



SAFETY DATA SHEET

Preparation Date: No data available Revision Date: 02/13/2015 Revision Number: G1

Product identifier

Product code: H2357

Product Name: HYDROXYLAMINE SULFATE, REAGENT, ACS

Other means of identification

Synonyms: No information available

CAS #: 10039-54-0
RTECS # NC5425000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available. Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp

14422 South San Pedro St.

Gardena, CA 90248 (310) 516-8000

Order Online At: https://www.spectrumchemical.com

Emergency telephone numberChemtrec 1-800-424-9300Contact Person:Martin LaBenz (West Coast)Contact Person:Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| Acute toxicity - Oral | Category 4 |
|-----------------------------------|------------|
| Acute toxicity - Dermal | Category 4 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |
| Skin sensitization | Category 1 |
| Corrosive to metals | Category 1 |

Label elements

Product code: H2357 Product name: HYDROXYLAMINE 1 / 12

Warning

Hazard statements

Harmful if swallowed Harmful in contact with skin Causes skin irritation

Causes serious eve irritation

May cause an allergic skin reaction

May be corrosive to metals



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Very toxic to aquatic life with long lasting effects Very toxic to aquatic life

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Wear protective gloves/protective clothing/eye protection/face protection

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing should not be allowed out of the workplace

Keep only in original container

Precautionary Statements - Response

Specific measures (see .? on this label)

Specific treatment (see .? on this label)

Absorb spillage to prevent material damage

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water

Call a POISON CENTER or doctor/physician if you feel unwell

Take off contaminated clothing and wash before reuse

If skin irritation or rash occurs: Get medical advice/attention

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Precautionary Statements - Storage

Store in corrosive resistant/ .? container with a resistant inner liner

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Product code: H2357 Product name: HYDROXYLAMINE 2 / 12

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % | Trade Secret |
|-------------------------------------|------------|----------|--------------|
| Hydroxylamine Sulfate 10039-54-0 | 10039-54-0 | 100 | * |

4. FIRST AID MEASURES

First aid measures

General Advice: Poison information centers in each State capital city can provide additional

assistance for scheduled poisons (13 1126)

Skin Contact: Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for

at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention

is required. Call a physician or Poison Control Centre immediately.

Eye Contact: Flush eye with water for 15 minutes. Get medical attention.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an

unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms Causes eye irritation. Eye contact may result in redness or pain. Causes skin irritation. Skin

contact may result in redness, pain, inflammation, itching, scaling. Harmful if swallowed.

Harmful in contact with skin. May cause allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: No information available.

Specific hazards: May be combustible at high temperatures

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus

pressure-demand, MSHA/NIOSH (approved or equivalent)

and full protective gear

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eves

and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all

sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering

drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containmentStop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning upSweep up and shovel into suitable containers for disposal. Clean contaminated

surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice:

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. May corrode metallic surfaces. Do not store in uncoated metallic containers.

Incompatible Materials:

Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

| Components | OSHA | NIOSH | ACGIH | AIHA WHEEL |
|-----------------------|------|-------|-------|------------|
| Hydroxylamine Sulfate | None | None | None | None |
| 10039-54-0 | | | | |

Canada

| Components | Alberta | British Columbia | Ontario | Quebec |
|-----------------------|---------|------------------|---------|--------|
| Hydroxylamine Sulfate | None | None | None | None |
| 10039-54-0 | | | | |

Australia and Mexico

| Components Australia Mexico |
|-----------------------------|
|-----------------------------|

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SULFATE, REAGENT, ACS

| Hydroxylamine Sulfate | None | None |
|-----------------------|------|------|
| 10039-54-0 | | |

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. Use process enclosures, local

exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure

limit

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Safety glasses Safety glasses with side-shields

Skin and body protection: Long sleeved clothing. Chemical resistant apron. Gloves.

Respiratory protection: Effective dust mask Wear respirator with dust filter.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and

immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:Appearance:Color:Solid.Crystalline.Colorless.

