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-----ISO 9001: 2015-----

MATERIAL SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name : Nickel sulphamate, solution min 11% Ni

EC no : 237-396-1

CAS No : 13770-89-3

Product code : N 1535

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral),

Category 4 H302

Acute toxicity (inhal.),

Category 4 H332

Serious eye damage/eye

irritation, Category 1 H318

Sensitisation —

Respiratory, category 1 H334

Sensitisation — Skin,

category 1 H317

Germ cell mutagenicity,

Category 2 H341

Carcinogenicity

(inhalation) Category 1A H350i

Reproductive toxicity,

Category 1A H360D

Specific target organ

toxicity — Repeated H372

exposure, Category 1

Hazardous to the aquatic H410

environment — Chronic

Hazard, Category 1

Full text of classification categories and H statements : see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

C; Carc.Cat.1; Muta.Cat.3; Repr.Cat.2; R23-45

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to display Extra classification(s) to display

Hazard pictograms (CLP) :

GHS05 GHS07 GHS08 GHS09

Signal word (CLP) : Danger

Hazard statements (CLP) : H302+H332 - Harmful if swallowed or if inhaled

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

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

Precautionary statements (CLP) : 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/protective clothing/eye protection/face protection

P284 - [In case of inadequate ventilation] wear respiratory protection

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : Nickel sulphamate, solution min 11% Ni

CAS No : 13770-89-3

EC no : 237-396-1

EC index no : 028-018-00-4

Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth out with water. If you feel unwell, seek medical advice.

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

Symptoms/injuries : May cause an allergic skin reaction. Suspected of causing genetic defects. Causes damage to organs through prolonged or repeated exposure.

Symptoms/injuries after inhalation : May cause cancer by inhalation. Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : Harmful if swallowed.

Chronic symptoms : May damage the unborn child.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).

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

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Ventilate area.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not get in eyes, on skin, or on clothing.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container tightly closed. Store in a dry place.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection : protective gloves

Eye protection : Chemical goggles or safety glasses

Skin and body protection : Wear suitable protective clothing
Respiratory protection : Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Colour : Green solution.
Odour : No data available
Odour threshold : No data available
pH : 4.45
Relative evaporation rate (butylacetate=1) : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapour pressure : No data available
Relative vapour density at 20 °C : No data available
Relative density : No data available
Density : 1.45 g/cm³
Solubility : Water: Soluble in water
Log Pow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : No data available
9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Overheating. Open flame. Heat. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Inhalation: Harmful if inhaled.

Skin corrosion/irritation : Not classified

pH: 4.45

Serious eye damage/irritation : Causes serious eye damage.

pH: 4.45

Respiratory or skin sensitisation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity : Suspected of causing genetic defects.

Carcinogenicity : May cause cancer by inhalation.

Reproductive toxicity : May damage the unborn child.

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

SECTION 12: Ecological information

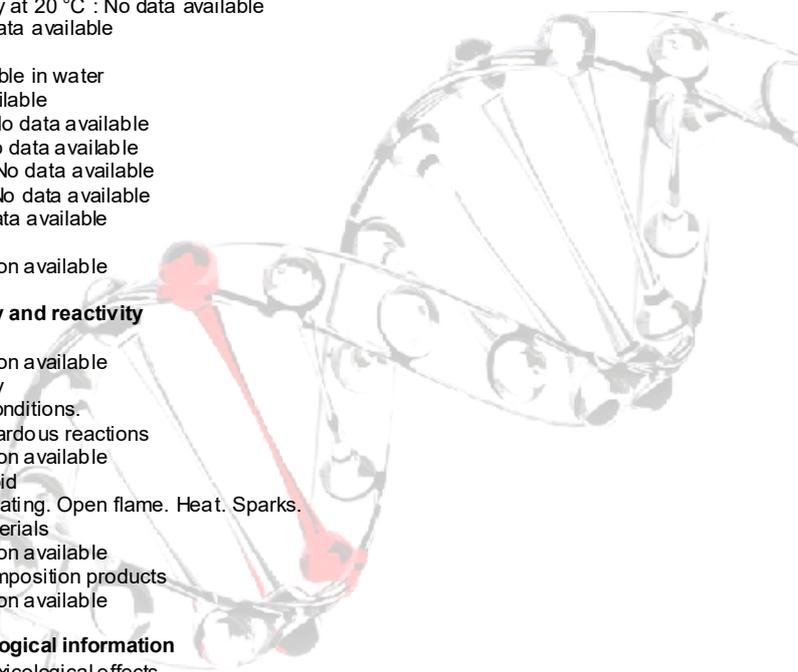
12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential



No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal Dispose of contents/container to ...
recommendations

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 3082

UN-No. (IMDG) : 3082

UN-No.(IATA) : 3082

UN-No.(ADN) : 3082

UN-No. (RID) : 3082

14.2. UN proper shipping name

Proper Shipping Name (ADR) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Proper Shipping Name (IATA) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Proper Shipping Name (ADN) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Proper Shipping Name (RID) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport document description (ADR) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III,
(E)

Transport document description (IMDG) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III,
MARINE POLLUTANT

Transport document description (IATA) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

Transport document description (ADN) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

Transport document description (RID) : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 9

