



SAFETY DATA SHEET

HYDROXYLAMINE NITRATE 38% - 42%

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name HYDROXYLAMINE NITRATE 38% - 42%

REACH Registration number 01-2119981704-29-0000

CAS-No. 13465-08-2

EC No. 236-691-2

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

Identified uses Manufacture of substance reductant in reprocessing of nuclear material.

1.3. Details of the supplier of the safety data sheet

Supplier DSSP Inc.
5301 Longley Ln Suite 118
Reno NV 89511

+775-851-4443

+www.dssptech.com

1.4. Emergency telephone number

EMERGENCY INFORMATION OUT OF OFFICE HOURS CONTACT INFOTRAC 1-800-535-5053

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Not classified.
Human health	Acute Tox. 4 - H302; Acute Tox. 3 - H311; Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Skin Sens. 1 - H317; Carc. 2 - H351; STOT RE 2 - H373
Environment	Aquatic Acute 1 - H400

Classification (1999/45/EEC) T; R24. Xn; R22, R48/22. Carc. Cat. 3; R40. Xi; R36/38. R43. N; R50.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

2.2. Label elements

EC No. 236-691-2

Contains HYDROXYLAMMONIUM NITRATE

Label In Accordance With (EC) No. 1272/2008



Signal Word Danger

Hazard Statements

H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.

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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.
H400	Very toxic to aquatic life.

Precautionary Statements

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/attention.
P313	Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P361	Remove/Take off immediately all contaminated clothing.
P501	Dispose of contents/container to ...

Supplementary Precautionary Statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P260	Do not breathe vapour/spray.
P261	Avoid breathing vapour/spray.
P264	Wash contaminated skin thoroughly after handling.
P321	Specific treatment (see medical advice on this label).
P301+312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P322	Specific measures (see ... on this label).
P330	Rinse mouth.
P332+313	If skin irritation occurs: Get medical advice/attention.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P337	If eye irritation persists:
P361	Remove all contaminated clothing.
P362	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P405	Store locked up.

2.3. Other hazards**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2. Mixtures**

HYDROXYLAMMONIUM NITRATE

30-60%

CAS-No.: 13465-08-2

EC No.: 236-691-2

Classification (EC 1272/2008)

Acute Tox. 4 - H302

Acute Tox. 3 - H311

Skin Irrit. 2 - H315

Eye Irrit. 2 - H319

Skin Sens. 1 - H317

Carc. 2 - H351

STOT RE 2 - H373

Aquatic Acute 1 - H400

Classification (67/548/EEC)

T;R24.

Xn;R48/22,R22.

Carc. Cat. 3;R40.

Xi;R36/38.

N;R50.

E;R2.

R43.

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The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

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EC No. 236-691-2

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation

Move the exposed person to fresh air at once. If respiratory problems, artificial respiration/oxygen. Keep the affected person warm and at rest. Get prompt medical attention.

Ingestion

Drink plenty of water. NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Get medical attention immediately!

Skin contact

Remove contaminated clothes and rinse skin thoroughly with water. Continue to rinse for at least 15 minutes and seek medical attention.

Eye contact

Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

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

General information

The casualty should be transferred to hospital as soon as possible.

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

NO DATA AVAILABLE

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Water spray.

5.2. Special hazards arising from the substance or mixture

Unusual Fire & Explosion Hazards

This product will support combustion but not burn in itself.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Use special protective clothing. Regular protection may not be safe. Cool containers exposed to flames with water until well after the fire is out.

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Do not release chemically contaminated water into drains, soil or surface waters. Sufficient measures must be taken to retain water used for extinguishing. Dispose of contaminated water and soil according to local regulations.

6.3. Methods and material for containment and cleaning up

Stop leak if possible without risk. DO NOT touch spilled material! Absorb with inert, damp, non-combustible material, then flush area with water. Provide ventilation and confine spill. Do not allow runoff to sewer.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. See section 11 for additional information on health hazards. Collect and dispose of spillage as indicated in section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

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Avoid spilling, skin and eye contact. Wear full protective clothing for prolonged exposure and/or high concentrations.

