

Product Name	Hydrochloric acid
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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification:

Product Description: Hydrochloric acid

Synonyms: Muriatic Acid, Chlorohydric acid, Hydrogen chloride, HCl

CAS-No: 7647-01-0

EC-No.: 231-595-7

Molecular Formula: HCl

REACH Registration No: 01-2119484862-27-XXXX

1.2. Relevant identified uses of the substance or mixture and uses advised against:

Recommended Use: Laboratory chemicals

1.3. Details of the supplier of the safety data sheet:

- **Company** **Finar Limited**
184-186/P, Chacharwadi Vasna,
Sarkhej-Bavla Highway,
Ta.: Sanand, Dist.: Ahmedabad-382110, Gujarat, India.
Web: www.finarchemicals.com
- **E-Mail Address** safety.finar@actylis.com; info.finar@actylis.com

1.4. Emergency Telephone Number:

- For Emergency contact on: +91 - 2717 - 616 717

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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008

Corrosive to Metals (Category 1), H290

Skin corrosion (Sub-category 1B), H314

Serious eye damage (Category 1), H318

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. Label Elements:

Labeling according Regulation (EC) No 1272/2008

Pictogram



Signal word: **Danger**

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)

Prevention

P234 Keep only in original packaging.

P261 Avoid breathing mist or vapors.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Reduced Labelling (<= 125 ml)

Pictogram

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Signal word: **Danger**

Hazard statement(s)

H314 Causes severe skin burns and eye damage.

Precautionary statement(s)

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements: none

2.3. Other Hazards:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances: Hydrochloric acid

3.2. Mixtures:

Component	CAS-No	EC-No.	Weight %
Hydrogen chloride	7647-01-0	231-595-7	37% - 41%
Water	7732-18-5	231-791-2	62% - 65%

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures:

- **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

- **If inhaled**

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If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

- **If Contact with skin**

Take off immediately all contaminated clothing, Wash off immediately with plenty of water for at least 15 minutes. Consult a physician.

- **In case of eye contact**

Rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses.

Consult a physician.

- **If swallowed**

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation).

Call a physician immediately. Do not attempt to neutralize.

4.2. Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed:

No information Available

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media:

Suitable Extinguishing Media- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Un-Suitable Extinguishing Media- For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture:

Hydrogen chloride gas

Not combustible.

Ambient fire may liberate hazardous vapours.

5.3. Advice for firefighters:

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further Information:

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

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Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2. Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3. Methods and material for containment and cleaning up:

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4. Reference to other sections:

For disposal see Sections 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:

For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities:**Storage conditions**

No metal containers. Tightly closed.

Storage class

Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials.

7.3. Specific end use(s):

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Ingredients with workplace control parameters.

8.2. Exposure Controls:**Personal Protective Equipment:****Eye & Face Protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles.

Skin Protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

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Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm

Break through time: 480 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material: Chloroprene

Minimum layer thickness: 0,65 mm

Break through time: 120 min

Material tested: KCL 720 Camapren®

Body Protection

Acid-resistant protective clothing

Respiratory Protection

Required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental Exposure Controls

Do not let product enter drains. Risk of explosion.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

- **Appearance:** Light Yellow
- **Physical State:** Liquid
- **Odour:** Pungent
- **pH:** < 1 at 20 °C
- **Critical Temperature:** No data available
- **Vapor Pressure:** 227 hPa at 21,1 °C , 547 hPa at 37.7 °C
- **Density :** 1.2 g/cm³ at 25 °C - lit.

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- **Relative Density:** No data available
- **Vapour Density:** No data available
- **Auto Ignition Temperature:** Not applicable
- **Bulk Density:** No data available
- **Odor Threshold:** No data available
- **Water/Oil Dist. Co eff.:** No data available.
- **Ionicity (in Water):** No data available
- **Lower Explosion Limit:** Not classified as explosive.
- **Upper Explosion Limit:** Not classified as explosive.
- **Boiling Point/Range:** > 100 °C - lit.
- **Flash Point:** Not applicable
- **Water Solubility:** Soluble

9.2. Other information:

Molecular weight: 36.458 g/mol

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

No data available

10.2. Chemical stability:

The product is chemically stable under standard ambient conditions (room temperature) .

10.3. Possibility of hazardous reactions:

No data available

10.4. Conditions to avoid:

No information available.

10.5. Incompatible materials:

Bases, Amines, Alkali metals, Metals, permanganates, for example potassium permanganate, Fluorine, metal acetylides

10.6. Hazardous decomposition products:

In the event of fire: see section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

Mixture

Acute toxicity

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

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Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Dermal: No data available

Skin corrosion/irritation

Remarks: Mixture causes burns.

Serious eye damage/eye irritation

Remarks: Mixture causes serious eye damage.Risk of blindness!

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Mixture may cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available

11.2 Further Information:

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

RTECS: UH8225000

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Components

Hydrochloric Acid

Acute toxicity

Oral: No data available

Inhalation: Cough Difficulty in breathing

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Inhalation: absorption

Symptoms: mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages:, damage of respiratory tract, tissue damage

Dermal: No data available

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE)

Result: Corrosive

(OECD Test Guideline 431)

Serious eye damage/eye irritation

Eyes - Bovine cornea

Result: Corrosive

(OECD Test Guideline 437)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells

Result: Conflicting results have been seen in different studies.

Carcinogenicity

Carcinogenicity - Did not show carcinogenic effects in animal experiments. (IUCLID)

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation.

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath,

Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages:, damage of respiratory tract, tissue damage

Specific target organ toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No aspiration toxicity classification

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SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Mixture

No data available

12.2 Persistence and degradability:

No data available

12.3 Bioaccumulate potential:

No data available

12.4 Mobility in soil:

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment :

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other Adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Dispose of as unused product.

SECTION 14: Transport information

	Land transport (ADR/RID)	Air transport (IATA)	Sea transport (IMDG)
14.1 UN number	1789	1789	1789
14.2 Proper shipping name	Hydrochloric Acid	Hydrochloric Acid	Hydrochloric Acid
14.3 Class	8	8	8

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14.4 Packing group	II	II	II
14.5 Environmentally hazardous	NO	NO	NO
14.6 Special precautions for user	No data available	No data available	No data available
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code			
Not Relevant			

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

REACH - Restrictions on the manufacture.

Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes skin irritation.
H319	Causes serious eye damage.
H335	Causes respiratory irritation.

References: Not available

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