



Material Safety Data Sheet

Hydrochloric acid

MSDS# 95545

Section 1 - Chemical Product and Company Identification

MSDS Name: Hydrochloric acid

Catalog Numbers: AC124620000, AC124620010, AC124620011, AC124620025, AC124620026, AC124620051, AC124620051, AC124620100, AC124620250, AC124630000, AC124630010, AC124630011, AC124630011, AC124630025, AC124630026, AC124630100, AC124635000, AC124635001, AC124635001, AC352020000, AC389300000, AC389310000, AC423790000, AC423790026, AC423790026, AC423790250, AC423795001, 42379-0025, 42379-5000

Synonyms: Hydrochloric acid solution in water.

Company Identification: Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium

Company Identification: (USA) Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01

For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

Risk Phrases: 34 37

CAS#: 7647-01-0  
Chemical Name: Hydrochloric acid  
%: 32-36  
EINECS#: 231-595-7  
Hazard Symbols: C

Risk Phrases:

CAS#: 7732-18-5  
Chemical Name: Water  
%: 64-68  
EINECS#: 231-791-2  
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: C



## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Danger! Causes respiratory tract irritation. Causes burns by all exposure routes. Target Organs: Respiratory system, gastrointestinal system, eyes, skin.

## Potential Health Effects

- Eye:** May cause irreversible eye injury. Vapor or mist may cause irritation and severe burns. Contact with liquid is corrosive to the eyes and causes severe burns. May cause painful sensitization to light.
- Skin:** May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Contact with liquid is corrosive and causes severe burns and ulceration.
- Ingestion:** May cause circulatory system failure. Causes severe digestive tract burns with abdominal pain, vomiting, and possible death. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.
- Inhalation:** May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. Causes chemical burns to the respiratory tract. Exposure to the mist and vapor may erode exposed teeth. Causes corrosive action on the mucous membranes.
- Chronic:** Prolonged or repeated skin contact may cause dermatitis. Repeated exposure may cause erosion of teeth.

## Section 4 - First Aid Measures

- Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
- Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Ingestion:** Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
- Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- Notes to Physician:** Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

- General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Not flammable, but reacts with most metals to form flammable hydrogen gas. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. May ignite or explode on contact with steam or moist air. Containers may explode when heated.
- Extinguishing Media:** Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.
- Autoignition Temperature:** Not available
- Flash Point:** Not available
- Explosion Limits: Lower:** Not available
- Explosion Limits: Upper:** Not available
- NFPA Rating:** health: 3; flammability: 0; instability: 0;

## Section 6 - Accidental Release Measures

- General Information:** Use proper personal protective equipment as indicated in Section 8.
- Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Provide ventilation. Do not let this chemical enter the environment.

## Section 7 - Handling and Storage

Handling: Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood.

Storage: Store in a cool, dry place. Do not store in direct sunlight. Store in a tightly closed container. Corrosives area. Do not store in metal containers.

## Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Hydrochloric acid	2 ppm Ceiling	50 ppm IDLH	5 ppm Ceiling; 7 mg/m <sup>3</sup> Ceiling
Water	none listed	none listed	none listed

OSHA Vacated PELs: Hydrochloric acid: None listed Water: None listed

### Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

### Exposure Limits

### Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

Physical State: Clear liquid

Color: colorless

Odor: pungent odor - strong odor

pH: <1

Vapor Pressure: 125mbar @20 deg C

Vapor Density: 1.26

Evaporation Rate: >1.00

Viscosity: 1.9 mPa @15 deg C

Boiling Point: 57 deg C @760mmHg ( 134.60°F)

Freezing/Melting Point: -35 deg C ( -31.00°F)

Decomposition Temperature:

Solubility in water: miscible with water: 823 g/l (0°C); 561

Specific Gravity/Density: 1.180

Molecular Formula: ClH

Molecular Weight: 36.45

## Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Mechanical shock, incompatible materials, excess heat, exposure to moist air or water.

Incompatibilities with Other Materials: Not available

Hazardous Decomposition Products: Hydrogen chloride, chlorine, hydrogen gas.

Hazardous Polymerization: Will not occur.

## Section 11 - Toxicological Information

RTECS#: CAS# 7647-01-0: MW4025000 MW4031000

CAS# 7732-18-5: ZC0110000

RTECS:

**CAS# 7647-01-0:** Inhalation, mouse: LC50 = 1108 ppm/1H;

Inhalation, mouse: LC50 = 20487 mg/m<sup>3</sup>/5M;

Inhalation, mouse: LC50 = 3940 mg/m<sup>3</sup>/30M;

Inhalation, mouse: LC50 = 8300 mg/m<sup>3</sup>/30M;

Inhalation, rat: LC50 = 3124 ppm/1H;

Inhalation, rat: LC50 = 60938 mg/m<sup>3</sup>/5M;

LD50/LC50: Inhalation, rat: LC50 = 7004 mg/m<sup>3</sup>/30M;

Inhalation, rat: LC50 = 45000 mg/m<sup>3</sup>/5M;

Inhalation, rat: LC50 = 8300 mg/m<sup>3</sup>/30M;

Oral, rabbit: LD50 = 900 mg/kg;

RTECS:

**CAS# 7732-18-5:** Oral, rat: LD50 = >90 mL/kg;

Carcinogenicity: Hydrochloric acid - IARC: Group 3 (not classifiable)

Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: Fish: Bluegill/Sunfish: 3.6 mg/L; 48H; Lethal (unspecified)

Other: Do not empty into drains. Biodegradable.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: HYDROCHLORIC ACID SOLUTION

Hazard Class: 8

UN Number: UN1789

Packing Group: II

Canada TDG

Shipping Name: HYDROCHLORIC ACID

Hazard Class: 8

UN Number: UN1789

Packing Group: II

USA RQ: CAS# 7647-01-0: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 34 Causes burns.

R 37 Irritating to respiratory system.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7647-01-0: 1

CAS# 7732-18-5: Not available

Canada

CAS# 7647-01-0 is listed on Canada's DSL List

CAS# 7732-18-5 is listed on Canada's DSL List

Canadian WHMIS Classifications: E, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7647-01-0 is listed on Canada's Ingredient Disclosure List

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 7647-01-0 is listed on the TSCA Inventory.

CAS# 7732-18-5 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 7/06/1999

Revision #7 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

-----