7.2. Conditions for safe storage, including any incompatibilities

Store at moderate temperatures in dry, well ventilated area. Avoid contact with oxidising agents. Protect against physical damage and/or friction.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2. For further information see attached Exposure Scenario.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Ingredient Comments

No exposure limits noted for ingredient(s).

DNEL

Inhalation.	Long Term	Systemic Effects	0.0007	mg/m ³
Industry	Dermal	Long Term	Systemic Effects	0.002 mg/kg/day

PNEC

Freshwater	0.0062	mg/l
Marinewater	0.00062	mg/l
Intermittent release	0.0081	mg/l
STP	0.5	mg/l

8.2. Exposure controls

Protective equipment



Engineering measures

Provide adequate general and local exhaust ventilation.

Respiratory equipment

NIOSH/MSHA-Approved respirator. Self-contained breathing apparatus.

Hand protection

Use protective gloves made of: Butyl rubber. Obtain the appropriate professional advice taking into account of the conditions under which the glove is used. Neoprene gloves are recommended.

Eye protection

Use safety goggles and face shield in case of splash risk. Safety glasses with side shields conforming to EN166

Other Protection

Provide eyewash station and safety shower. Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Wash hands at the end of each work shift and before eating, smoking and using the toilet.

Skin protection

Protection suit must be worn. with hood , neoprene coated

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Colourless.
Odour	Odourless.
Solubility	Soluble in water.
Relative density	1.18 20
Vapour pressure	<7 mmHg 25
pH-Value, Conc. Solution	3

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Partition Coefficient (N-Octanol/Water) log Kow
-3.6

read across Hydroxylamine Sulphate

9.2. Other information

Not available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Avoid exposing to heat and contact with strong oxidising substances. Strong alkalis.

10.5. Incompatible materials

Materials To Avoid

Alkalis and oxidisers. Alkali metals. Other metals or alloys. Ferric Metal

10.6. Hazardous decomposition products

Oxides of: Nitrogen. Ammonia or amines.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxic Dose 1 - LD 50 408mg/kg oral-mouse Hydroxylamine hydrochloride

Toxic Dose 2 - LD 50 200mg/kg oral-cat read accross Hydroxylamine sulphate

Toxicological information

rat-intraperitoneal LD50 139.3 mg/kg hydroxylamine nitrate (klimisch rating 4) mouse-intraperitoneal LD50 ca 1.83mmol/kg (klimisch 3)

Acute toxicity:

Acute Toxicity (Oral LD50)

545 mg/kg

read across: hydroxylamine sulphate

Acute Toxicity (Dermal LD50)

500 mg/kg Rat

read across: hydroxylamine sulphate LD50 70mg/kg skn-rabbit hydroxylamine nitrate

Acute Toxicity (Inhalation LC50)

Not available.

Skin Corrosion/Irritation:

Irritating.

Serious eye damage/irritation:

OECD 405 Cornea score: 0 Iris score 1 Conjunctivae 1.3 out of 3 Moderately Irritating.

Respiratory or skin sensitisation:

Respiratory sensitisation

Guinea Pig

Not sensitising.

Skin sensitisation

Guinea pig maximization test (GPMT): Guinea Pig

Sensitising.

Germ cell mutagenicity:

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Genotoxicity - In Vitro

Gene Mutation:

read across: hydroxylamine hydrochloride

Positive.

bacterial reverse mutation assay: negative (read across hydroxylamine hydrochloride)

Genotoxicity - In Vivo

Chromosome aberration:

Negative.

Carcinogenicity:

rats-female-oral neoplastic effects: yes haemangiosarcomas and haemangiomas in the spleen of animals at 5ppm. read

across: Hydroxylamine sulphate

NOAEL 0.2 mg/kg/day Oral Rat

carcinogen category 2

Reproductive Toxicity:

Reproductive Toxicity - Fertility

One-generation study: NOAEL no NOAEL identified

Reproductive Toxicity - Development

Developmental toxicity: NOAEL >10 mg/kg/day Oral Rat

read across: hydroxylamine sulphate

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure

NOAEL 0.2-0.3 mg/kg Oral Rat

read across: hydroxylamine sulphate

Health Warnings

May cause irritation to the respiratory system. Prolonged inhalation of high concentrations may damage respiratory system.