Odor: Taste Molecular/Formula weight:

No information available No information available 164.14

Formula: Flammability: Flash point (°C): No information available No data available

Flashpoint (°C/°F): Flash Point Tested according to: Lower Explosion Limit (%): No information available. No information available

Upper Explosion Limit (%): Autoignition Temperature (°C/°F): pH:

No information available No information available No information available

Melting point/range(°C/°F): Boiling point/range(°C/°F): Decomposition temperature(°C/°F):

No information available No information available 170°C/338°F

Bulk density: Specific gravity: Vapor pressure @ 20°C (kPa):

No information available 1.67 No information available

Density (g/cm3): Evaporation rate: Vapor density:

VOC content (g/L):Odor threshold (ppm):Partition coefficientNo information availableNo information available(n-octanol/water):

No information available

Viscosity: Miscibility: Solubility:

No information available

No information available

Easily soluble in cold water

Very slightly soluble in Methanol

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10. STABILITY AND REACTIVITY

Reactivity

Reacts vigorously with oxidizing agents

Chemical stability

Stability: Stable under recommended storage conditions

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials: Oxidizing agents.

Hazardous decomposition products: No information available

Other Information

Corrosivity: Corrodes on contact with metals

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure: Eyes. Ingestion. Inhalation. Skin.

Acute Toxicity

Component Information

Hydroxylamine Sulfate - 10039-54-0

LD50/oral/rat = = 842 mg/kg Oral LD50 Rat

LD50/oral/mouse = No information available

LD50/dermal/rat = No information available

LD50/dermal/rabbit = 70 mg/kg Dermal LD50Rabbit

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No infomation available

Other LD50 or LC50information = No information available

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = 545mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = No information available

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = 70mg/kg

LD50/dermal/rat

VALUE -Acute Tox Dermal = >500 mg/kgmg/kg

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LC50/inhalation/rat

VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Causes skin irritation. Harmful in contact with skin. May cause allergic skin reaction.

Eye Contact: Causes serious eye irritation.

Inhalation May cause irritation of respiratory tract.

Ingestion Harmful if swallowed.

Aspiration hazard No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity No information available

Sensitization: May cause sensitization by skin contact

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic

| Components | ACGIH - Carcinogens | IARC | NTP | OSHA HCS - Carcinogens | Australia - Prohibited Carcinogenic Substances | Australia - Notifiable Carcinogenic Substances |
|-----------------------|------------------------|------------|------------|---------------------------|--|--|
| Hydroxylamine Sulfate | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |

Reproductive toxicity No data is available

Reproductive Effects:

Developmental Effects:
No information available
No information available
No information available

Specific Target Organ Toxicity

STOT - single exposure
STOT - repeated exposure
Target Organs:

No information available
No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

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12. ECOLOGICAL INFORMATION

No data available. **Ecotoxicity effects:**

Hydroxylamine Sulfate - 10039-54-0

0.72 mg/L EC50 Desmodesmus subspicatus 72 h Freshwater Algae Data:

0.86 mg/L EC50 Desmodesmus subspicatus 96 h

Freshwater Fish Species Data: 1 - 10 mg/L LC50 Pimephales promelas 96 h 1

Water Flea Data: 1.62 mg/L EC50 Daphnia magna 48 h

Persistence and degradability: No information available Bioaccumulative potential: No information available No information available **Mobility:**

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

| Components | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|-----------------------|---------------------------|---------------------------|------------------------------|------------------------|
| Hydroxylamine Sulfate | None | None | None | None |

14. TRANSPORT INFORMATION

DOT

UN-No: UN2865

Proper Shipping Name: Hydroxylamine sulfate

Hazard Class: 8

Subsidiary Risk:

Packing Group: Ш **ERG No:** 154

No data available **Marine Pollutant** DOT RQ (lbs): No information available

Symbol(s):

TDG (Canada)

UN2865 UN-No:

Hydroxylamine sulfate **Proper Shipping Name:**

Hazard Class:

Subsidiary Risk: No information available

Packing Group: Ш

Description: No information available

ADR

UN2865 UN-No:

Proper Shipping Name: Hydroxylamine sulphate

Product code: H2357 Product name: HYDROXYLAMINE 8 / 12

14. TRANSPORT INFORMATION

Hazard Class: 8
Packing Group: |||

Subsidiary Risk:No information availableClassification Code:No information availableDescription:No information availableCEFIC Tremcard No:No information available

