

## SAFETY DATA SHEET: HYDROCHLORIC ACID

### SECTION 1: IDENTIFICATION OF THE PRODUCT/COMPANY/UNDERTAKING.

#### **1.1) Identification of the Product.**

Identified Product:	<b>HYDROCHLORIC ACID</b>
Synonym(S):	Muriatic Acid; Hydrogen Chloride, Aqueous, Hydrochloric acid
CAS NO.:	7647-01-0
Molecular Formula	HCl
Chemical Identity	-
Chemical Nature	-

#### **1.2) Product Uses.**

Hydrochloric acid, also known as muriatic acid or spirits of salt, is an aqueous solution of hydrogen chloride with the chemical formula HCl(aqueous). It is a colorless solution with a distinctive pungent smell. It is classified as a strong acid. It is a component of the gastric acid in the digestive systems of most animal species, including humans. Hydrochloric acid is an important laboratory reagent and industrial chemical.

#### **1.3) Identification of The Company/Undertaking**

Manufacturer/supplier

### **INDIGO CHEMICALS**

44/1, PLOT NO.50, AT PO-BHATHA,  
VILLAGE-BHATHA, TALUKA-CHORASI,  
Surat, Gujarat, 394510

#### **1.4) Emergency Contact Details.**


### **INDIGO CHEMICALS**

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### SECTION 2: HAZARD IDENTIFICATION

<b>Classification</b>	POISON! DANGER! CORROSIVE. LIQUID AND MIST CAUSE SEVERE BURNS TO BODY TISSUE. MAY BE FATAL IF SWALLOWED OR INHALED. INHALATION MAY CAUSE LUNG DAMAGE.
<b>Pictogram</b>	
<b>Signal Word</b>	warning



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<b>Precautionary Statement</b>	Hazard statement(s) H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation. Precautionary statement(s) P261 Avoid breathing vapors
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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Composition	CAS no.	EC#	Composition (%)
Hydrochloric Acid	7647-01-0	-	30–35%

### SECTION 4: FIRST-AID MEASURES

<b>First aid after Inhalation:</b>	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
<b>First aid Skin contact:</b>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
<b>First aid Eye contact:</b>	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
<b>First aid after Ingestion:</b>	DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.
<b>Symptoms</b>	Irritation, Nausea, Headache, Shortness of breath.

### SECTION 5: FIRE- FIGHTING MEASURES

<b>Special Information:</b>	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Structural firefighter's protective clothing is ineffective for fires involving hydrochloric acid. Stay away from ends of tanks. Cool tanks with water spray until well after fire is out.
<b>Explosion:</b>	Not considered to be an explosion hazard.
<b>Fire Extinguishing Media:</b>	If involved in a fire, use water spray. Neutralize with soda ash or slaked lime.



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## SECTION 6: ACCIDENTAL RELEASE MEASURE.

### 6.1) Personal Precautions

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Neutralize with alkaline material (soda ash, lime), then absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as sawdust. Do not flush to sewer.

## SECTION 7: HANDLING AND STORAGE.

### 7.1) Precautions for safe handling.

Store in a cool, dry, ventilated storage area with acid resistant floors and good drainage. Protect from physical damage. Keep out of direct sunlight and away from heat, water, and incompatible materials. Do not wash out container and use it for other purposes. When diluting, the acid should always be added slowly to water and in small amounts. Never use hot water and never add water to the acid. Water added to acid can cause uncontrolled boiling and splashing. When opening metal containers, use non-sparking tools because of the possibility of hydrogen gas being present. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

CAS No.	ACGIH	IDLH	OSHA
7647-01-0	Threshold Limit Value	None	Permissible Exposure Limit

<b>Respiratory Protection</b>	If the exposure limit is exceeded, a full-face piece respirator with an acid gas cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. <b>WARNING:</b> Air purifying respirators do not protect workers in oxygen-deficient atmospheres.
<b>Ventilation System</b>	A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of recommended Practices, most recent edition, for details.
<b>Eye Protection</b>	Use chemical safety goggles and/or a full-face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.
<b>Body Protection</b>	Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.



