



SAFETY DATA SHEET

Version 1.1
Revision Date 7/28/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Nickel Sulfamate Solution

Supplier : NET Global
389 West Elm Street
Pembroke, MA 02359
USA

Manufacturer : VARIOUS

Telephone : 781-826-7143
Fax : 781-826-7668
Emergency Phone (24 Hr): : 1-800-424-9300 (CHEMTREC)
8:00 a.m. to 5:00 p.m.
(Mon-Fri): 1-615-641-1200

2. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs

Skin, Lungs, Para nasal Sinus, Central nervous system

WHMIS Classification

D2A	Very Toxic Material Causing Other Toxic Effects	Chronic toxicity
D2B	Toxic Material Causing Other Toxic Effects	Carcinogen
		Reproductive hazard
		Respiratory sensitiser
		Skin sensitiser
		Mutagen

GHS Classification

Acute toxicity, Oral (Category 4)
Respiratory sensitisation (Category 1)
Skin sensitisation (Category 1)
Germ cell mutagenicity (Category 2)
Carcinogenicity (Category 1A)
Reproductive toxicity (Category 2)
Specific target organ toxicity - repeated exposure, Inhalation (Category 1), Respiratory system
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

GHS Label elements, including precautionary statements

Pictogram



Hazard statement(s)

H302

Harmful if swallowed.

H317

May cause an allergic skin reaction.

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H341

Suspected of causing genetic defects.

H350 May cause cancer.
 H361 Suspected of damaging fertility or the unborn child.
 H372 Causes damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention

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.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P285 In case of inadequate ventilation wear respiratory protection.

Response

P301 + P330 + P312 IF SWALLOWED: rinse mouth. Call a POISON CENTER or doctor/ physician if you feel unwell.
 P302 + P352 IF ON SKIN: Wash with plenty of water.
 P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P308 + P313 IF exposed or concerned: Get medical advice/attention
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 P363 Wash contaminated clothing before reuse.
 P391 Collect Spillage

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard: 2
 Chronic Health Hazard: *
 Flammability: 0
 Physical hazards: 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin Harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : Ni(SO3NH2)2

CAS-No.	EC-No.	Index-No.	Concentration
Nickel (II) sulfamate			
13770-89-3	237-396-1	028-018-00-4	> 30 - < 55 %
Water			
7732-18-5	231-791-2	-	> 45 - < 70 %

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability

Not flammable or combustible.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Nickel/nickel oxides

Explosion data - sensitivity to mechanical impact

no data available

Explosion data - sensitivity to static discharge

no data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

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.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Nickel (II) sulfamate	13770-89-3	TWA	0.1 mg/m ³	Canada, Alberta, Occupational Health and Safety Code (table 2: OEL)

Remarks	Confirmed Human Carcinogen (means that the agent is carcinogenic to humans)			
		TWAEV	0.1 mg/m ³	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWAEV	0.1 mg/m ³	Canada. Ontario OELs
		TWA	0.1 mg/m ³	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.

Personal protective equipment

Respiratory protection

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).

Hand protection

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

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

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

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Colour	clear, dark green

Safety data

pH	3.5 – 5.0
Melting point/freezing point	~0 °C (32 °F)
Crystallization Point	~4 °C (39 °F)
Boiling point	~ 104 °C (220 °F)
Flash point	no data available
Ignition temperature	no data available
Auto-ignition temperature	no data available
Lower explosion limit	no data available

Upper explosion limit	no data available
Vapour pressure	no data available
Density	1.25 - 1.60 g/cm ³
Water solubility	completely miscible
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

no data available

Materials to avoid

Oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides, Nickel/nickel oxides

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

no data available

Inhalation LC50

no data available

Dermal LD50

no data available

Other information on acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

Eyes: no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: 1 - Group 1: Carcinogenic to humans (Nickel (II) sulfamate)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	Harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea., Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough., wheezing, burning sensation, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects

no data available

Additional Information

RTECS: Not available

12. ECOLOGICAL INFORMATION**Toxicity**

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

Very toxic to aquatic life with long lasting effects.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN number: 3082 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substances, liquid, n.o.s. (Nickel (II) sulfamate)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN number: 3082 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nickel (II) sulfamate)
Marine pollutant: Marine Pollutant

IATA

UN number: 3082 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Nickel (II) sulfamate)

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

WHMIS Classification

D2A	Very Toxic Material Causing Other Toxic Effects	Chronic toxicity
D2B	Toxic Material Causing Other Toxic Effects	Carcinogen
		Reproductive hazard
		Respiratory sensitiser
		Skin sensitiser
		Mutagen

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
H302 + H332	Harmful if swallowed or if inhaled
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
Muta.	Germ cell mutagenicity
Repr.	Reproductive toxicity
Resp. Sens.	Respiratory sensitisation
Skin Sens.	Skin sensitisation
STOT RE	Specific target organ toxicity - repeated exposure

Further information

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