IMO / IMDG

UN-No: UN2865

Proper Shipping Name: Hydroxylamine sulphate

Hazard Class: 8

Subsidiary Risk: No information available

Packing Group:

Description:No information availableIMDG Page:No information availableMarine PollutantNo information available

EMS: F-A

MFAG: No information available Maximum Quantity: No information available

RID

UN-No: UN2865

Proper Shipping Name: Hydroxylamine sulphate

Hazard Class: 8

Subsidiary Risk: No information available

Packing Group:

Classification Code: No information available Description: No information available

ICAO

UN-No: UN2865

Proper Shipping Name: Hydroxylamine sulphate

Hazard Class:

Subsidiary Risk: No information available

Packing Group:

Description: No information available

IATA

UN-No: UN2865

Proper Shipping Name: Hydroxylamine sulphate

Hazard Class: 8

Subsidiary Risk: No information available

Packing Group: III ERG Code: 8L

Description: No information available

15. REGULATORY INFORMATION

International Inventories

| Components | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | CHINA | Australia (AICS) | EINECS-No. |
|-----------------------|-----------|----------------------|------------------------|-----------------------------|---------|---------------------|-------------------|
| Hydroxylamine Sulfate | Present | Present KE- 03210 | Present | Present (1)- 724 (1)-375 | Present | Present | Present 233-118-8 |

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U.S. Regulations

Hydroxylamine Sulfate

New Jersey RTK Hazardous Substance List: 1020

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

| Components | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|-----------------------|------------|------------------------|-------------------------------|-------------------------------|
| Hydroxylamine Sulfate | Not Listed | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| Components | CERCLA - Hazardous | Section 302 Extremely | Section 302 Extremely | Section 313 - | Section 313 - Reporting |
|-----------------------|---------------------------|-----------------------|-----------------------|-------------------|-------------------------|
| | Substances and their | Hazardous | Hazardous | Chemical Category | de minimis |
| | Reportable Quantities | Substances and TPQs | Substances and RQs | | |
| Hydroxylamine Sulfate | None | None | None | None | None |

U.S. TSCA

| Components | TSCA Section 5(a)2 - Chemicals With Significant | TSCA 8(d) -Health and Safety Reporting |
|-----------------------|---|--|
| | New Use Rules (SNURS) | |
| Hydroxylamine Sulfate | Not Applicable | Not Applicable |

Canada

WHMIS hazard class:

D2A Very toxic materials E Corrosive material

Hydroxylamine Sulfate

Ε

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

| Components | WHMIS Ingredient Disclosure List - |
|-----------------------|------------------------------------|
| Hydroxylamine Sulfate | 1 % |

Inventory

| Components | | Canada (NDSL) |
|-----------------------|---------|---------------|
| Hydroxylamine Sulfate | Present | Not Listed |

| Components | CEPA Schedule I - Toxic Substances CEPA - 2010 Greenhouse Gases Subject to M | |
|-----------------------|--|------------|
| | | Reporting |
| Hydroxylamine Sulfate | Not listed | Not listed |

EU Classification

Product code: H2357 Product name: HYDROXYLAMINE 10 / 12 SULFATE, REAGENT, ACS

R-phrase(s)
R35 - Causes severe burns.

$\frac{\text{S -phrase(s)}}{\text{none}}$

| Components | Classification | Concentration Limits: | Safety Phrases |
|-----------------------|---|-----------------------|----------------|
| Hydroxylamine Sulfate | E; R2 Xn; R21/22-48/22 Xi; R36/38 Carc.Cat.3; R40 R43 N; R50 | No information | S2 S36/37 S61 |

The product is classified in accordance with Annex VI to Directive 67/548/EEC

| Indication | of danger: |
|------------|------------|
|------------|------------|

C - Corrosive.

16. OTHER INFORMATION

Product code: H2357

Product name: HYDROXYLAMINE SULFATE, REAGENT, ACS

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16. OTHER INFORMATION

Revision Date: 02/13/2015 **Prepared by:** Sonia Owen

Disclaimer: All chemicals may pose unknown hazards and should be used with caution. This

Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet

Product code: H2357 Product name: HYDROXYLAMINE 12 / 12