

Material Safety Data Sheet

Hydroxylamine Sulphate

Section 1 - Product Identification

Synonyms : Hydroxylammonium sulfate
Molecular Weight : 164.14 g/mol
Chemical Formula : $(\text{NH}_3\text{OH})_2\text{SO}_4$
Company Identification : Tradeasia International Pte. Limited
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Recommended use of the chemical and restrictions on use:

Manufacturing of Substances, Laboratory chemicals.

Section 2 – Composition/Information on Ingredients

Product Name	EC Code/CAS No	Concentration
Hydroxylamine Sulphate	233-118-8/10039-54-0	<= 100%

Section 3 – Hazards Identification

3.1 GHS Classification

Corrosive to metals (Category 1)

Acute toxicity, Oral (Category 4)

Acute toxicity, Dermal (Category 4)

Skin irritation (Category 2)

Eye irritation (Category 2)

Skin sensitisation (Category 1)

Carcinogenicity (Category 2)

Specific target organ toxicity - repeated exposure, Oral (Category 2)

Acute aquatic toxicity (Category 1)

3.2 Precautionary Statements

Hazard statement(s)

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.

H319 Causes serious eye irritation.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

H400 Very toxic to aquatic life.

Precautionary statement(s)

Prevention

P201 Obtain special instructions before use.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection.

P281 Use personal protective equipment as required.

Response

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P390 Absorb spillage to prevent material damage.

P391 Collect spillage.

3.3 Other hazards

None.

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

Do NOT induce vomiting. 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

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

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

N.A.

Section 5 – Fire Fighting 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 (NO_x), Sulphur oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

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 section

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.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1, no other specific uses are stipulated

Section 8 – Exposure Controls/Personal Protection

8.1. Control parameters

No available data.

8.2. Appropriate engineering controls

General industrial hygiene practice. Wash hands before breaks and at the end of workday.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Respirator:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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).

Clothing:

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

Gloves:

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.

Eye protection:

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance : Colourless Crystalline Powder

Odour : N.A.

Odour threshold : N.A.

pH @ 20°C : N.A.

Melting point : 170°C – dec.

Boiling point : N.A.

Flash point : N.A.

Evaporation rate : N.A.

Flammability : This product is not flammable.

Upper/lower flammability or explosive limits : No data available

Vapour pressure: No data available

Vapour density : No data available

Relative density : 1.88/cm³ at 20°C – lit,

Solubility in water : 587 g/L at 20°C – soluble

Partition coefficient, n-octanol/water: -3.6 at 25°C

Auto-ignition temperature: No data available

Decomposition Temperature: N.A.

Surface tension: N.A.

Viscosity: No data available

Section 10 – Stability and Reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

No data available

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid:

No data available.

10.5. Incompatible materials

Oxidizing agents

10.6. Hazardous decomposition products

No data available.

Section 11 – Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - male and female - 642 mg/kg

LD50 Dermal - rabbit - male and female - > 1,500 - < 2,000 mg/kg

Skin corrosion/irritation

Skin - rabbit - Irritating to skin. - OECD Test Guideline 404

Serious eye damage/eye irritation

Eyes - rabbit - No eye irritation - 24 h - OECD Test Guideline 405

Respiratory or skin sensitisation

Maximisation Test - guinea pig - May cause sensitisation by skin contact. - OECD Test Guideline 406

Germ cell mutagenicity

Genotoxicity in vivo - mouse - male - Intraperitoneal - negative

Carcinogenicity

Carcinogenicity - rat - male and female - Oral

Endocrine: Adrenal cortex hyperplasia.

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

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation Harmful if inhaled. Causes respiratory tract irritation.

Ingestion Harmful if swallowed.

Skin Harmful if absorbed through skin. Causes skin irritation.

Eyes Causes serious eye irritation.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.,
Cough, Shortness of breath, Headache, Nausea

Additional Information

RTECS: NC5425000

Section 12 – Ecological Information

12.1 Toxicity

Toxicity to fish mortality LC50 - Pimephales promelas (fathead minnow) - 7.2 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 1.62 mg/l - 48 h, Method: Directive 67/548/EEC, Annex V, C.2.

Toxicity to algae static test EC50 - Desmodesmus subspicatus (Scenedesmus subspicatus) - 0.72 mg/l - 72 h

Toxicity to bacteria Respiration inhibition EC50 - Sludge Treatment - 54 mg/l - 180 min Method: OECD Test Guideline 209

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

no data available

12.6 Other adverse effects

Very toxic to aquatic life.

Section 13 – Disposal Considerations

13.1. Disposal methods

Product:

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

Contaminated packaging:

Dispose of as unused product.

Section 14 – Transport Information

14.1. UN number : ADR/RID: 2865 IMDG: 2865 IATA-DGR: 2865

14.2. UN proper shipping name: ADR/RID, IMDG, IATA-DGR – Hydroxylamine sulphate

14.3. Transport of hazard classes : ADR/RID: 8 IMDG: 8 IATA-DGR: 8

14.4. Packing group : ADR/RID: III IMDG: III IATA-DGR: III

14.5. Environmental hazards : ADR/RID: yes IMDG Marine pollutant: yes IATA-DGR: no

14.6. Special precautions for user : No data available

14.7. Incompatible materials:

Section 15 – Regulatory Information

15.1. Safety, health and environmental regulations for the substance/mixture:

Notification Status

AICS: On the inventory, or in compliance with the inventory

DSL: All components of this product are on the Canadian DSL.

ENCS: Not in compliance with the inventory - Bis(hydroxylammonium) sulphate

IECSC: On the inventory, or in compliance with the inventory

ISHL: Not in compliance with the inventory - Bis(hydroxylammonium) sulphate

KECI: On the inventory, or in compliance with the inventory

NZIoC: On the inventory, or in compliance with the inventory

PICCS: On the inventory, or in compliance with the inventory

Section 16 : Additional Information

16.1. Disclaimer of Liability

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