


# Material Safety Data Sheet

Section 1. Chemical Product and Company Identification		
<b>Product Name:</b>	Hydrochloric Acid 10%	<b>Version: 2</b> <b>Effective Date: June 25, 2014</b>
<b>Supplier/ Manufacturer:</b>	Chemfax Products Ltd. 11444 – 42 Street SE Calgary, AB T2C 5C4 Tel: 403-287-2055	
<b>Material Uses</b>	Mineral acid, scale remover, pickling liquor, pH control, downhole applications	
<b>24 Hour Emergency</b>	Canutec (613) 996-6666	
<b>WHMIS</b>		
		
This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR		
<b>HMIS Ratings</b> for this product are: <b>Health 3 , Flammability 0 , Reactivity 1</b>		

Section 2. Composition and Information on Ingredients		
Name	CAS#	% by weight
Hydrogen chloride anhydrous	7647-01-0	1 - 10
See Section 8 for information on permissible exposure limits and threshold limit values		

Section 3. Hazards Identification	
<b>Physical State and Appearance</b>	Colourless to pale yellow fuming liquid with a pungent odour
<b>Hazard Summary</b>	Corrosive
<b>Routes of Exposure</b>	Skin and eye contact, inhalation, ingestion
<b>Potential Acute Health Effects</b>	<p><b>Skin:</b> Corrosive. 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.</p> <p><b>Eyes:</b> Corrosive. Vapours can be irritating to the eyes.</p>

	<p>Concentrated vapours, mists or splashed liquid can cause severe irritation, burns and permanent blindness.</p> <p><b>Inhalation:</b> Corrosive to the respiratory passage. 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.</p> <p><b>Ingestion:</b> Corrosive. 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.</p>
<b>Medical Conditions Aggravated by Exposure</b>	Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product.
See Toxicological Information – Section 11	
<b>Additional Hazard Identification Remarks</b>	Repeated and prolonged exposure to low concentrations and of mists or vapours can cause discoloration and damage to tooth enamel, bleeding of the nose and gums, and chronic bronchitis and gastritis. Repeated exposure to low concentrations of liquids, mists or vapours can cause redness, swelling and pain (dermatitis).

<b>Section 4. First Aid Measures</b>	
<b>Eye Contact</b>	Flush eyes with water for 30 minutes. If irritation and pain persists continue washing with water. Do not transport unless flushing can be continued. Seek immediate medical attention.
<b>Skin Contact</b>	Flush area with water for at least 30 minutes. Seek immediate medical attention. Do not transport until irritation ceases, unless flushing can be continued during transport.
<b>Inhalation</b>	Remove victim to fresh air. If there is difficulty breathing, seek immediate medical attention. CPR and oxygen should only be administered by trained persons.
<b>Ingestion</b>	Do NOT induce vomiting. Lay victim on left side to prevent aspiration of any vomit. Seek immediate medical attention. If conscious wash mouth out with water
<b>Notes to Physician</b>	Treatment should be based on sound judgment of the physician and individual reactions of the patient.
<b>Additional First Aid Remarks</b>	None

<b>Section 5. Fire Fighting Measures</b>	
<b>Flammability of the Product</b>	Non flammable

<b>Flash Point</b>	Not applicable
<b>Explosive Limits</b>	Not applicable
<b>Auto Ignition Temperature</b>	Not applicable
<b>Static Discharge</b>	No
<b>Suitable Extinguishing Media</b>	Use extinguishing media suitable for the surrounding fire.
<b>Hazardous Combustion Products</b>	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.
<b>Precautions for Fire Fighting</b>	<p>Fire fighters should wear self contained breathing apparatus and full protective clothing. Use water spray to cool containers and structures exposed to fire.</p> <p>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.</p>

<b>Section 6. Accidental Release Measures</b>	
<b>Personal Precautions</b>	Chemical resistant (rubber / neoprene) gloves, coveralls and footwear
<b>Environmental Precautions</b>	Do not allow spilt material to enter surface drains and watercourses.
<b>Methods for Clean Up</b>	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.

<b>Section 7. Handling and Storage</b>	
<b>Handling</b>	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.
<b>Storage</b>	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.

