

## 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

**Product Identifier:**

**GHS Product Identifier:** Hydrochloric Acid 10 - <25%

**Substance Name:** Hydrochloric Acid

**EC Index No.:** 017-002-01-X

**CAS No.:** 7647-01-0

**EC No.:** 231-595-7

**REACH Registration Number:** 01-2119484862-27-XXXX

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

**Identified use:** See table in front of appendix for a complete overview of identified uses.

**Uses advised against:** At this moment uses advised against have not been identified

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## 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture:**

**Regulation 1272/2008 (CLP):** Corrosive to metals - Category 1 - H290  
Skin irritation - Category 2 - H315  
Eye irritation- Category 2 - H319  
Specific target organ toxicity - single exposure - Category 3 - H335

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

**Most important adverse effects:** Human Health: See section 11 for toxicological information.

Physical and chemical hazards: See section 9 for physicochemical information.

Potential environmental effects: See section 12 for environmental information.

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### Label elements:

Labelling according to Regulation (EC) No 1272/2008:

Hazard Pictogram(s):



Signal Word(s):

Warning

Hazard Statement(s):

H290 May be corrosive to metals.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary Statement(s):

Prevention:

P234 Keep only in original container.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P280 Wear protective gloves/ eye protection/ face protection.

P309 + P311 If exposed or if you feel unwell:

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

Hazardous components which must be listed on the label: hydrochloric acid

Other hazards:

For results of PBT and vPvB assessment see section 12.5.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Chemical Nature: Aqueous solution

CAS Number: 7647-01-0

EINECS Number: 231-595-7

REACH registration number: 01-2119484862-27-XXXX

Index Number: 017-002-01-X

Classification according to Regulation 1272/2008:

Met. Corr.1 H290

STOT SE3 H335

Skin Corr.1B H314

Content:

10 - <25%

See section 16 for the full text of the H- Statements mentioned in this section.

[cont...]

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### 4. FIRST AID MEASURES

#### Description of first aid measures:

<b>General advice:</b>	Take off all contaminated clothing immediately.
<b>Inhalation:</b>	Remove to fresh air. Call a physician immediately. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position.
<b>Skin contact:</b>	Wash off immediately with plenty of water. If skin irritation persists, call a physician.
<b>Eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 5 minutes. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.
<b>Ingestion:</b>	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician immediately.

#### Most important symptoms and effects, both acute and delayed:

<b>Symptoms:</b>	Irritant effects, Inhalation of vapours is irritating to the respiratory system, may cause throat pain and cough.
<b>Effects:</b>	See Section 11 for more detailed information on health effects and symptoms.

#### Indication of any immediate medical attention and special treatment needed:

<b>Treatment:</b>	Treat symptomatically. No further information available.
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### 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media:

<b>Suitable Extinguishing Media:</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.
<b>Unsuitable Extinguishing Media:</b>	No information available.

#### Special hazards arising from the substance or mixture:

**Specific hazards during firefighting:** Under fire conditions: Hydrogen chloride gas

#### Advice for fire-fighters:

**Special protective equipment for fire-fighters:** In the event of fire, wear self-contained breathing apparatus. Wear personal protective equipment.

<b>Further information:</b>	Suppress (knock down) gases/vapours/mists with a water spray jet. Use water spray to cool unopened containers. Heating will cause a pressure rise - with risk of bursting. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
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### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures:

- Use personal protective equipment.
- Keep people away from and upwind of spill/leak.
- Avoid contact with skin and eyes.
- Do not breathe vapours or spray mist.

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**Environmental precautions:** Do not flush into surface water or sanitary sewer system.  
If the product contaminates rivers and lakes or drains inform respective authorities.

**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).  
Flush away residuals with plenty of water.

**Further information:** Treat recovered material as described in the section "Disposal Considerations".

**Reference to other sections:** See Section 1 for emergency contact information.  
See Section 8 for information on personal protective equipment.  
See Section 13 for waste treatment information.

### 7. HANDLING AND STORAGE

**Precautions for safe handling:**

**Advice on safe handling:** Keep container tightly closed. Ensure adequate ventilation. Avoid formation of aerosol. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.

**Hygiene measures:** Keep away from food, drink and animal feeding stuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately.

**Conditions for safe storage, including any incompatibilities:**

**Requirements for storage areas and containers:** Keep in an area equipped with acid resistant flooring. Store in original container.

**Advice on protection against fire and explosion:** The product is not flammable. Normal measures for preventive fire protection.

**Fire-fighting class:** Non-combustible

**Further information on storage conditions:** Keep tightly closed in a dry and cool place. Keep in a well-ventilated place.