Danger labels (ADR) : 9

IMDG

Transport hazard class(es) (IMDG) : 9

Danger labels (IMDG) : 9

IATA

Transport hazard class(es) (IATA) : 9

Hazard labels (IATA) : 9

ADN

Transport hazard class(es) (ADN) : 9

Danger labels (ADN) : 9

RID

Transport hazard class(es) (RID) : 9

Danger labels (RID) : 9

14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : M7

Special provision (ADR) : 274, 335, 601, 375

Limited quantities (ADR) : 5kg

Excepted quantities (ADR) : E1

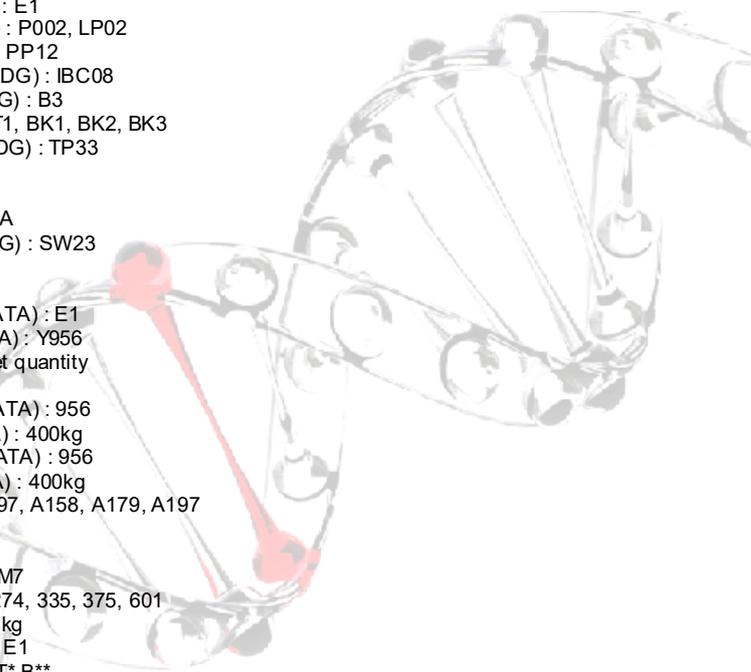
Packing instructions (ADR) : P002, IBC08, LP02, R001

Special packing provisions (ADR) : PP12, B3

Mixed packing provisions (ADR) : MP10

Portable tank and bulk container

instructions (ADR): T1, BK1, BK2
Portable tank and bulk container special provisions (ADR): TP33
Tank code (ADR): SGAV, LGBV
Vehicle for tank carriage: AT
Transport category (ADR): 3
Special provisions for carriage - Packages (ADR): V13
Special provisions for carriage - Bulk (ADR): VC1, VC2
Special provisions for carriage - Loading, unloading and handling (ADR): CV13
Hazard identification number (Kemler No.): 90
Orange plates:
Tunnel restriction code (ADR): E
EAC code: 2Z
- Transport by sea
Special provision (IMDG): 274, 335, 966, 967, 969
Limited quantities (IMDG): 5 kg
Excepted quantities (IMDG): E1
Packing instructions (IMDG): P002, LP02
Packing provisions (IMDG): PP12
IBC packing instructions (IMDG): IBC08
IBC special provisions (IMDG): B3
Tank instructions (IMDG): T1, BK1, BK2, BK3
Tank special provisions (IMDG): TP33
EmS-No. (Fire): F-A
EmS-No. (Spillage): S-F
Stowage category (IMDG): A
Stowage and handling (IMDG): SW23
MFAG-No: 154
- Air transport
PCA Excepted quantities (IATA): E1
PCA Limited quantities (IATA): Y956
PCA limited quantity max net quantity (IATA): 30kgG
PCA packing instructions (IATA): 956
PCA max net quantity (IATA): 400kg
CAO packing instructions (IATA): 956
CAO max net quantity (IATA): 400kg
Special provision (IATA): A97, A158, A179, A197
ERG code (IATA): 9L
- Inland waterway transport
Classification code (ADN): M7
Special provisions (ADN): 274, 335, 375, 601
Limited quantities (ADN): 5 kg
Excepted quantities (ADN): E1
Carriage permitted (ADN): T* B**
Equipment required (ADN): PP, A
Number of blue cones/lights (ADN): 0
- Rail transport
Classification code (RID): M7
Special provision (RID): 274, 335, 375, 601
Limited quantities (RID): 5kg
Excepted quantities (RID): E1
Packing instructions (RID): P002, IBC08, LP02, R001
Special packing provisions (RID): PP12, B3
Mixed packing provisions (RID): MP10
Portable tank and bulk container instructions (RID): T1, BK1, BK2
Portable tank and bulk container special provisions (RID): TP33
Tank codes for RID tanks (RID): SGAV, LGBV
Transport category (RID): 3
Special provisions for carriage – Packages (RID): W13
Special provisions for carriage – Bulk (RID): VC1, VC2
Special provisions for carriage – Loading and unloading (RID): CW13, CW31



Colis express (express parcels) (RID) : CE11

Hazard identification number (RID) : 90

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

15.1.2. National regulations

Germany

12th Ordinance Implementing the Federal

Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

Pregnant/breastfeeding women working with the product must not be in direct contact with the product

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Inhalation) Acute toxicity (inhal.), Category 4

Acute Tox. 4 (Oral) Acute toxicity (oral), Category 4

Aquatic Chronic 1 Hazardous to the aquatic environment — Chronic Hazard, Category 1

Carc. 1A Carcinogenicity (inhalation) Category 1A

Eye Dam. 1 Serious eye damage/eye irritation, Category 1

Muta. 2 Germ cell mutagenicity, Category 2

Repr. 1A Reproductive toxicity, Category 1A

Resp. Sens. 1 Sensitisation — Respiratory, category 1

Skin Sens. 1 Sensitisation — Skin, category 1

STOT RE 1 Specific target organ toxicity — Repeated exposure, Category 1

H302 Harmful if swallowed

H317 May cause an allergic skin reaction

H318 Causes serious eye damage

H332 Harmful if inhaled

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

C Corrosive

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.