<b>Section 8. Exposure Controls and Personal Protection</b>				
<b>Exposure Guidelines</b>	<b>TWA: 8 Hr</b>	<b>STEL: 15 min</b>	<b>Ceiling</b>	<b>IDLH *</b>
Hydrogen chloride anhydrous	2 ppm ACGIH		5ppm OPSHA	50 ppm
* Immediately Dangerous to Life and Health				

<b>Exposure Controls</b>	Local exhaust ventilation
<b>Personal Protection</b>	
<b>Respiratory</b>	Air purifying respirator fitted with cartridges for acid vapours and mists
<b>Skin</b>	Chemical resistant (rubber/ neoprene) gloves, coveralls and footwear
<b>Eyes</b>	Safety glasses
<b>Other</b>	None

<b>Section 9. Physical and Chemical Properties</b>	
<b>Physical State and Appearance</b>	Colourless to pale yellow fuming liquid with a pungent odour
<b>Odour Threshold</b>	No data
<b>pH</b>	<1
<b>Boiling Point</b>	No data
<b>Melting Point / Freezing point</b>	No data
<b>Evaporation Rate</b>	No data
<b>Vapour Density</b>	1.268 @ 20 °C
<b>Vapour Pressure</b>	13.3 kPa @ 20 °C
<b>Specific Gravity</b>	1.10
<b>Solubility in Water</b>	Completely soluble
<b>% Volatile</b>	No data
<b>Other Data</b>	None

<b>Section 10. Stability and Reactivity</b>	
<b>Chemical Stability</b>	Stable
<b>Hazardous Polymerisation</b>	Will not occur. Reaction with some incompatible materials – aldehydes / epoxides, can cause polymerisation
<b>Conditions to Avoid</b>	Heat and direct sunlight
<b>Materials to Avoid</b>	Strong bases, metals, metal oxides, hydroxides, amines, carbonates, alkalis, cyanides, sulfides, sulphites, formaldehyde
<b>Hazardous Decomposition Products</b>	Will not decompose under normal conditions of use

<b>Section 11. Toxicological Information</b>	
<b>Principle Routes of Exposure</b>	
<b>Skin:</b>	Corrosive. 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.
<b>Eyes:</b>	Corrosive. Vapours can be irritating to the eyes. Concentrated vapours, mists or splashed liquid can cause severe irritation, burns and permanent blindness.
<b>Inhalation:</b>	Corrosive to the respiratory passage. Causes irritation of the

<b>Ingestion:</b>	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. Corrosive. 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.
<b>Additional Information</b>	
<b>Acute Toxicity</b>	
Hydrochloric acid	LD50: 700 mg/kg (Rat, oral) LC50: 3124 ppm (Rat, inhalation) LD50: 5010 mg/kg (Rabbit, dermal)
<b>Chronic Toxic Effects</b> – None known	
<b>Carcinogenicity</b> – IARC – Group 3 ( Hydrogen chloride anhydrous) / ACGIH - listed	
<b>Reproductive Toxicity / Teratogenicity / Embryotoxicity / Mutagenicity</b> – None known	

<b>Section 12. Ecological Information</b>	
<b>Ecotoxicity</b>	Hydrochloric acid LC50: 282 mg/L (Gambusia affinis) LC50: 3.6 mg/L (Lepomis macrochirus)
<b>BOD and COD</b>	No data
<b>Biodegradability / OECD</b>	No data
<b>Toxicity of the Products of Biodegradation</b>	No data
<b>Special Remarks</b>	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.

<b>Section 13. Disposal Considerations</b>	
Dispose of in accordance with local, provincial and federal regulations	

<b>Section 14. Transport Information</b>	
<b>TDG Classification</b>	Hydrochloric acid solution, UN 1789, Class 8, Packing Group II
<b>Emergency Response Guide #</b>	ERG# 157
<b>Marine Pollutant</b>	No
<b>Special Precautions</b>	None

<b>Section 15. Regulatory Information</b>	
<b>Canada – DSL Inventory</b>	All components of this product are either on the Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL) or exempt
<b>TSCA</b>	All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt
<b>WHMIS Hazard Class</b>	D1A E
<b>Additional Information</b>	None

<b>Section 16. Other Information</b>	
<b>Prepared by:</b>	Chemfax Products Ltd., Technical Department
<b>Date Prepared:</b>	June 16, 2010
<b>Revision Date:</b>	June 25, 2014
<b>Disclaimer</b>	<p>Notice to reader</p> <p>To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.</p> <p>Chemfax Products Ltd. expressly disclaims all expressed or implied warranties of merchantability and fitness for a particular purpose with respect to the product provided.</p>