



Registered Off. : 101-A, Deep Enclave, Pocket 'D', Ashok Vihar, Phase-III, Delhi-110 052 (India)
Corporate Off. : 152, Vardhman City Centre, Near Shakti Nagar Underbridge, Delhi-110052 (India)
Works : Plot No.1022, Modern Industrial Estate, Bahadurgarh-124507, Haryana (India)
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HYDROCHLORIC ACID

1. Product Identification

Synonyms: Hydrogen chloride, aqueous

CAS No.: 7647-01-0

Molecular Weight: 36.46

Chemical Formula: HCl

Product Code: 90018 , 90019

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Hydrogen Chloride	7647-01-0	33 - 40%
Water	7732-18-5	60 - 67%

3. Hazards Identification

Potential Health Effects

Inhalation: Corrosive! Inhalation of vapors can cause coughing, choking, inflammation of the nose, throat, and upper respiratory tract.

Ingestion: Corrosive! Swallowing hydrochloric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract.

Skin Contact: Can cause redness, pain, and severe skin burns. Concentrated solutions cause deep ulcers and discolor skin.

Eye Contact: Corrosive! Vapors are irritating and may cause damage to the eyes. Contact may cause severe burns and permanent eye damage.

Chronic Exposure: Long-term exposure to concentrated vapors may cause erosion of teeth. Long term exposures seldom occur due to the corrosive properties of the acid.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye disease may be more susceptible to the effects of this substance.

4. First Aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: 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.

Skin Contact: 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.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.



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5. Fire Fighting Measures

Fire: Extreme heat or contact with metals can release flammable hydrogen gas.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: If involved in a fire, use water spray. Neutralize with soda ash or slaked lime.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

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 saw dust.

7. Handling and Storage

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. . 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.

8. Exposure Controls/Personal Protection

Ventilation System:

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.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded, a full facepiece 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.

Skin Protection: Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.

Eye Protection: 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.

9. Physical and Chemical Properties

Appearance: Colorless, fuming liquid.

Odor: Pungent odor of hydrogen chloride.

Solubility: Infinite in water with slight evolution of heat.

Density: 1.18 % Volatiles by volume @ 21C (70F): 100

Boiling Point: 53C (127F) Azeotrope (20.2%) boils at 109C (228F)

Melting Point: -74C (-101F)

Vapor Density (Air=1): No information found.

Vapor Pressure (mm Hg): 190 @ 25C (77F)

Evaporation Rate (BuAc=1): No information found.



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10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage. Containers may burst when heated.

Hazardous Decomposition 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

Hazardous Polymerization: Will not occur.

Incompatibilities: 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.

Conditions to Avoid: Heat, direct sunlight.

11. Toxicological Information

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

12. Ecological Information

Environmental Fate: When released into the soil, this material is not expected to biodegrade. When released into the soil, this material may leach into groundwater.

Environmental Toxicity: This material is expected to be toxic to aquatic life.

13. Disposal Considerations

Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Land

Proper Shipping Name: HYDROCHLORIC ACID

Hazard Class: 8

UN/NA: UN1789

Packing Group: II

Information reported for product/size: 475LB

International (Water)

Proper Shipping Name: HYDROCHLORIC ACID

Hazard Class: 8

UN/NA: UN1789

Packing Group: II

Information reported for product/size: 475LB

15. Regulatory Information

SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No

Reactivity: No (Mixture / Liquid)

16. Other Information

Product Use:

Laboratory Reagent.

The information contained herein in good faith but makes no representations as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. We do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.