



SAFETY DATA SHEET

Hydrochloric acid (25% - 38%)

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

1.1. Product identifier

Product name	Hydrochloric acid (25% - 38%)
REACH registration number	01-2119484862-27
CAS number	7647-01-0
EU index number	017-002-00-2
EC number	231-595-7

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

Identified uses	Manufacture of substances. Intermediate Industrial use pH regulating agent Treatment of drinking water, has received approval by the European Committee for Standardisation. Raw material. Washing and cleaning products Formulating packaged products Professional use Consumer use
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1.3. Details of the supplier of the safety data sheet

Supplier

Industrial Chemicals Limited
Hogg Lane
Grays
Essex
RM17 5DU
United Kingdom
T:+44 (0)1375 389000
F:+44 (0)1375 389110
sds@icgl.co.uk

1.4. Emergency telephone number

Emergency telephone	+44 (0)1865 407333 (24-hour)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Met. Corr. 1 - H290
Health hazards	Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT SE 3 - H335
Environmental hazards	Not Classified

Classification (67/548/EEC or 1999/45/EC) C;R35. Xi;R37.

2.2. Label elements

EC number	231-595-7
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Hydrochloric acid (25% - 38%)

Pictogram



Signal word

Danger

Hazard statements

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

Precautionary statements

P234 Keep only in original container.
 P260 Do not breathe vapour/ spray.
 P261 Avoid breathing vapour/ spray.
 P264 Wash contaminated skin thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep 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.
 P310 Immediately call a POISON CENTER/ doctor.
 P312 Call a POISON CENTER/ doctor if you feel unwell.
 P321 Specific treatment (see medical advice on this label).
 P363 Wash contaminated clothing before reuse.
 P390 Absorb spillage to prevent material damage.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P406 Store in corrosive resistant container with a resistant inner liner.
 P501 Dispose of contents/ container in accordance with national regulations.

Supplementary precautionary statements

P234 Keep only in original container.
 P264 Wash contaminated skin thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P363 Wash contaminated clothing before reuse.
 P390 Absorb spillage to prevent material damage.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P406 Store in corrosive resistant/... container with a resistant inner liner.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Product name	Hydrochloric acid (25% - 38%)
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EC number	231-595-7

SECTION 4: First aid measures

4.1. Description of first aid measures

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General information	Remove affected person from source of contamination. Keep the affected person warm and at rest. Get prompt medical attention. Place unconscious person on the side in the recovery position and ensure breathing can take place. Never give anything by mouth to an unconscious person. For breathing difficulties, oxygen may be necessary. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Effects may be delayed. Keep affected person under observation.
Inhalation	Move affected person to fresh air at once.
Ingestion	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Never give anything by mouth to an unconscious person. Never give anything by mouth to an unconscious person.
Skin contact	Remove contaminated clothing and rinse skin thoroughly with water. Continue to rinse for at least 15 minutes.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

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

General information	Effects may be delayed. Keep affected person under observation.
Inhalation	Irritation of nose, throat and airway.
Ingestion	May cause chemical burns in mouth and throat.
Skin contact	May cause serious chemical burns to the skin. Reddened skin if chemical is not removed by washing. Later, white and wrinkled skin without pain, often with delayed skin burns.
Eye contact	May cause blurred vision and serious eye damage.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide, dry powder or water fog.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Corrosive gases or vapours. Chlorine. Hydrogen chloride (HCl).

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure suitable respiratory protection is worn during removal of spillages in confined areas. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate.
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6.2. Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up Neutralise spilled material with crushed limestone, slaked lime (calcium hydroxide), soda ash (sodium carbonate) or sodium bicarbonate. Flush contaminated area with plenty of water. Large Spillages: Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Collect spillage with a shovel and broom, or similar and reuse, if possible. Contain, neutralise with lime or soda ash, and dispose of in accordance with local regulations.

