

### SECTION 1: Identification

#### 1.1. Product identifier

Trade name	: HYDROCHLORIC ACID 32%
EC-No.	: 231-595-7
EC Index-No.	: 017-002-01-X
CAS-No.	: 7647-01-0
UN-No. (ADR)	: 1789
Product code	: 108060xxx, 108070xxx, 108080xxx
Formula	: HCl

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

Recommended uses and restrictions	: For laboratory use only
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#### 1.3. Supplier's details

Labchem (Pty)Ltd  
 6 Wakefield Road  
 Founders Hill  
 1609 Johannesburg - South Africa  
 T +27 11 452 1116 - F +27 86 588 0293  
[techlab@labchem.co.za](mailto:techlab@labchem.co.za) - [www.labchem.co.za](http://www.labchem.co.za)

#### 1.4. Emergency telephone number

Emergency number	: +27 11 452 1116
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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to the United Nations GHS

Skin corrosion/irritation, Category 1	H314
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335
Full text of H statements : see section 16	

#### 2.2. Label elements

##### 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.  
 H335 - May cause respiratory irritation.

Precautionary statements (GHS-ZA) : P260 - Do not breathe dust/fume/gas/mist/vapours/spray.  
 P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P264 - Wash hands, forearms and face 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 or doctor.  
 P312 - Call a POISON CENTER or doctor if you feel unwell.  
 P321 - Specific treatment (see supplemental first aid instruction on this label).  
 P363 - Wash contaminated clothing before reuse.  
 P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
 P405 - Store locked up.  
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 2.3. Other hazards

Adverse physicochemical, human health and : May cause respiratory irritation, Causes severe skin burns and eye damage.

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According to SANS 10234:2008 and SANS 11014:2010

environmental effects

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Substance identification codes: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
hydrochloric acid (Main constituent)	(CAS-No.) 7647-01-0	≥ 32	Skin Corr. 1, H314 STOT SE 3, H335

Full text of H-statements: see section 16

#### 3.2. Mixtures

Not applicable

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Wash immediately with PE-glycol 400. Wash immediately with lots of water (15 minutes)/shower. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital. Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist. 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 with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Immediately consult a doctor/medical service. Call Poison Information Centre ( <a href="http://www.big.be/antigif.html">www.big.be/antigif.html</a> ). Take the container/vomit to the doctor/hospital. Do not give chemical antidote. Ingestion of large quantities: immediately to hospital. Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after inhalation	: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. EXPOSURE TO HIGH CONCENTRATIONS: Respiratory difficulties. Possible laryngeal spasm/oedema. Corrosion of the upper respiratory tract. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of pneumonia. Risk of lung oedema. May cause respiratory irritation.
Symptoms/effects after skin contact	: Caustic burns/corrosion of the skin. Burns.
Symptoms/effects after eye contact	: Corrosion of the eye tissue. Permanent eye damage. Serious damage to eyes.
Symptoms/effects after ingestion	: Burns to the gastric/intestinal mucosa. Blood in vomit. Possible esophageal perforation. Shock. Burns.
Potential adverse human health effects and symptoms	: Causes severe skin burns. May cause respiratory irritation. Causes serious eye damage.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Adapt extinguishing media to the environment for surrounding fires. Water spray. Dry powder. Foam. Carbon dioxide.

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

Fire hazard	: DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

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According to SANS 10234:2008 and SANS 11014:2010

### 5.3. Advice for firefighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
- Firefighting instructions : Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
- Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus. 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

No additional information available

#### 6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Face shield. Corrosion-proof suit. Large spills/in enclosed spaces: compressed air apparatus. Large spills/in enclosed spaces: gas-tight suit. Reactivity hazard: compressed air/oxygen apparatus. Reactivity hazard: gas-tight suit.
- Emergency procedures : Ventilate spillage area. Mark the danger area. No naked flames. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation. Large spills/in confined spaces: consider evacuation. Wash contaminated clothes. 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".

### 6.2. Environmental precautions

Avoid release to the environment. Prevent soil and water pollution. Prevent spreading in sewers.

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

- For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Hazardous reaction: measure explosive gas-air mixture. If reacting: dilute combustible/toxic gases/vapours. Take account of toxic/corrosive precipitation water. Heat exposure: dilute toxic gas/vapour with water spray.
- Methods for cleaning up : Take up liquid spill into absorbent material. Liquid spill: neutralize with soda (sodium carbonate). Neutralized substance: take up in absorbent material. Scoop absorbed substance into closing containers. Damaged/cooled tanks must be emptied. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
- 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 : Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
- Hygiene measures : Observe strict hygiene. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
- Storage area : Ventilation at floor level. Keep locked up. Provide for a tub to collect spills. Meet the legal requirements.
- Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) bases. metals. amines.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. corrosion-proof. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : MATERIAL TO AVOID: steel. metal.
- Storage temperature : 2 – 25 °C

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

# HYDROCHLORIC ACID 32%

## Safety Data Sheet

According to SANS 10234:2008 and SANS 11014:2010

HYDROCHLORIC ACID 32% (7647-01-0)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Hydrogen chloride
OEL STEL (mg/m <sup>3</sup> )	7 mg/m <sup>3</sup>
OEL STEL (ppm)	5 ppm
Regulatory reference	Government Notice. R: 1179

### 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 (PPE)

Materials for protective clothing : GIVE GOOD RESISTANCE: natural rubber. nitrile rubber  
Hand protection : Gloves  
Eye protection : Face shield  
Skin and body protection : Corrosion-proof clothing  
Respiratory protection : Full face mask with filter type B. Full face mask with filter type E. High vapour/gas concentration: self-contained respirator

