

SECTION 1: Identification

1.1. Product identifier

Trade name	: HYDROXYLAMMONIUM CHLORIDE
Type of product	: Hygroscopic substance. Preventive measures apply to the substance in dry state only
EC-No.	: 226-798-2
EC Index-No.	: 612-123-00-2
CAS-No.	: 5470-11-1
UN-No. (ADR)	: 3260
Product code	: 108130xxx
Formula	: NH ₂ OH.HCl

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

Recommended uses and restrictions	: For laboratory use only
-----------------------------------	---------------------------

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 - www.labchem.co.za

1.4. Emergency telephone number

Emergency number	: +27 11 452 1116
------------------	-------------------

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Corrosive to metals, Category 1	H290
Acute toxicity (oral), Category 4	H302
Acute toxicity (dermal), Category 4	H312
Skin corrosion/irritation, Category 2	H315
Skin sensitisation, Category 1	H317
Carcinogenicity, Category 2	H351
Specific target organ toxicity — Repeated exposure, Category 2	H373
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Full text of H statements : see section 16	

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS-ZA) :



GHS05

GHS07

GHS08

GHS09

Signal word (GHS-ZA)	: Warning
Hazard statements (GHS-ZA)	: H290 - May be corrosive to metals. H302+H312 - Harmful if swallowed or in contact with skin H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H351 - Suspected of causing cancer. H373 - May cause damage to organs through prolonged or repeated exposure. H400 - Very toxic to aquatic life.
Precautionary statements (GHS-ZA)	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P234 - Keep only in original packaging. 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. P270 - Do not eat, drink or smoke when using this product. P272 - Contaminated work clothing should not be allowed out of the workplace.

HYDROXYLAMMONIUM CHLORIDE

Safety Data Sheet

According to SANS 10234:2019 and SANS 11014:2010

P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P390 - Absorb spillage to prevent material damage.
P391 - Collect spillage.
P405 - Store locked up.
P406 - Store in corrosive resistant container with a resistant inner liner.
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 environmental effects : May be corrosive to metals,Suspected of causing cancer,May cause damage to organs through prolonged or repeated exposure,Harmful in contact with skin,Harmful if swallowed,Causes skin irritation,May cause an allergic skin reaction,Very toxic to aquatic life.

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
hydroxylammonium chloride (Main constituent)	(CAS-No.) 5470-11-1	≥ 98	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Skin Sens. 1, H317 Carc. 2, H351 STOT RE 2, H373 Aquatic Acute 1, H400

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. IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.

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.

First-aid measures after skin contact : Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.

First-aid measures after ingestion : Rinse mouth with water. Call Poison Information Centre (www.big.be/antigif.html). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of lung oedema. Respiratory difficulties. Symptoms similar to those listed under ingestion.

Symptoms/effects after skin contact : Tingling/irritation of the skin. Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Irritation of the eye tissue. ON CONTINUOUS EXPOSURE/CONTACT: Corrosion of the eye tissue. Permanent eye damage.

Symptoms/effects after ingestion : Nausea. Vomiting. Gastrointestinal complaints. Methemoglobinemia. Feeling of weakness. Headache. Dizziness. Blue/grey discolouration of the skin. Respiratory difficulties. Cramps/uncontrolled muscular contractions.

HYDROXYLAMMONIUM CHLORIDE

Safety Data Sheet

According to SANS 10234:2019 and SANS 11014:2010

Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Methemoglobinemia. Symptoms similar to those listed under acute toxicity.
Potential adverse human health effects and symptoms	: Obstructs oxygen absorption. Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation.

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	: Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam. Water spray. Dry powder. Foam.
Unsuitable extinguishing media	: Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: INDIRECT FIRE HAZARD: Fire/heat: explosive hazard bigger than fire hazard. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: DIRECT EXPLOSION HAZARD: Risk of explosion by heating. Risk of explosion by sparks. Risk of explosion by shock or friction. Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD: may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".
Hazardous decomposition products in case of fire	: On burning: release of toxic and corrosive gases/vapours (nitrous vapours, hydrogen chloride).

5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety. Extinguish/cool from behind cover/unmanned monitors. Do not move the load if exposed to heat. Depending on nature/size of load: consider extinguishment. Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water.
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. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit.
Emergency procedures	: Ventilate spillage area. Notify experts. Mark the danger area. Prevent dust cloud formation. Consider evacuation. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Keep containers closed. Prevent shock/impact. Wash contaminated clothes. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin, eyes and clothing.

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 solid spill. Cover with a water blanket. Knock down/dilute dust cloud with water spray. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills. Collect spillage.
Methods for cleaning up	: Mechanically recover the product. Start with disposal only in the presence of experts. Wet with an excess of water. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Do not use compressed air for pumping over spills. Store under water in containers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

HYDROXYLAMMONIUM CHLORIDE

Safety Data Sheet

According to SANS 10234:2019 and SANS 11014:2010

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid raising dust. Use spark-/explosionproof appliances and lighting system. Use earthed equipment. Keep away from naked flames/heat. Keep away from ignition sources/sparks. 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. Handle and open the container with care. Avoid shock and friction. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Keep container tightly closed. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing.
- Hygiene measures : Observe very strict hygiene - avoid contact. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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 in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up. Store in a well-ventilated place. Keep cool.
- Storage area : Store in a cool area. Store in a dry area. Fireproof storeroom. Keep locked up. Unauthorized persons are not admitted. Provide the tank with earthing. Meet the legal requirements.
- Incompatible materials : Metals.
- Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) bases. metals. water/moisture.
- Special rules on packaging : SPECIAL REQUIREMENTS: watertight. hermetical. dry. clean. shock-absorbing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : MATERIAL TO AVOID: steel. aluminium.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