6.4. Reference to other sections

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Eye wash facilities and emergency shower must be available when handling this product. Do not use in confined spaces without adequate ventilation and/or respirator. Wear appropriate protective clothing. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in a cool and well-ventilated place. Keep container tightly sealed when not in use. Store away from the following materials: Alkalis. 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.

Storage class Corrosive storage.

7.3. Specific end use(s)

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

Long-term exposure limit (8-hour TWA): WEL 1 ppm 2 mg/m³

Short-term exposure limit (15-minute): WEL 5 ppm 8 mg/m³

WEL = Workplace Exposure Limit

Ingredient comments Data relates to hydrogen chloride gas

Biological limit values EH40/2005 Workplace exposure limits (UK Health and Safety Executive)

DNEL
- Inhalation; Short term : 15 mg/m³
- Inhalation; Long term : 8 mg/m³

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide eyewash stations and safety showers close to the workstation area. Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients. Provide corrosion-resistant local exhaust ventilation.

Eye/face protection

Contact lenses should not be worn when working with this chemical. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

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Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It is recommended that gloves are made of the following material: Polyvinyl chloride (PVC). Rubber (natural, latex).
Other skin and body protection	Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.
Hygiene measures	Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes wet or contaminated.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Colourless to pale yellow liquid.
Odour	Pungent. Irritating.
pH	pH (concentrated solution): -1
Melting point	-26 - -55°C Varies with concentration
Initial boiling point and range	50 - 100°C @ Varies with concentration
Vapour pressure	2 - 20 kPa @ °C
Relative density	1.1 - 1.9 @ °C Varies with concentration
Solubility(ies)	Miscible with water.
Viscosity	1.5 - 2.1 @ °C Varies with concentration

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Stability	Stable at normal ambient temperatures.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	In contact with metals liberates flammable hydrogen gas, which may form explosive mixtures in a confined space.
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10.4. Conditions to avoid

Conditions to avoid	Heating may generate the following products: Toxic gases or vapours. Reactions with the following materials may generate heat: Alkalis. Amines.
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10.5. Incompatible materials

Materials to avoid	Strong alkalis. Metals.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Irritating gases or vapours. Chlorine. Hydrogen chloride (HCl).
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

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**Acute toxicity oral (LD₅₀
mg/kg)** 700.0

Species Rat

Acute toxicity - dermal

**Acute toxicity dermal (LD₅₀
mg/kg)** 5.0

Species Rabbit

Carcinogenicity

Carcinogenicity NOAEL 10 ppm, Inhalation, Rat

SECTION 12: Ecological Information

12.1. Toxicity

Acute toxicity - fish LC50, 96 hours: 20.5 mg/l,

**Acute toxicity - aquatic
invertebrates** EC₅₀, 48 hours: 0.45 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 0.73 mg/l,
NOEC, 72 hours: 0.36 mg/l,

12.2. Persistence and degradability

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating.

12.4. Mobility in soil

Mobility Chloride ions are mobile in soil, eventually draining into surface water.

12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB
assessment** This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Do not allow to enter watercourses or soils. Discharge may have an adverse effect on water pH.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Discharge of small quantities to the sewer with plenty of water may be permitted. The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. Larger quantities should be treated in a suitable plant or disposed of via a licensed waste disposal contractor. Reuse or recycle products wherever possible.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1789

UN No. (IMDG) 1789

UN No. (ICAO) 1789

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14.2. UN proper shipping name

14.3. Transport hazard class(es)

Transport labels



14.4. Packing group

ADR/RID packing group II

IMDG packing group II

ICAO packing group II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Emergency Action Code 2R

Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

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

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	Updated hazard phrases.
Issued by	D.Kelly
Revision date	23/05/2017
Revision	11
Supersedes date	12/02/2014
Risk phrases in full	R35 Causes severe burns. R37 Irritating to respiratory system.
Hazard statements in full	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H335 May cause respiratory irritation.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.