#### 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. Information on basic physical and chemical properties

Physical state : Liquid  
Appearance : Translucent.  
Molecular mass : 36.46 g/mol  
Colour : Colourless.  
Odour : Irritating/pungent odour.  
Odour threshold : No data available  
pH : < 1  
pH solution : No data available  
Relative evaporation rate (butylacetate=1) : No data available  
Relative evaporation rate (ether=1) : No data available  
Melting point : Not applicable  
Freezing point : -30 °C  
Boiling point : No data available  
Flash point : Not applicable  
Auto-ignition temperature : Not applicable  
Decomposition temperature : No data available  
Flammability (solid, gas) : Not applicable  
Vapour pressure : No data available  
Vapour pressure at 50 °C : No data available  
Relative vapour density at 20 °C : No data available  
Relative density : 1.2  
Relative density of saturated gas/air mixture : No data available  
Density : 1190 kg/m<sup>3</sup>  
Relative gas density : No data available  
Solubility : Soluble in water.  
Water: complete  
Partition coefficient n-octanol/water (Log Pow) : 0.25 (QSAR)  
Partition coefficient n-octanol/water (Log Kow) : No data available

# HYDROCHLORIC ACID 32%

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According to SANS 10234:2008 and SANS 11014:2010

Viscosity, kinematic	: 1.933 mm <sup>2</sup> /s
Viscosity, dynamic	: 2.3 mPa·s (15 °C)
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available
Lower explosive limit (LEL)	: No data available
Upper explosive limit (UEL)	: No data available

### 9.2. Other information

Minimum ignition energy	: Not applicable
VOC content	: 0 %
Other properties	: Gas/vapour heavier than air at 20°C. Producing fumes/mist. Acid reaction.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

On exposure to air: release of corrosive mist. Reacts violently with (some) bases. Reacts exothermically with many compounds.

### 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

Reacts with (strong) oxidizers: release of (highly) toxic gases/vapours (chlorine). Reacts with (some) metals: release of highly flammable gases/vapours (hydrogen). Decomposes on exposure to temperature rise: release of (highly) toxic gases/vapours (chlorine).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Causes severe skin burns. pH: < 1
Serious eye damage/irritation	: Assumed to cause serious eye damage pH: < 1
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

### HYDROCHLORIC ACID 32% (7647-01-0)

Viscosity, kinematic	1.933 mm <sup>2</sup> /s
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Potential adverse human health effects and symptoms : Causes severe skin burns. May cause respiratory irritation. Causes serious eye damage.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008. Before neutralisation, the product may represent a danger to aquatic organisms.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Slightly harmful to fishes. Groundwater pollutant. Mild water pollutant (surface water). pH shift. Toxic to plankton.

# HYDROCHLORIC ACID 32%

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According to SANS 10234:2008 and SANS 11014:2010

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

HYDROCHLORIC ACID 32% (7647-01-0)	
LC50 fish 1	282 mg/l (96 h, Gambusia affinis, Pure substance)
EC50 Daphnia 1	< 56 mg/l (72 h, Daphnia magna, Pure substance)
Partition coefficient n-octanol/water (Log Pow)	0.25 (QSAR)

### 12.2. Persistence and degradability

HYDROCHLORIC ACID 32% (7647-01-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

### 12.3. Bioaccumulative potential

HYDROCHLORIC ACID 32% (7647-01-0)	
Partition coefficient n-octanol/water (Log Pow)	0.25 (QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

### 12.4. Mobility in soil

HYDROCHLORIC ACID 32% (7647-01-0)	
Mobility in soil	No additional information available
Partition coefficient n-octanol/water (Log Pow)	0.25 (QSAR)
Ecology - soil	No (test) data on mobility of the components available. May be harmful to plant growth, blooming and fruit formation.

### 12.5. Other adverse effects

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




## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Product/Packaging disposal recommendations : Treat using the best available techniques before discharge into drains or the aquatic environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an authorized dump (Class I). Dehydrate/make insoluble. Immobilize the toxic or harmful components.  
Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

## SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
<b>14.1. UN number</b>		
1789	1789	1789
<b>14.2. Proper Shipping Name</b>		
HYDROCHLORIC ACID	HYDROCHLORIC ACID	Hydrochloric acid
<b>14.3. Transport hazard class(es)</b>		
8	8	8
		 Not applicable
<b>14.4. Packing group</b>		
II	II	II
<b>14.5. Environmental hazards</b>		
Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No

# HYDROCHLORIC ACID 32%

## Safety Data Sheet

According to SANS 10234:2008 and SANS 11014:2010

SANS	IMDG	IATA
	:	
No supplementary information available		

### 14.6. Special precautions for user

#### - SANS

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

#### - IMDG

Transport regulations (IMDG)	: Subject to the provisions
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
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

Transport regulations (IATA)	: Subject to the provisions
PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y840
PCA limited quantity max net quantity (IATA)	: 0.5L
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
ERG code (IATA)	: 8L

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

Not applicable

## SECTION 15: Regulatory information

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

Regulatory reference	: SANS 10234:2008; SANS 11014:2010; SANS 10228:2012; SANS 10229:2010; SANS 10232(1,2,4), SANS 10231:2018; Occupational Health and Safety Act 85 of 1993; National Road Traffic Act 93 of 1996.
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## SECTION 16: Other information

Issue date	: 06/02/2020
Revision date	: 06/02/2025

Full text of H-statements:

H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

SDS South Africa

The data provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge. The data relates to the specific product as named and is intended as a guide to the safe handling of the product in all its facets. The data may no longer be valid if the product is used in any process or in combination with other products. This SDS is not a quality specification nor any form of guarantee.