

Material Safety Data Sheet

Version:01

Revision Date 6/5/2025

Section 1. Product Information and Company Identification			
Product name	Hydroxylamine Hydrochloride		
Mol. formula	H3NO · HCl	CAS No.	5470-11-1
Mol.wt	69,49 g/mol		
Manufacturer name	Pioneers for laboratory chemicals		
Brand name	Piochem		
Address	Area 540, Industrial Zone 6 th October city Giza, Egypt.		
Website	www.piochem.com		
E-mail	info@piochem.com		
Phone number	+201225728304 , +201023932115		

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Corrosive to metals (Category 1), H290
 Acute toxicity, Oral (Category 4), H302
 Acute toxicity, Dermal (Category 4), H312
 Skin irritation (Category 2), H315
 Eye irritation (Category 2), H319
 Skin sensitisation (Category 1), H317
 Carcinogenicity (Category 2), H351
 Specific target organ toxicity - repeated exposure (Category 2), H373
 Acute aquatic toxicity (Category 1), H400
 Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

E	Explosive	R 2 R40
Xn	Harmful	R21/22, R48/22
Xi	Irritant	R36/38 R43
N	Dangerous for the	R50

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Warning

Hazard statement(s)

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.

H319

Causes serious eye irritation.

H351

Suspected of causing cancer.

H373

May cause damage to organs through prolonged or repeated exposure.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P273

Avoid release to the environment.

P280

Wear protective gloves/ protective clothing.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501

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

Supplemental Hazard Statements

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Hydroxylammonium chloride

Formula : $\text{H}_3\text{NO} \cdot \text{HCl}$

Molecular weight : 69,49 g/mol

CAS-No. : 5470-11-1

EC-No. : 226-798-2

Index-No. : 612-123-00-2

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Hydroxylamine hydrochloride		
CAS-No. 5470-11-1	Met. Corr. 1; Acute Tox. 4;	<= 100 %
EC-No. 226-798-2	Skin Irrit. 2; Eye Irrit. 2; Skin	
Index-No. 612-123-00-2	Sens. 1; Carc. 2; STOT RE 2;	
	Aquatic Acute 1; Aquatic Chronic 1; H290, H302 + H312, H315, H317, H319, H351, H373, H410	

Hazardous ingredients according to Directive 1999/45/EC

Component	Classification	Concentration
Hydroxylamine hydrochloride		
CAS-No. 5470-11-1	E, Xn, N, Carc.Cat.3, R 2 -	<= 100 %

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NOx), Hydrogen chloride gas
Container explosion may occur under fire conditions.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

May explode when heated.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Air and moisture sensitive.

Storage class (TRGS 510): Other explosive hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|--|---|
| a) Appearance | Form: Crystalline powder, Chunks
Colour: white |
| b) Odour | No data available |
| c) Odour Threshold | No data available |
| d) pH | 2,5 - 3,5 at 50 g/l at 20 °C |
| e) Melting point/freezing point | Melting point/range: 155 - 157 °C - dec. |
| f) Initial boiling point and boiling range | No data available |

g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Vapour density	No data available
m) Relative density	1,67 g/cm ³ at 25 °C
n) Water solubility	soluble
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	> 150 °C - Heating may cause an explosion.
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Air Exposure to moisture. May be unstable at temperatures above: 75° C

10.5 Incompatible materials

Strong oxidizing agents, phosphorous pentachloride, Calcium, Anhydrous copper(II) sulfate

10.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 600 mg/kg

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

Germ cell mutagenicity

Rat

Embryo

Morphological transformation.

Hamster

Lungs

Sister chromatid exchange

Carcinogenicity

Suspected human carcinogens

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

Additional Information

RTECS: NC3675000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - 1 - 10 mg/l - 48,0 h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 2923

IMDG: 2923

IATA: 2923

14.2 UN proper shipping name

ADR/RID: CORROSIVE SOLID, TOXIC, N.O.S. (Hydroxylamine hydrochloride)
 IMDG: CORROSIVE SOLID, TOXIC, N.O.S. (Hydroxylamine hydrochloride)
 IATA: Corrosive solid, toxic, n.o.s. (Hydroxylamine hydrochloride)

14.3 Transport hazard class(es)

ADR/RID: 8 (6.1) IMDG: 8 (6.1) IATA: 8 (6.1)

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No data available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information
Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
Eye Irrit.	Eye irritation
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H302 + H312	Harmful if swallowed or in contact with skin
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

Full text of R-phrases referred to under sections 2 and 3

E	Explosive
N	Dangerous for the environment
Xn	Harmful
R 2	Risk of explosion by shock, friction, fire or other sources of ignition.
R21/22	Harmful in contact with skin and if swallowed.
R36/38	Irritating to eyes and skin.
R40	Limited evidence of a carcinogenic effect.
R43	May cause sensitisation by skin contact.
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50	Very toxic to aquatic organisms.