

SAFETY DATA SHEET

Hydrochloric acid (10% - 24%)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name

Hydrochloric acid (10% - 24%)

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

▼ Relevant identified uses of the substance or mixture

Manufacture of substance, Intermediate, Industrial purposes, pH regulating, Treatment of drinking water, European Committee Approval, Raw Material, Cleaning product
Restricted to professional users.

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

▼ Company and address

Industrial Chemicals Limited

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Warley Hill Business Park,
The Drive,
Warley,
Brentwood,
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CM13 3BE
United Kingdom
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E-mail

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Revision

11/04/2024

SDS Version

11.0

Date of previous version

16/06/2023 (10.0)

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).

See section 4 "First aid measures".

SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.1. ▼ Classification of the substance or mixture

Met. Corr. 1; H290, May be corrosive to metals.

Skin Irrit. 2; H315, Causes skin irritation.

Eye Irrit. 2; H319, Causes serious eye irritation.

STOT SE 3; H335, May cause respiratory irritation.

2.2. Label elements

▼ Hazard pictogram(s)



▼ Signal word

Warning

▼ Hazard statement(s)

May be corrosive to metals. (H290)
 Causes skin irritation. (H315)
 Causes serious eye irritation. (H319)
 May cause respiratory irritation. (H335)

Precautionary statement(s)

General

-

▼ Prevention

Wash hands thoroughly after handling. (P264)
 Wear face protection/protective gloves/protective clothing. (P280)

▼ Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
 Continue rinsing. (P305+P351+P338)
 Absorb spillage to prevent material damage. (P390)

▼ Storage

Store in a container with a resistant inner liner. (P406)

▼ Disposal

Dispose of contents/container in accordance with local regulation
 (P501)

Hazardous substances

hydrogen chloride

Additional labelling

Not applicable.

2.3. Other hazards

▼ Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.
 This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable. This product is a mixture.

3.2. ▼ Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
hydrogen chloride	CAS No.: 7647-01-0 EC No.: 231-595-7 UK-REACH: 01-4393370836-4-0014 Index No.: 017-002-00-2	10-24%	Skin Corr. 1B, H314 (SCL: 25.00 %) Skin Irrit. 2, H315 (SCL: 10.00 %) Eye Irrit. 2, H319 (SCL: 10.00 %) STOT SE 3, H335 (SCL: 10.00 %)	[1]

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[1] European occupational exposure limit.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.
 Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with

him/her.

▼ **Skin contact**

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

Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

▼ **Eye contact**

If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

▼ **Ingestion**

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns

Not applicable.

4.2. ▼ **Most important symptoms and effects, both acute and delayed**

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

If eye irritation persists: Get medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. **Extinguishing media**

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. **Special hazards arising from the substance or mixture**

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Halogenated compounds

5.3. **Advice for firefighters**

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

Hazchem Code: 2R

SECTION 6: Accidental release measures

6.1. ▼ **Personal precautions, protective equipment and emergency procedures**

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Avoid inhalation of vapours from spilled material.

Contaminated areas may be slippery.

6.2. **Environmental precautions**

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3. **Methods and material for containment and cleaning up**

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. **Reference to other sections**

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid direct contact with the product.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. ▼ Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Store in a container with a resistant inner liner.

Recommended storage material

Store in vented vessels of rubber lined mild steel or HDPE.

Storage tanks and day tanks must be vented to the outside atmosphere, using suitable piping so all containers must have a venting device

Storage temperature

Dry, cool and well ventilated

Corrosive storage.

Tightly closed. Dry

Incompatible materials

Alkali

Amines

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

hydrogen chloride

Long term exposure limit (8 hours) (ppm): 1

Long term exposure limit (8 hours) (mg/m³): 2

Short term exposure limit (15 minutes) (ppm): 5

Short term exposure limit (15 minutes) (mg/m³): 8

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

hydrogen chloride

Duration:	Route of exposure:	DNEL:
Long term	Inhalation	8 mg/m ³
Short term	Inhalation	15 mg/m ³

PNEC

No data available.

8.2. ▼ Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

▼ Hygiene measures

Take off contaminated clothing and wash it before reuse.

▼ Measures to avoid environmental exposure

No specific requirements.

Individual protection measures, such as personal protective equipment

Generally

Use only UKCA marked protective equipment.

Respiratory Equipment

Type	Class	Colour	Standards
If mists are formed, a respirator must be worn. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Particulate filter, type P2.			