**Advice on common storage:** Keep away from food, drink and animal feeding stuffs. Incompatible with: Organic peroxides, oxidising and spontaneously flammable products, alkalis, metals

**Specific end use(s):**

**Identified use:** See table in front of appendix for a complete overview of identified uses.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control parameters:** EU ELV, Short Term Exposure Limit (STEL): 10 ppm, 15 mg/m<sup>3</sup>. Indicative  
EU ELV, Time Weighted Average (TWA): 5 ppm, 8 mg/m<sup>3</sup>. Indicative  
EH40 WEL, Time Weighted Average (TWA), Gas and aerosol mists. 1 ppm, 2 mg/m<sup>3</sup>  
EH40 WEL, Short Term Exposure Limit (STEL): Gas and aerosol mists. 5 ppm, 8 mg/m<sup>3</sup>  
ELV (IE), Time Weighted Average (TWA): 5 ppm, 8 mg/m<sup>3</sup>. Indicative OELV  
ELV (IE), Short Term Exposure Limit (STEL): 10 ppm, 15 mg/m<sup>3</sup>. Indicative OELV

**Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)DN(M)EL's:**

**DNEL:** Workers, Acute - local effects. Inhalation 15 mg/m<sup>3</sup>  
Workers, Long-term - local effects. Inhalation 8 mg/m<sup>3</sup>

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### Predicted No Effect Concentrations (PNEC):

Fresh water: 36 µg/l  
Marine water: 36 µg/l  
Intermittent release: 45 µg/l  
Sewage treatment plant (STP): 36 µg/l

### Exposure controls:

**Appropriate engineering controls:** Refer to protective measures listed in sections 7 and 8.

**Respiratory protection:** In case of insufficient ventilation, wear suitable respiratory equipment. Required, if exposure limit is exceeded (e.g. OEL). Combination filter: E-P2

**Hand protection:** The glove material has to be impermeable and resistant to the product / the substance / the preparation. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Protective gloves should be replaced at first signs of wear.

Material: butyl-rubber. Break through time:  $\geq 8$  h. Glove thickness: 0.5 mm

Material: Polyvinylchloride. Break through time:  $\geq 8$  h. Glove thickness: 0.5 mm

Material: Fluorinated rubber. Break through time:  $\geq 8$  h. Glove thickness: 0.4 mm

Material: Nitrile rubber. Break through time:  $\geq 8$  h. Glove thickness: 0.35 mm

Material: Polychloroprene. Break through time:  $\geq 8$  h. Glove thickness: 0.5 mm

**Eye protection:** Tightly fitting safety goggles

**Skin and body protection:** Acid resistant protective clothing.

**Environmental exposure controls:** Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties:

**Form:** Liquid  
**Colour:** Colourless  
**Odour:** Stinging  
**Odour Threshold:** No data available  
**pH:**  $<1$  (20 °C)  
**Melting point/range:**  $<0$  °C  
**Boiling point/boiling range:**  $>100$  °C  
**Flash point:** Not applicable  
**Evaporation rate:** No data available  
**Flammability (solid, gas):** Not applicable  
**Upper explosion limit:** Not applicable  
**Lower explosion limit:** Not applicable  
**Vapour pressure:** 23 hPa (20 °C)  
**Relative vapour density:** No data available  
**Density:** 1.05 - 1.12 g/cm<sup>3</sup> (20 °C)  
**Water solubility:** Completely soluble  
**Partition coefficient: n-octanol/water:** No data available  
**Auto-ignition temperature:** Not applicable

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**Thermal decomposition:** No data available  
**Viscosity, dynamic:** No data available  
**Explosivity:** Product is not explosive.  
**Oxidising properties:** Not oxidising

**Other information:**  
**Corrosions to metals:** Corrosive to metals.

### 10. STABILITY AND REACTIVITY

**Reactivity:** No decomposition if stored and applied as directed.

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Gives off hydrogen by reaction with metals.

**Conditions to avoid:** Heat.

**Thermal decomposition:** No data available.

**Incompatible materials:**

**Materials to avoid:** Bases, metals, alkali metals, hydrides, sodium hypochlorite.

**Hazardous decomposition products:** Hydrogen chloride gas.

### 11. TOXICOLOGICAL INFORMATION

**Information on toxicological effects:**

**Acute Oral Toxicity:** No information available.

**Hydrochloric Acid:** No data available.

**Acute Inhalation Toxicity:** No information available.

**Hydrochloric Acid:** No data available.

**Acute Dermal Toxicity:**

**Hydrochloric Acid:** LD50 Dermal: >5010 mg/kg (rabbit)

**Skin Irritation:** Causes skin irritation.

**Hydrochloric Acid:** Corrosive effect (rabbits).

**Serious eye damage/irritation:** Causes serious eye irritation.

**Hydrochloric Acid:** Corrosive effect (rabbit). Risk of serious damage to eyes.

**Sensitisation:**

**Hydrochloric Acid:** Not sensitising (guinea pig) (Maximisation Test).

**Carcinogenicity:**

**Hydrochloric Acid:** Did not show carcinogenic effects in animal experiments.

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### Mutagenicity:

**Hydrochloric Acid:** In vitro tests did not show mutagenic effects.

### Teratogenicity:

**Hydrochloric Acid:** No data available.

### Reproductive Toxicity:

**Hydrochloric Acid:** Animal testing did not show any effects on fertility.

### Specific Target Organ Toxicity – Single exposure (STOT SE):

#### Inhalation:

**Target Organs:** Respiratory system. May cause respiratory irritation.

**Hydrochloric Acid:**

**Inhalation:** May cause respiratory irritation

**Specific Target Organ Toxicity – Repeated exposure (STOT RE):** The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

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

**Aspiration Hazard:** No aspiration toxicity classification.

**Hydrochloric Acid:** No aspiration toxicity classification.

## 12. ECOLOGICAL INFORMATION

### Component: Hydrochloric Acid:

#### Toxicity:

**Fish:** LC50 7.45 mg/l (Oncorhynchus mykiss; 96 h).

LC50 24.6 mg/l (Lepomis macrochirus; 96 h)

**Toxicity to daphnia and other aquatic invertebrates:** EC50 0.492 mg/l (Daphnia magna; 48 h)

**Algae:** EC50 0.78 mg/l (Pseudokirchneriella subcapitata; 72 h)

**Persistence and degradability:** Inorganic product which is not removable from water by biological processes.

**Bioaccumulative potential:** Bioaccumulation is not expected.

**Mobility in soil:** Not expected to adsorb on soil.

**Results of PBT and vPvB assessment:** This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

**Other adverse effects:** Harmful effects to aquatic organisms due to pH-shift. Neutralisation is normally necessary before wastewater is discharged into water treatment plants. Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

[cont...]

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### 13. DISPOSAL CONSIDERATIONS

#### Waste treatment methods:

**Product:** Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services.

**Contaminated packaging:** Empty contaminated packaging thoroughly. They can be recycled after thorough and proper cleaning. Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

**European waste catalogue number:** No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

### 14. TRANSPORT INFORMATION

**UN number:** 1789

#### Proper shipping name:

**ADR:** HYDROCHLORIC ACID

**RID:** HYDROCHLORIC ACID

**IMDG:** HYDROCHLORIC ACID

#### Transport hazard class(es):

**ADR-Class:** 8

**(Labels; Classification Code; Hazard identification no; Tunnel restriction code):** 8; C1; 80; (E)

**RID-Class:** 8

**(Labels; Classification Code; Hazard identification no):** 8; C1; 80

**IMDG-Class:** 8

**(Labels; EmS):** 8; F-A, S-B

#### Packaging group:

**ADR:** III

**RID:** III

**IMDG:** III

#### Environmental hazards:

**Labelling according to 5.2.1.8 ADR:** No

**Labelling according to 5.2.1.8 RID:** No

**Labelling according to 5.2.1.6.3:** No

**IMDG Classification as environmentally hazardous according to 2.9.3 IMDG:** No

**Classified as "P" according to 2.10 IMDG:** No

**Special precautions for users:** Not applicable.

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

**IMDG:** Not applicable.

[cont...]



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### 15. REGULATORY INFORMATION

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

**UK ISR:** Hydrochloric Acid

**Hydrochloric Acid:**

**Annual reporting level threshold:** 10,000 kg

EU. Regulation 273/2004, Drug Precursors, Category 3. Scheduled substance Combined Nomenclature (CN) code: 2806 10 00.

EU. Regulation No 1451/2007 [Biocides], Annex I, Active substances identified as existing (OJ (L 325)).

**Listed EC Number:** 231-595-7

EU. Directive 98/8/EC, Annex 1, Active substances in biocidal products. Special provisions may apply; see text of legislation. Minimum purity: 999 g/kg. Private area and public health area disinfectants and other biocidal products.

EU. Directive 98/8/EC, Annex 1, Active substances in biocidal products. Expiry Date of Inclusion: 30 Apr 2024.

EU. Directive 98/8/EC, Annex 1, Active substances in biocidal products. Inclusion Date: 1 May 2014.

EU. Directive 98/8/EC, Annex 1, Active substances in biocidal products. Deadline for Compliance: 30 Apr 2016.

**Chemical safety assessment:** A Chemical Safety Assessment has been completed for this substance.

**Note:** The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

### 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

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

**Legal disclaimer:** The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.