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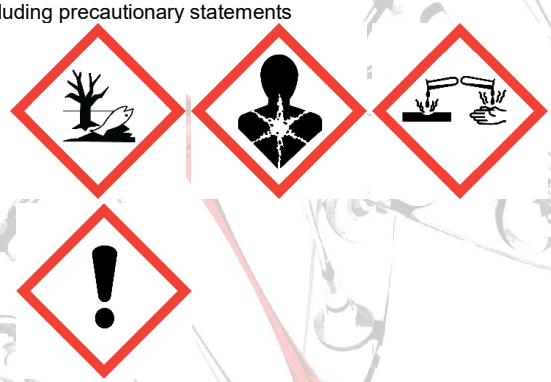
----------ISO 9001: 2015----------

MATERIAL SAFETY DATA SHEET

1.Identification
1.1GHS Product identifier
Hydroxylamine hydrochloride, GR 99%+
Code H 1607

2.Hazard identification
2.1Classification of the substance or mixture
Corrosive to metals, Category 1
Acute toxicity - Oral, Category 4
Acute toxicity - Dermal, Category 4
Skin irritation, Category 2
Eye irritation, Category 2
Skin sensitization, Category 1
Carcinogenicity, Category 2
Specific target organ toxicity \u2013 repeated exposure, Category 2
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1
2.2GHS label elements, including precautionary statements
Pictogram(s)



Signal word	Warning
Hazard statement(s)	H290 May be corrosive to metals H302 Harmful if swallowed H312 Harmful in contact with skin H315 Causes skin irritation H319 Causes serious eye irritation H317 May cause an allergic skin reaction H351 Suspected of causing cancer H400 Very toxic to aquatic life
Precautionary statement(s)	
Prevention	P234 Keep only in original packaging. P264 Wash ... thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/protective clothing/eye protection/face protection. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P272 Contaminated work clothing should not be allowed out of the workplace. P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P273 Avoid release to the environment.
Response	P390 Absorb spillage to prevent material damage. P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/\u2026if you feel unwell. P330 Rinse mouth. P302+P352 IF ON SKIN: Wash with plenty of water/...

	P312 Call a POISON CENTER/doctor/\u2026if you feel unwell. P321 Specific treatment (see ... on this label). P362+P364 Take off contaminated clothing and wash it before reuse. P332+P313 If skin irritation occurs: Get medical advice/attention. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P308+P313 IF exposed or concerned: Get medical advice/ attention. P314 Get medical advice/attention if you feel unwell. P391 Collect spillage.
Storage	P406 Store in a corrosion resistant/...container with a resistant inner liner. P405 Store locked up.
Disposal	P501 Dispose of contents/container to ...

2.3Other hazards which do not result in classification
none

3.Composition/information on ingredients
3.1Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Hydroxylamine hydrochloride	Hydroxylamine hydrochloride	5470-11-1	none	100%

4.First-aid measures
4.1Description of necessary first-aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
Fresh air, rest. Refer for medical attention.
In case of skin contact
Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention .
In case of eye contact
First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
If swallowed
Rinse mouth. Give a slurry of activated charcoal in water to drink. Refer for medical attention .
4.2Most important symptoms/effects, acute and delayed
SYMPTOMS: Symptoms of exposure to this chemical include eye, skin and mucous membrane irritation; burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting and methemoglobinemia. Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi; chemical pneumonitis and pulmonary edema.
ACUTE/CHRONIC HAZARDS: This chemical is very irritating to skin, eyes, and mucous membranes. When heated to decomposition, it emits toxic fumes. This compound may react violently when heated to temperatures above 115\u00b0C.
4.3Indication of immediate medical attention and special treatment needed, if necessary
no data available

5.Fire-fighting measures
5.1Extinguishing media
Suitable extinguishing media
Fires involving this material can be controlled using a dry chemical, carbon dioxide or Halon extinguisher.
5.2Specific hazards arising from the chemical
Flash point data for this chemical are not available; however, it is probably combustible.
5.3Special protective actions for fire-fighters
Wear self-contained breathing apparatus for firefighting if necessary.