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)

- Hand protection : Gloves
- Eye protection : Face shield
- Skin and body protection : Protective clothing. In case of dust production: dustproof clothing
- Respiratory protection : Dust production: dust mask with filter type P2

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 : Solid
- Appearance : Crystalline solid. Crystalline powder.
- Molecular mass : 69.49 g/mol
- Colour : White.
- Odour : Odourless.
- Odour threshold : No data available
- pH : 3.2 (1.4 %)
- pH solution : No data available
- Relative evaporation rate (butylacetate=1) : No data available
- Relative evaporation rate (ether=1) : No data available

HYDROXYLAMMONIUM CHLORIDE

Safety Data Sheet

According to SANS 10234:2019 and SANS 11014:2010

Melting point	: 152 °C
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 152 °C
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: Not applicable
Relative density	: 1.7 (17 °C)
Relative density of saturated gas/air mixture	: No data available
Density	: 1670 kg/m ³ (17 °C)
Relative gas density	: No data available
Solubility	: Soluble in water. Soluble in ethanol. Soluble in methanol. Soluble in glycerol. Soluble in propyleneglycol. Water: 95 g/100ml Ethanol: 437 g/100ml
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	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable
Lower explosive limit (LEL)	: No data available
Upper explosive limit (UEL)	: No data available

9.2. Other information

VOC content	: 0 %
Other properties	: Hygroscopic. Acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

May be corrosive to metals. Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Under confinement: risk of explosion on exposure to temperature rise. Decomposes slowly in moist air. Decomposes slowly on exposure to water (moisture).

10.2. Chemical stability

Unstable on exposure to moisture.

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

metals.

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)	: Harmful if swallowed.
Acute toxicity (dermal)	: Harmful in contact with skin.
Acute toxicity (inhalation)	: Not classified

HYDROXYLAMMONIUM CHLORIDE (5470-11-1)

LD50 oral rat	200 – 2000 mg/kg (Rat, Oral)
LD50 dermal rabbit	400 – 2000 mg/kg (Rabbit, Dermal)

Skin corrosion/irritation	: Causes skin irritation. pH: 3.2 (1.4 %)
---------------------------	--

HYDROXYLAMMONIUM CHLORIDE

Safety Data Sheet

According to SANS 10234:2019 and SANS 11014:2010

Serious eye damage/irritation	: Not classified pH: 3.2 (1.4 %)
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Obstructs oxygen absorption. Harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Dangerous for the environment. Very toxic to aquatic life.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Very toxic to aquatic organisms. Groundwater pollutant. Severe water pollutant (surface water). Inhibition of activated sludge. pH shift.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

HYDROXYLAMMONIUM CHLORIDE (5470-11-1)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

HYDROXYLAMMONIUM CHLORIDE (5470-11-1)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

HYDROXYLAMMONIUM CHLORIDE (5470-11-1)	
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

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: 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. Specific incineration with energy recovery. Do not discharge to wastewater treatment installation.
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
14.1. UN number		
3260	3260	3260
14.2. Proper Shipping Name		
CORROSIVE SOLID, ACIDIC, INORGANIC,	CORROSIVE SOLID, ACIDIC, INORGANIC,	Corrosive solid, acidic, inorganic, n.o.s.

HYDROXYLAMMONIUM CHLORIDE

Safety Data Sheet

According to SANS 10234:2019 and SANS 11014:2010

SANS	IMDG	IATA
N.O.S.	N.O.S.	
14.3. Transport hazard class(es)		
8	8	8
 	 	  Not applicable
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : No :	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

- SANS

Transport regulations (UN)	: Subject to the provisions
Special provisions (SANS)	: 274
Limited quantities (SANS)	: 1 kg
Limited quantities (SANS)	: 1 kg
Packagings, large packagings and IBCs	: P002, IBC08
Packing instructions (SANS)	
Packagings, large packagings and IBCs Special packing instructions (SANS)	: B2, B4
Portable tank and bulk containers instructions (SANS)	: T3
Portable tank and bulk container special provisions (SANS)	: TP33

- IMDG

Transport regulations (IMDG)	: Subject to the provisions
Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 1 kg
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B21, B4
Tank instructions (IMDG)	: T3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	: B
Properties and observations (IMDG)	: 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)	: Y844
PCA limited quantity max net quantity (IATA)	: 5kg
PCA packing instructions (IATA)	: 859
PCA max net quantity (IATA)	: 15kg
CAO packing instructions (IATA)	: 863
CAO max net quantity (IATA)	: 50kg
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

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

Not applicable

HYDROXYLAMMONIUM CHLORIDE

Safety Data Sheet

According to SANS 10234:2019 and SANS 11014:2010

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.

SECTION 16: Other information

Issue date : 02/07/2020

Revision date : 02/07/2025

Full text of H-statements:

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

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.