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MATERIAL SAFETY DATA SHEET (MSDS)
HYDROXYLAMINE HYDROCHLORIDE (FOR SYNTHESIS)

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : HYDROXYLAMINE HYDROCHLORIDE (FOR SYNTHESIS)

Product code : H0109600100

Identification of the product : HYDROXYLAMINE HYDROCHLORIDE 98%
CAS No: 5470-11-1

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

Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification
SUVCHEM
Chaitanya Tower, 2nd Floor, Office # 206,
Siddharth Nagar, S.V. Road,
Goregaon (West), Mumbai - 400062,
Maharashtra, India.
Contact: +91 22 28725393 / 94 / 95
Email ID: info@suvchem.com/care@suvchem.com

1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [Office hours]

2. Hazards identification -DSD

2.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Classification : Xn; R21/22-48/22
Xi; R36/38
R43
N; R50

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302
Acute toxicity, dermal - Category 4 - Warning (CLP : Acute Tox. 4) H312

Environmental hazards : Hazardous to the aquatic environment - Acute hazard - Category 1 - Warning (CLP : Aquatic Acute 1) H400

2.2. Label elements

Labelling EC 67/548 or EC 1999/45

MATERIAL SAFETY DATA SHEET (MSDS)

HYDROXYLAMINE HYDROCHLORIDE (FOR SYNTHESIS)

2. Hazards identification -DSD (continued)

Symbol(s)



Symbol(s)

: Xn : Harmful
 N : Dangerous for the environment

R Phrase(s)

:
 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 sensitization by skin contact.
 R48/22 : Harmful : danger of serious damage to health by prolonged exposure if swallowed.
 R50 : Very toxic to aquatic organisms.

S Phrase(s)

: S36/37 : Wear suitable protective clothing and gloves.
 S61 : Avoid release to the environment. Refer to special instructions/Safety data sheets.

Labelling Regulation EC 1272/2008 (CLP)

Hazard pictograms



Signal words

: Warning

Hazard statements

: H302 : Harmful if swallowed.
 H312 : Harmful in contact with skin.
 H400 : Very toxic to aquatic life.

Precautionary statements

• Prevention

: P280: Wear protective gloves, protective clothing, eye protection, face protection.
 P273: Avoid release to the environment.
 P264: Wash thoroughly after handling.
 P270: Do not eat, drink or smoke when using this product.

• Response

: P302+P352: IF ON SKIN : Wash with plenty of soap and water.
 P301+P312: IF SWALLOWED : Call a POISON CENTER or doctor if you feel unwell.
 P391: Collect spillage.
 P363: Wash contaminated clothing before reuse.

• Disposal considerations

: P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Other hazards

: The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

MATERIAL SAFETY DATA SHEET (MSDS)

HYDROXYLAMINE HYDROCHLORIDE (FOR SYNTHESIS)

3. Composition/information on ingredients

Substance / Preparation : HYDROXYLAMINE HYDROCHLORIDE 98% Substance.

Contains no other components or impurities which will influence the classification of the product.

4. First aid measures

4.1. Description of first aid measures

Inhalation : Assure fresh air breathing. Allow the victim to rest.

Skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Immediately call a POISON CENTER or doctor. Specific treatment (see on this label). Wash with plenty of soap and water. Wash contaminated clothing before reuse.

Eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

Ingestion : Obtain emergency medical attention. Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting.

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

Symptoms relating to use : Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Swallowing a small quantity of this material will result in serious health hazard.

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

General information : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

Surrounding fires : Use water spray or fog for cooling exposed containers.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products : Under fire conditions, hazardous fumes will be present.

5.3. Advice for fire-fighters

MATERIAL SAFETY DATA SHEET (MSDS)

HYDROXYLAMINE HYDROCHLORIDE (FOR SYNTHESIS)

5. Fire-fighting measures (continued)

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|--------------------------------|--|
| Protection against fire | : Do not enter fire area without proper protective equipment, including respiratory protection. |
| Special procedures | : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment. |

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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|------------------------------------|---|
| For emergency responders | : Equip cleanup crew with proper protection.
Ventilate area. |
| For non-emergency personnel | : Evacuate unnecessary personnel. |

6.2. Environmental precautions

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|----------------------------------|---|
| Environmental precautions | : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.
Avoid release to the environment. |
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6.3. Methods and material for containment and cleaning up

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|-------------------------|---|
| Clean up methods | : On land, sweep or shovel into suitable containers. Minimize generation of dust.
Store away from other materials. |
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6.4. Reference to other sections

See section 8. Exposure controls/personal protection

7. Handling and storage

7.1. Precautions for safe handling

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|--------------------------------------|---|
| Handling | : Do not eat, drink or smoke when using this product. Wash thoroughly after handling. |
| Technical protective measures | : Provide good ventilation in process area to prevent formation of vapour. |

7.2. Conditions for safe storage, including any incompatibilities

- | | |
|----------------------------|--|
| Storage | : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use. |
| Storage - away from | : Strong bases. Strong acids. Sources of ignition. Direct sunlight. |

7.3. Specific end use(s)

MATERIAL SAFETY DATA SHEET (MSDS)

HYDROXYLAMINE HYDROCHLORIDE (FOR SYNTHESIS)

7. Handling and storage (continued)

Specific end use(s) : None.

8. Exposure controls/personal protection

8.1. Exposure controls

Personal protection : Avoid all unnecessary exposure.

- Respiratory protection : Wear approved mask.
- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or safety glasses.
- Others : When using, do not eat, drink or smoke.