Skin protection

Recommended	Type/Category	Standards
Dedicated work clothing should be worn.	-	-



Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.			
Vinyl/PVC	-	-	EN388
Cotton/Latex	-	-	EN388, EN407



Eye protection

Type	Standards
Chemical splash goggles	
Face shield	EN166



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Pale Yellow, Colourless

Odour / Odour threshold

Slight Pungent

pH

-
- pH in solution
(1.1%)
- ▼ Density (g/cm³)
-
- Relative density
1.02 @ °C Varies with concentration
- Kinematic viscosity
1-10 @ °C Varies with concentration
- Particle characteristics
Does not apply to liquids.
- Phase changes
- Melting point/Freezing point (°C)
Testing not relevant or not possible due to the nature of the product.
- Softening point/range (waxes and pastes) (°C)
Does not apply to liquids.
- Boiling point (°C)
100°C @ Varies with concentration
- Vapour pressure
Testing not relevant or not possible due to the nature of the product.
- Relative vapour density
Testing not relevant or not possible due to the nature of the product.
- Decomposition temperature (°C)
Testing not relevant or not possible due to the nature of the product.
- Data on fire and explosion hazards
- Flash point (°C)
Testing not relevant or not possible due to the nature of the product.
- Flammability (°C)
Testing not relevant or not possible due to the nature of the product.
- Auto-ignition temperature (°C)
Testing not relevant or not possible due to the nature of the product.
- Lower and upper explosion limit (% v/v)
Testing not relevant or not possible due to the nature of the product.
- Solubility
- Solubility in water
Miscible with Water
- n-octanol/water coefficient (LogKow)
Testing not relevant or not possible due to the nature of the product.
- Solubility in fat (g/L)
Testing not relevant or not possible due to the nature of the product.
- 9.2. Other information
- Effect of ignition under confinement
In contact with metals liberates flammable hydrogen gas, which may form explosive mixtures in a confined space
- Thermal stability
Stable at normal ambient temperatures
- Explosive power
Thermal decomposition or combustion products may include the following substances: Irritating gases or vapours. Chlorine. Hydrogen chloride (HCl)
- Oxidizing properties
Testing not relevant or not possible due to the nature of the product.
- Other physical and chemical parameters
Avoid Heating may generate the following products: Toxic gases or vapours. Reactions with the following materials may generate heat: Alkalis. Amines.

SECTION 10: Stability and reactivity

- 10.1. Reactivity
No data available.
- 10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Alkali

Amines

10.6. ▼ Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity

Based on available data, the classification criteria are not met.

▼ Skin corrosion/irritation

Causes skin irritation.

▼ Serious eye damage/irritation

Causes serious eye irritation.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Skin sensitisation

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

▼ STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

▼ Long term effects

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

▼ Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

hydrogen chloride has been classified by IARC as a group 3 carcinogen.

SECTION 12: Ecological information

12.1. Toxicity

No data available.

12.2. ▼ Persistence and degradability

Based on available data, the classification criteria are not met.

12.3. ▼ Bioaccumulative potential

Based on available data, the classification criteria are not met.

12.4. Mobility in soil

No data available.

12.5. ▼ Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. ▼ Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

▼ Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP 8 - Corrosive

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code




Not applicable.

Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	UN1789	HYDROCHLORIC ACID	Transport hazard class: 8 Label: 8 Classification code: C1 	III	No	Limited quantities: 5 L Tunnel restriction code: (E) See below for additional information.
IMDG	UN1789	HYDROCHLORIC ACID	Transport hazard class: 8 Label: 8 Classification code: C1 	III	No	Limited quantities: 5 L EmS: F-A S-B See below for additional information.
IATA	UN1789	HYDROCHLORIC ACID	Transport hazard class: 8 Label: 8 Classification code: C1 	III	No	See below for additional information.

* Packing group

** Environmental hazards

Additional information

ADR / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

Hazchem Code: 2R

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

▼ Restrictions for application

Restricted to professional users.

Demands for specific education

No specific requirements.

SEVESO - Categories / dangerous substances

hydrogen chloride

Regulation on drug precursors

hydrogen chloride is included (Category 3)

Additional information

Not applicable.

Sources

The Management of Health and Safety at Work Regulations 1999.

Control of Major Accident Hazards (COMAH) Regulations 2015.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

The Controlled Drugs (Drug Precursors) Regulations 2008.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

▼ Full text of H-phrases as mentioned in section 3

H314, Causes severe skin burns and eye damage.

H315, Causes skin irritation.

H319, Causes serious eye irritation.

H335, May cause respiratory irritation.

▼ Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne (European conformity)

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EuPCS = European Product Categorisation System

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of

1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

▼ The safety data sheet is validated by

LWetton

▼ Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en