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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES AND SAFETY CHARACTERISTICS.**

<b>Appearance</b>	Colorless to yellowish, fuming liquid.
<b>Odor</b>	Pungent odor of hydrogen chloride.
<b>Solubility</b>	Infinite in water with slight evolution of heat
<b>Density</b>	1.14 to 1.18
<b>pH</b>	For HCL solutions: 0.1 (1.0 N), 1.1 (0.1 N), 2.02 (0.01 N)
<b>% Volatiles by volume @ 21C (70F)</b>	100
<b>Boiling Point</b>	53C (127F) Azeotrope (20.2%) boils at 109C (228F)
<b>Melting point</b>	74C (-101F)
<b>Vapor Density (Air=1)</b>	No information available
<b>Flash Point</b>	No information available
<b>Evaporation Point</b>	No information available
<b>Auto-Ignition temperature</b>	No information available

**SECTION 10: STABILITY AND REACTIVITY.**

<b>Stability:</b>	Stable under ordinary conditions of use and storage. Containers may burst when heated 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.
<b>Hazardous Decomposition Products</b>	
<b>Incompatibilities</b>	A strong mineral acid, concentrated hydrochloric acid is incompatible with many substances and highly reactive with strong bases, metals, metal oxides, hydroxides, amines, carbonates and other alkaline materials. Incompatible with materials such as cyanides, sulfides, sulfites, and formaldehyde.
<b>Conditions to avoid:</b>	Heat, direct sunlight.

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## SECTION 11: TOXICOLOGY INFORMATION.

Inhalation rat LC50: 3124 ppm/1H; oral rabbit LD50: 900 mg/kg (Hydrochloric acid concentrated); investigated as a tumorigenic, mutagen, reproductive effector.

Ingredient	CAS No	NTP Carcinogen		IARC Category
		Known	Anticipated	
Hydrogen Chloride	7647-01-0	No	No	3
Water	7732-18-5	No	No	None

## SECTION 12: ECOLOGICAL INFORMATION.

12.1	<b>Environmental Fate:</b> When released into the soil, this material is not expected to biodegrade. When released into the soil, this material may leach into groundwater.
12.2	<b>Environmental Toxicity:</b> This material is expected to be toxic to aquatic life
12.3	<b>Bioaccumulation Potential:</b> No Data Available
12.4	<b>Mobility in Soil:</b> No Data Available

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## SECTION 13: DISPOSAL CONSIDERATIONS.

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## SECTION 14: TRANSPORT INFORMATION.

<b>Land Transport (DOT):</b> - UN No 1789. Packing group II. Major hazard class 8.0. Transport category 2.	
<b>UN Number</b>	N/A
<b>Proper Shipping Name</b>	N/A
<b>Class</b>	N/A
<b>Packaging Group</b>	N/A
<b>Air transport (IATA):</b> - Not regulated for transport	
<b>UN Number</b>	N/A
<b>Proper Shipping Name</b>	N/A
<b>Class</b>	N/A
<b>Packaging Group</b>	N/A
<b>Sea Transport (IMO/IMDG):</b> - Not regulated for transport	
<b>UN Number</b>	N/A
<b>Proper Shipping Name</b>	N/A
<b>Class</b>	N/A
<b>Packaging Group</b>	N/A
<b>Ems No.</b>	N/A

## SECTION 15: REGULATORY INFORMATION.

### WHMIS 2015 Hazard Classification Information:

Not Available.

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### SECTION 16: OTHER INFORMATION.

**Source of data:** United Nations Publications. (2019). *Globally Harmonized System of Classification and Labelling of Chemicals (GHS)* (Eighth Revised ed.). United Nations.

**Disclaimer:**

The safety data sheet is prepared by Indigo Chemicals to the best of its knowledge. All the information present in the SDS is obtained from verified technical sources and verified literature source to the best knowledge at the date of issue. Indigo Chemicals cannot control or foresee on how the product is used. Everyone accessing the product must be aware about the risks and take required precautions to use the material. Indigo Chemicals shall be responsible for damage caused to the consumer in terms to handling, storing, disposing and using the product. Contact Indigo Chemicals for any information regarding the SDS. The SDS applies to the direct users of the product. The SDS shall be considered valid if the product is used formixing other substances or chemicals.

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**END OF SDS**