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

1.1 Product identifiers
Product name: Nickel Sulphate Hexahydrate
CAS-No.: 10101-97-0

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
Company: Central Drug House (P) Ltd
7/28 Vardaan House
New Delhi-10002
INDIA
Telephone: +91 11 49404040
Email: care@cdhfinechemical.com

1.4 Emergency telephone number
Emergency Phone #: +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Skin irritation (Category 2), H315
Respiratory sensitisation (Category 1), H334
Skin sensitisation (Category 1), H317
Germ cell mutagenicity (Category 2), H341
Carcinogenicity, Inhalation (Category 1A), H350i
Reproductive toxicity (Category 1B), H360D
Specific target organ toxicity - repeated exposure (Category 1), H372
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC
R49
R61
R68
T Toxic R48/23
Xn Harmful R20/22
Xi Irritant R38
For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Signal word: Danger

Hazard statement(s)
- H302 + H332: Harmful if swallowed or if inhaled
- H315: Causes skin irritation.
- 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.

Precautionary statement(s)
- P201: Obtain special instructions before use.
- P261: Avoid breathing dust.
- P273: Avoid release to the environment.
- P280: Wear protective gloves.
- P308 + P313: IF exposed or concerned: Get medical advice/attention.
- P501: Dispose of contents/container to an approved waste disposal plant.

Supplemental Hazard Statements: none

Restricted to professional users.

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula: NiO4S · 6H2O
Molecular Weight: 262,85 g/mol
CAS-No.: 10101-97-0
EC-No.: 232-104-9
Index-No.: 028-009-00-5

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component | Classification | Concentration
--- | --- | ---

Nickel sulphate hexahydrate
- CAS-No.: 10101-97-0
- EC-No.: 232-104-9
- Index-No.: 028-009-00-5
- Acute Tox. 4; Skin Irrit. 2; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1A; Repr. 1B; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H302 + H332, H315, H317, H334, H341, H350i, H360D, H372, H410
- <= 100 %

Hazardous ingredients according to Directive 1999/45/EC

Component | Classification | Concentration
--- | --- | ---
Nickel sulphate hexahydrate

CAS-No. 10101-97-0 T, N, Carc.Cat.1, Repr.Cat.2, <= 100%
EC-No. 232-104-9 Mut.Cat.3, R49 - R61 - R20/22
Index-No. 028-009-00-5 - R38 - R42/43 - R48/23 - R68
- R50/53

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

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. Take victim immediately to hospital. 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.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
no data available

SECTION 5: Firefighting 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
Sulphur oxides, Nickel/nickel oxides

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. 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 sections
For disposal see section 13.
SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid exposure - obtain special instructions before use. 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)
A part from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Personal protective equipment

Eye/face 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 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.

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.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Form: crystalline</td>
</tr>
<tr>
<td></td>
<td>Colour: blue</td>
</tr>
<tr>
<td>Odour</td>
<td>no data available</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>pH</td>
<td>no data available</td>
</tr>
<tr>
<td>Melting point/freezing</td>
<td>no data available</td>
</tr>
<tr>
<td>Initial boiling point and</td>
<td>no data available</td>
</tr>
<tr>
<td>boiling range</td>
<td>no data available</td>
</tr>
</tbody>
</table>
g) Flash point no data available
h) Evaporation rate no data available
i) Flammability (solid, gas) no data available
j) Upper/lower flammability or explosive limits no data available
k) Vapour pressure no data available
l) Vapour density no data available
m) Relative density 2.07 g/cm3
n) Water solubility no data available
o) Partition coefficient: n-octanol/water no data available
p) Auto-ignition temperature no data available
q) Decomposition temperature no data available
r) Viscosity no data available
s) Explosive properties no data available
t) Oxidizing properties no data available

9.2 Other safety information
no data available

SECTION 10: Stability and reactivity

10.1 Reactivity
no data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
no data available

10.4 Conditions to avoid
no data available

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - rat - 361 mg/kg (OECD Test Guideline 401)
LC50 Inhalation - rat - 4 h - 2.48 mg/l (OECD Test Guideline 403)

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available
Respiratory or skin sensitisation
Germ cell mutagenicity
In vitro tests showed mutagenic effects

Human lymphocyte
Cytogenetic analysis

Human lymphocyte
Sister chromatid exchange

mouse lymphocyte
Mutation in mammalian somatic cells.

Hamster Embryo
Morphological transformation.

Carcinogenicity
Human carcinogen. May cause cancer by inhalation.

IARC: 1 - Group 1: Carcinogenic to humans (Nickel sulphate hexahydrate)

Reproductive toxicity
Presumed human reproductive toxicant May damage the unborn child.

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
Inhalation - Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard
no data available

Additional Information
RTECS: QR9600000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity
no data available

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
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
Very toxic to aquatic life with long lasting effects.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 3077  
IMDG: 3077  
IATA: 3077

14.2 UN proper shipping name
ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel sulphate hexahydrate)  
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel sulphate hexahydrate)  
IATA: Environmentally hazardous substance, solid, n.o.s. (Nickel sulphate hexahydrate)

14.3 Transport hazard class(es)
ADR/RID: 9  
IMDG: 9  
IATA: 9

14.4 Packaging group
ADR/RID: III  
IMDG: III  
IATA: III

14.5 Environmental hazards
ADR/RID: yes  
IMDG Marine pollutant: yes  
IATA: yes

14.6 Special precautions for user

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.

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-statements referred to under sections 2 and 3.

Acute Tox.  Acute toxicity
Aquatic Acute  Acute aquatic toxicity
Aquatic Chronic  Chronic aquatic toxicity
Carc.  Carcinogenicity
H302  Harmful if swallowed.
H302 + H332  Harmful if swallowed or if inhaled
H315  Causes skin irritation.
H317  May cause an allergic skin reaction.
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.

Full text of R-phrases referred to under sections 2 and 3

N  Dangerous for the environment
T  Toxic
R20/22  Harmful by inhalation and if swallowed.
R38  Irritating to skin.
R42/43  May cause sensitisation by inhalation and skin contact.
R48/23  Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R49    May cause cancer by inhalation.
R50/53  Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R61    May cause harm to the unborn child.
R68    Possible risk of irreversible effects.
Repr.Cat.2 Toxic to Reproduction Category 2

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.