direct sunlight.
Incompatible Materials	Strong bases, metals, metal oxides, hydroxides, amines, carbonates, alkalis, cyanides, sulfides, sulphites, formaldehyde.
Hazardous Decomposition Products	Under normal storage condition decomposition will not occur.

Section 11. Toxicological Information			
Component Toxicity	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrochloric Acid	0.7 g/kg (Rat)	5.01 g/kg (Rabbit)	3124 ppm (Rat)
Likely Routes of Exposure			
Skin:	Contact with liquid can cause severe irritation, burns and permanent scarring, possibly death. Vapours and mists may cause redness, irritation and burns if contact is prolonged.		
Eyes:	Vapours can be irritating to the eyes. Concentrated vapours, mists or splashed liquid can cause severe irritation, burns and permanent blindness.		
Inhalation:	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 oedema (fluid in the lungs). Symptoms can be delayed for several hours.		
Ingestion:	May be fatal if swallowed. Causes burns to the mouth, throat and stomach. Causes vomiting, nausea and diarrhea. Aspiration of the material into the lungs can cause chemical pneumonitis (inflammation of the lung tissue) which can be fatal.		
Acute Toxicity Estimates (ATE)	> 2000 mg/kg oral and dermal. > 20 mg/l. vapor.		
STOT (Specific Target Organ Toxicity) – Single Exposure	Respiratory system.		
Aspiration Toxicity	Not classified		



Manufacturer of Specialty Chemicals

Safety Data Sheet

STOT (Specific Target Organ Toxicity) – Repeated Exposure	None known
Skin Corrosion / Irritation	Causes burns by all exposure routes
Serious Eye Damage / Irritation	Causes burns by all exposure routes
Respiratory or Skin Sensitization	Not classified
Carcinogenicity	– IARC – Group 3 (Hydrogen chloride anhydrous) / ACGIH - listed.
Reproductive Toxicity	
- Sexual Function and Fertility	Not classified
- Development of Offspring	Not classified
- Effects on or via Lactation	Not classified
Germ Cell Mutagenicity	Not classified
Interactive Effects	No data
Other Information	Not applicable

Section 12. Ecological Information

Ecotoxicity	Hydrochloric acid LC50: 282 mg/L (Gambusia affinis) LC50: 3.6 mg/L (Lepomis macrochirus)
Persistence and Degradability	Persistence is unlikely based on information available.
Bioaccumulative Potential	Not available
Biodegradability	Not available
Mobility in Soil	Not available
Other Adverse Effects	Low pH levels caused by Hydrochloric acid may cause toxic effects to aquatic life. Low pH may cause release of toxic metals. Product does not accumulate. Material dissociates in water, may be neutralized by naturally occurring minerals.

Section 13. Disposal Considerations

Disposal Considerations	Dispose of contents / containers in accordance with local regulations.
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Safety Data Sheet

Section 14. Transport Information	
UN Number	1789
UN Proper Shipping Name	Hydrochloric acid solution
Transport Hazard Class(es)	8
Packaging Group	II
Environmental Hazards	Not applicable
Bulk Transport	Not applicable
Special Precaution	Not applicable
DOT Erg#	157

Section 15. Regulatory Information	
Canada – DSL Inventory	All components of this product are either on the Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL) or exempt
TSCA	All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt
Additional Information	None

Section 16. Other Information	
NFPA Rating	Health-3/ Flammability-0/Reactivity-2/Special Hazard-Not applicable
HMIS Rating	Health-3/Flammability-0/Reactivity-2/Personal Protection-See Section 8.
Prepared by:	Chemfax Products Ltd., Technical Department
Date Prepared:	6 January, 2012
Date of Latest Revision:	4 November, 2016
Disclaimer	
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