

Safety Data Sheet



Hydrochloric Acid, 1M

Section 1 Product Description

Product Name: Hydrochloric Acid, 1M
Recommended Use: Science education applications
Synonyms: Muriatic Acid
Supplier: C2A Sales & Supplies (Barbados) Ltd.
#3 Canewood Road, Jackson, St. Michael, Barbados
Tel: (246) 426-1256

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;



DANGER

Causes severe skin burns and eye damage. Causes eye irritation.

GHS Classification:

Skin Corrosion/Irritation Category 3, Serious Eye Damage/Eye Irritation Category 2B.

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	96.86
Hydrochloric Acid	7647-01-0	3.14

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin Contact: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Section 5 Firefighting Procedures

Extinguishing Media: Water fog in flooding quantities. Apply water from as far a distance as possible.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Hydrogen Chloride

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Section 6

Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled:

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container.

Section 7

Handling and Storage

Handling:

Do not breathe dust/fume/gas/mist/vapors/spray. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Storage:

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep container tightly closed in a cool, well-ventilated place.

Storage Code:

White - Corrosive. Separate acids from bases; separate oxidizer acids from organic acids.

Section 8

Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>		<u>OSHA PEL</u>	
	<u>(TWA)</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>(STEL)</u>
Hydrogen Chloride	N/A	N/A	N/A	N/A

Control Parameters Engineering Measures:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

Respirator Type(s):

NIOSH approved air purifying respirator with acid gas cartridge and dust/mist filter

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

Natural latex,, Butyl rubber, Nitrile, Neoprene

Section 9

Physical Data

Formula: HCl

Molecular Weight: 36.46 (Hydrogen Chloride)

Appearance: Colorless Liquid

Odor: None Pungent

Odor Threshold: No data available

pH: -0.1

Melting Point: No data available

Boiling Point: No data available

Flash Point: No data available

Flammable Limits in Air: No data available

Vapor Pressure: No data available

Evaporation Rate (BuAc=1): No data available

Vapor Density (Air=1): No data available

Specific Gravity: No data available

Solubility in Water: No data available

Log Pow (calculated): No data available

Autoignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

Percent Volatile by Volume: No data available

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Section 10

Reactivity Data

Reactivity:	Not generally reactive under normal conditions.
Chemical Stability:	Stable under normal conditions.
Conditions to Avoid:	None Known.
Incompatible Materials:	Water-reactive materials
Hazardous Decomposition Products:	Hydrogen Chloride
Hazardous Polymerization:	Will not occur

Section 11

Toxicity Data

Symptoms (Acute):	No data available
Delayed Effects:	Pulmonary Edema

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
Hydrochloric Acid	7647-01-0	Oral LD50 Rabbit 900 mg/kg	PPM	INHALATION LC50 Rat 3700 PPM 30M INHALATION LC50 Mouse 1108 PPM 1H INHALATION LC50 Rat 45000 MG/M3 5M INHALATION LC50 Rat 8300 MG/M3

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
No data available				

Teratogenicity: No evidence of a teratogenic effect (birth defect).

Sensitization: No evidence of a sensitization effect.

Reproductive: No evidence of negative reproductive effects.

Target Organ Effects:

Acute:	No information available
Chronic:	No information available

Section 12

Ecological Data

Overview:	This material is not expected to be harmful to the ecology.
Mobility:	This material is expected to have very high mobility in soil. It does not absorb to most soil types .
Persistence:	No data
Bioaccumulation:	Bioconcentration is not expected to occur.
Degradability:	No data
Other Adverse Effects:	No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
Hydrogen Chloride	7647-01-0	Aquatic LC50 (96h) Mosquitofish (<i>Gambusia affinis</i>) 282 MG/L

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Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Waste Disposal Code(s): If discarded, this product is considered a RCRA corrosive waste, D002.

Section 14

Transport Information

Ground - DOT Proper Shipping Name:

UN1789
Hydrochloric Acid
Class 8
P.G. II

Air - IATA Proper Shipping Name:

UN1789
Hydrochloric Acid
Class 8
P.G. III

Section 15

Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Hydrochloric Acid	7647-01-0	Hydrochloric acid	5000 lb RQ	5000 lb final RQ; 2270 kg final RQ	500 lb TPQ (gas only)	No

California Prop 65:

No California Proposition 65 ingredients

Section 16

Additional Information

Revised: 02/27/2025

Replaces: 04/10/2024

Printed: 02-2-2025

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. C2A Sales and Supplies (Barbados) Ltd makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health