

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

1.1. GHS product identifier

Product form	: Substance
Trade name	: Hydrochloric acid
Type of product	: Acids
EC-No.	: 933-977-5
UN-No. (ADR)	: 1789
Formula	: HCl
Product group	: End product

1.2. Other means of identification

Other means of identification	: Aqueous hydrogen chloride, chlorohydric acid, Hydrogen chloride, Muriatic acid, Spirits of salt
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1.3. Recommended use of the chemical and restrictions on use

Recommended use	: Industrial:
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1.4. Supplier's details

Distributor

Rolfes Chemicals (Pty) Ltd.
Cnr Brammer and Strachan Street,
P.O. Box P.O. Box 14075, Wadeville
1422 Germiston – South Africa Gauteng
T 011 873 0157

1.5. Emergency phone number

Emergency number	: 086 111 4753
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SECTION 2: Hazard identification

2.1. GHS classification of the substance/mixture and any national or regional information

Classification according to the United Nations GHS

Skin corrosion/irritation, Category 1	H314
Serious eye damage/eye irritation, Category 1	H318
Full text of H-statements: see section 16	
Adverse physicochemical, human health and environmental effects	: Causes severe skin burns and eye damage, Causes serious eye damage.

2.2. GHS label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA)



Signal word (GHS-ZA)	: Danger
Hazard statements (GHS ZA)	: H314 - Causes severe skin burns and eye damage
Precautionary statements (GHS ZA)	: P260 - Do not breathe dusts or mists. P264 - Wash hands, forearms and face thoroughly after handling. P280 - Wear protective clothing, eye protection, face protection, protective gloves. P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P354+P338 - IF IN EYES: Immediately rinse with water for several minutes. Remove

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P-statements for label (GHS-ZA)

contact lenses, if present and easy to do. Continue rinsing.
P316 - Get emergency medical help immediately.
P317 - Get medical help.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents and container to an approved waste disposal plant.

: P260 - Do not breathe dusts or mists.; P264 - Wash hands, forearms and face thoroughly after handling.; P280 - Wear protective clothing, eye protection, face protection, protective gloves.; P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.; IF INHALED: Remove person to fresh air and keep comfortable for breathing.; P305+P354+P338 - IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.; P316 - Get emergency medical help immediately.; P317 - Get medical help.; P321 - Specific treatment (see supplemental first aid instruction on this label).; P363 - Wash contaminated clothing before reuse.; P405 - Store locked up.; P501 - Dispose of contents and container to an approved waste disposal plant.

2.3. Other hazards which do not result in classification or are not covered by the GHS

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : Hydrochloric acid
EC-No. : 933-977-5
Product identifiers: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
Water	CAS-No.: 7732-18-5	≤ 62	Not classified
Hydrogen chloride	CAS-No.: 7647-01-0	≤ 38	Not classified

Full text of H-statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of necessary first aid measures

First-aid measures general : Call a physician immediately.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms/effect, acute and delayed

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact : Burns.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns.

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4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.
Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

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7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Store locked up.
Packaging materials	: Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hydrogen chloride (7647-01-0)	
South Africa - Occupational Exposure Limits (Restricted Limits)	
Local name	Hydrogen chloride (gas and aerosol mists)
OEL eight hour TWA	4 ppm
Regulatory reference	Government Notice No. R. 280, 2021
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Hydrogen chloride
Regulatory reference	Government Notice No. R 904

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Hand protection	: Protective gloves
Eye protection	: Safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment
Personal protective equipment symbol(s)	



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Colour	: yellowish to very slightly yellow
Odour	: Pungent
Odour threshold	: No data available
pH	: 1.1
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: -50 °C
Freezing point	: No data available
Boiling point	: 90 °C
Flash point	: No data available

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Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability	: Non flammable.
Vapour pressure	: 16.5 mm Hg
Vapour pressure at 50°C	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: 1.268
Relative density of saturated gas/air mixture	: No data available
Density	: No data available
Relative gas density	: No data available
Solubility	: Very soluble.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 2 cP
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Physical state	: Liquid
Appearance	: Liquid.

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10: Stability and Reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical Stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Corrosive substances
Acute toxicity (dermal)	: CAUSES (SEVERE) SKIN BURNS
Acute toxicity (inhalation)	: Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea.

Water (7732-18-5)

LD50 oral rat	90000 mg/kg
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Skin corrosion/irritation	: Causes severe skin burns. pH: 1.1
Serious eye damage/irritation	: Causes serious eye damage. pH: 1.1
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Before neutralisation, the product may represent a danger to aquatic organisms.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

Hydrochloric acid	
Persistence and degradability	Not rapidly degradable
Water (7732-18-5)	
Persistence and degradability	
Hydrogen chloride (7647-01-0)	
Persistence and degradability	

12.3. Bioaccumulative potential

Hydrochloric acid	
Bioaccumulative potential	No additional information available
Water (7732-18-5)	
Partition coefficient n-octanol/water (Log Kow)	-1.38

12.4. Mobility in soil

Hydrochloric acid	
Mobility in soil	No additional information available

12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available

SECTION 13: Disposal Considerations

13.1. Disposal methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.

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Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
1789	1789	1789
14.2. UN Proper Shipping Name		
HYDROCHLORIC ACID	HYDROCHLORIC ACID	Hydrochloric acid
14.3. Transport hazard class(es)		
8	8	8
		
14.4. Packing group, if applicable		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

SANS

Limited quantities (SANS) : 1 L
Limited quantities (SANS) : 1 L
Packagings, large packagings and IBCs Packing instructions (SANS) : P001, IBC02
Portable tank and bulk containers instructions (SANS) : T8
Portable tank and bulk container special provisions (SANS) : TP2

IMDG

Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
IBC special provisions (IMDG) : B20
Tank instructions (IMDG) : T8
Tank special provisions (IMDG) : TP2
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage) : S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG) : C
Segregation (IMDG) : SGG1, SG36, SG49
Properties and observations (IMDG) : Colourless liquid. An aqueous solution of the gas hydrogen chloride. Highly corrosive to most metals. Causes burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y840
PCA limited quantity max net quantity (IATA) : 0.5L

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PCA packing instructions (IATA)	: 851
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

14.7. Transport in bulk according to IMO instructions

Not applicable

SECTION 15: Regulatory information

15.1. National regulations

15.1.1. OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

Prohibited Hazardous Chemical Agents

Not regulated

15.2. Safety, health, and environmental national regulations specific for the product

No additional information available

SECTION 16: Other information

Issue date	: 23/02/2012
Revision date	: 30/09/2024
Supersedes	: 09/09/2024

Full text of H-statements:

H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

Safety Data Sheet (SDS), South Africa (HCA)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.