8.2. Control parameters

Occupational Exposure Limits : No data available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state at 20 °C	: Solid.
Colour	: White crystalline
Odour	: Odorless
Odour threshold	: No data available.
pH value	: Not applicable.
Melting point [°C]	: 155 - 157 °C
Decomposition point [°C]	: N/A
Critical temperature [°C]	: N/A
Auto-ignition temperature [°C]	: N/A
Flammability (solid, gas)	: N/A
Flash point [°C]	: N/A
Boiling point [°C]	: 305.60C
Initial boiling point [°C]	: N/A
Final boiling point [°C]	: N/A
Evaporation rate	: N/A
Vapour pressure [20°C]	: N/A
Vapour pressure mm/Hg	: N/A
Vapour density	: N/A
Density [g/cm ³]	: 1,67

MATERIAL SAFETY DATA SHEET (MSDS)

HYDROXYLAMINE HYDROCHLORIDE (FOR SYNTHESIS)

9. Physical and chemical properties (continued)

Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: Soluble in water
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: 2.5 - 3.5
Viscosity at 40°C [mm ² /s]	: N/A

9.2. Other information

Explosive properties	: N/A
Explosion limits - upper [%]	: N/A
Explosion limits - lower [%]	: N/A
Oxidising properties	: No data available.

10. Stability and reactivity

10.1. Reactivity

Reactivity	: Not established.
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10.2. Chemical stability

Chemical stability	: Stable under recommended storage conditions.
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10.3. Possibility of hazardous reactions

Hazardous reactions	: Not established.
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10.4. Conditions to avoid

Conditions to avoid	: Direct sunlight. Extremely high or low temperatures.
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10.5. Incompatible materials

Materials to avoid	: Strong acids. Strong bases.
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10.6. Hazardous decomposition products

Hazardous decomposition products	: Fumes. Carbon monoxide. Carbon dioxide.
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MATERIAL SAFETY DATA SHEET (MSDS)

HYDROXYLAMINE HYDROCHLORIDE (FOR SYNTHESIS)

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

- Inhalation : Based on available data, the classification criteria are not met.
- Dermal : Harmful in contact with skin.
- Ingestion : Harmful if swallowed.

Corrosion : Based on available data, the classification criteria are not met.

Irritation : Based on available data, the classification criteria are not met.

Sensitization : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Toxic for reproduction : Based on available data, the classification criteria are not met.

STOT-single exposure : Based on available data, the classification criteria are not met.

STOT-repeated exposure : Based on available data, the classification criteria are not met.

Aspiration hazard : Based on available data, the classification criteria are not met.

12. Ecological information

12.1. Toxicity

Toxicity information : Very toxic to aquatic life.

12.2. Persistence - degradability

Persistence - degradability : Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential : Not established.

12.4. Mobility in soil

Mobility in soil : Not established.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

12.6. Other adverse effects

Environmental precautions : Avoid release to the environment.

MATERIAL SAFETY DATA SHEET (MSDS)

HYDROXYLAMINE HYDROCHLORIDE (FOR SYNTHESIS)

13. Disposal considerations

13.1. Waste treatment methods

General

: Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.
 Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

14. Transport information

14.1. Land transport (ADR-RID)

Proper shipping name : CORROSIVE SOLID, TOXIC, N.O.S.
 UN N° : 2923
 H.I. nr : 86
 ADR - Class : 8
 Labelling - Transport : 8 : Corrosive substance. 6.1 : Toxic substances.



ADR - Classification code : CT2
 ADR - Group : II
 ADR - Packing instructions : P002
 ADR - Limited Quantity : 1 KG
 ADR - Tunnel code : E : Passage forbidden through tunnels of category E.



14.2. Sea transport (IMDG) [English only]

Proper shipping name : CORROSIVE SOLID, TOXIC, N.O.S.
 UN N° : 2923
 IMO-IMDG - Class or division : 8 : Corrosive substance. (6.1 : Toxic substances.)
 IMO-IMDG - Packing group : II
 IMO-IMDG - Packing instructions : P002
 IMO-IMDG - Limited quantities : 1 kg
 IMO-IMDG - Marine pollution : Yes
 EMS-Nr : F-A S-B

MATERIAL SAFETY DATA SHEET (MSDS)

HYDROXYLAMINE HYDROCHLORIDE (FOR SYNTHESIS)

14. Transport information (continued)

14.3. Air transport (ICAO-IATA) [English only]

Proper shipping name	: CORROSIVE SOLID, TOXIC, N.O.S.
UN N°	: 2923
IATA - Class or division	: 8 : Corrosive substance. (6.1 : Toxic substances.)
IATA - Packing group	: II
IATA - Passenger and Cargo Aircraft	: ALLOWED
- Passenger and Cargo - Packing instruction	: 859
- Passenger and Cargo - Maximum Quantity/Packing	: 15 kg
IATA - Cargo only	: ALLOWED
- Cargo only - Packing instruction	: 863
- Cargo only - Maximum Quantity/Packing	: 50 kg
IATA - Limited Quantities	: 5 kg
ERG-Nr	: 8P

15. Regulatory information

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

Safety, health and environmental regulations/legislation specific for the substance or mixture	: Ensure all national/local regulations are observed.
REACH Restrictions - Annex XVII	: The components of this product are not subject to restrictions.
REACH Authorisation - Annex XIV	: The components of this product are not subject to authorization.

15.2. Chemical Safety Assessment

Chemical Safety Assessment	: It has not been carried out.
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16. Other information

Revision	: Revision - See : *
Abbreviations and acronyms	: PBT: persistent, bioaccumulative and toxic. vPvB: very persistent and very bioaccumulative
Sources of key data used	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

MATERIAL SAFETY DATA SHEET (MSDS)
HYDROXYLAMINE HYDROCHLORIDE (FOR SYNTHESIS)

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

DISCLAIMER:

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

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