Irritating to skin. Prolonged or repeated exposure may cause severe irritation. May cause severe irritation to eyes.

Methemoglobin former.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Acute Toxicity - Fish

LC50 96 hours 7.2 mg/l Pimephales promelas (Fat-head Minnow)

read across Hydroxylamine Sulphate

LC50 12.3-43.2 mg/l

QSAR

Acute Toxicity - Aquatic Invertebrates

EC50 48 hours 1.62 mg/l Daphnia magna

read across Hydroxylamine Sulphate

1.77 mg/l Daphnia magna

read across Hydroxylamine Sulphate 24 hours

Acute Toxicity - Aquatic Plants

EC50 72 hours 0.72 mg/l Scenedesmus subspicatus

read across Hydroxylamine Sulphate

EC50 96 hours 0.81 mg/l Scenedesmus subspicatus

read across Hydroxylamine Sulphate EC20: 2h 0.42mg.l & EC20 96h 0.5mg/l read across Hydroxylamine Sulphate

Acute Toxicity - Microorganisms

EC50 3 hours 50.4 mg/l Activated sludge

read across Hydroxylamine Sulphate

Chronic Toxicity - Fish Early life Stage

Not available.

Short Term Toxicity - Embryo and Sac Fry Stages

Not available.

Chronic Toxicity - Aquatic Invertebrates

Not available.

Acute Toxicity - Terrestrial

Not available.

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12.2. Persistence and degradability

Degradability

Data waived under REACH The product is expected to be biodegradable.

12.3. Bioaccumulative potential

Partition coefficient

log Kow -3.6

read across Hydroxylamine Sulphate

12.4. Mobility in soil

Data waived under REACH

12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

UN No. (ADR/RID/ADN) 1760

UN No. (IMDG) 1760

UN No. (ICAO) 1760

14.2. UN proper shipping name

Proper Shipping Name CORROSIVE LIQUID, N.O.S, (HYDROXYLAMINE NITRATE SOLUTION)

14.3. Transport hazard class(es)

ADR/RID/ADN Class 8

ADR/RID/ADN Class Class 8: Corrosive substances.

ADR Label No. ENVIRONMENTALLY HAZARDOUS SYMBOL

IMDG Class 8

ICAO Class/Division 8

Transport Labels



14.4. Packing group

ADR/RID/ADN Packing group III

IMDG Packing group III

ICAO Packing group III

14.5. Environmental hazards

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Environmentally Hazardous Substance/Marine Pollutant



14.6. Special precautions for user

Hazard No. (ADR) 80 Corrosive or slightly corrosive substance.

Tunnel Restriction Code (E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: REGULATORY INFORMATION

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

EU Legislation

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 with amendments. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

15.2. Chemical Safety Assessment

A chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Information Sources

Material Safety Data Sheet, Misc. manufacturers.

Revision Comments

This is first issue.

Revision Date 04-14

Revision 000

SDS No. 10211

Date 04-14

Risk Phrases In Full

R22 Harmful if swallowed.
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R36/38 Irritating to eyes and skin.
R40 Limited evidence of a carcinogenic effect.
R43 May cause sensitisation by skin contact.
R2 Risk of explosion by shock, friction, fire or other sources of ignition.
R24 Toxic in contact with skin.
R50 Very toxic to aquatic organisms.

Hazard Statements In Full

H319 Causes serious eye irritation.
H315 Causes skin irritation.
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H373 May cause damage to organs <<Organs>> through prolonged or repeated exposure.
H351 Suspected of causing cancer.
H311 Toxic in contact with skin.
H400 Very toxic to aquatic life.

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Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.