6.Accidental release measures
6.1Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. 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.
6.2Environmental precautions
Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Do NOT wash away into sewer.
6.3Methods and materials for containment and cleaning up
Pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7.Handling and storage

7.1Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.
7.2Conditions for safe storage, including any incompatibilities
Dry.

8.Exposure controls/personal protection
8.1Control parameters
Occupational Exposure limit values
no data available
Biological limit values
no data available
8.2Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
8.3Individual protection measures, such as personal protective equipment (PPE)
Eye/face protection
Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection
Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. 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. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Respiratory protection
Wear dust mask when handling large quantities.
Thermal hazards
no data available

9.Physical and chemical properties

Physical state	Colorless or off-white crystalline solid
Colour	no data available
Odour	no data available
Melting point/ freezing point	151\u00b0C(dec.)(lit.)
Boiling point or initial boiling point and boiling range	215\u00b0C/20mmHg(lit.)
Flammability	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit / flammability limit	no data available
Flash point	-2\u00b0C(lit.)
Auto-ignition temperature	no data available
Decomposition temperature	at 151-152\u00b0C\u00b0C
pH	no data available
Kinematic viscosity	no data available
Solubility	In water:560 g/L (20 \u00baC)
Partition coefficient n-octanol/water (log value)	no data available
Vapour pressure	no data available
Density and/or relative density	1.67g/mLat 25\u00b0C(lit.)
Relative vapour density	no data available
Particle characteristics	no data available

10.Stability and reactivity
10.1Reactivity
no data available
10.2Chemical stability
Stable under recommended storage conditions.
10.3Possibility of hazardous reactions
A reducing agent. Reacts with bases and oxidizing agents.
10.4Conditions to avoid
no data available
10.5Incompatible materials
no data available
10.6Hazardous decomposition products
no data available

11.Toxicological information
Acute toxicity

Oral: no data available
Inhalation: no data available
Dermal: no data available
Skin corrosion/irritation
no data available
Serious eye damage/irritation
no data available
Respiratory or skin sensitization
no data available
Germ cell mutagenicity
no data available
Carcinogenicity
no data available
Reproductive toxicity
no data available
STOT-single exposure
no data available
STOT-repeated exposure
no data available
Aspiration hazard
no data available

12.Ecological information
12.1Toxicity
Toxicity to fish: no data available
Toxicity to daphnia and other aquatic invertebrates: no data available
Toxicity to algae: no data available
Toxicity to microorganisms: no data available
12.2Persistence and degradability
no data available
12.3Bioaccumulative potential
no data available
12.4Mobility in soil
no data available
12.5Other adverse effects
no data available

13.Disposal considerations
13.1Disposal methods
Product
The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
Contaminated packaging
Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14.Transport information
14.1UN Number
ADR/RID: UN2923 IMDG: UN2923 IATA: UN2923
14.2UN Proper Shipping Name
ADR/RID: CORROSIVE SOLID, TOXIC, N.O.S.
IMDG: CORROSIVE SOLID, TOXIC, N.O.S.
IATA: CORROSIVE SOLID, TOXIC, N.O.S.
14.3Transport hazard class(es)
ADR/RID: 8 IMDG: 8 IATA: 8
14.4Packing group, if applicable
ADR/RID: III IMDG: III IATA: III
14.5Environmental hazards
ADR/RID: yes IMDG: yes IATA: yes
14.6Special precautions for user
no data available
14.7Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
no data available

15.Regulatory information
15.1Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
Hydroxylamine hydrochloride	Hydroxylamine hydrochloride	5470-11-1	none
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.

EC Inventory	Listed.
United States Toxic Substances Control Act (TSCA) Inventory	Listed.
China Catalog of Hazardous chemicals 2015	Not Listed.
New Zealand Inventory of Chemicals (NZIoC)	Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed.
Vietnam National Chemical Inventory	Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Listed.

Section 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.