Material Safety Data Sheet
Revision: 01
Date of Revision: 02.05.2013

1. Identification of the substances/mixture and of the company/undertaking

1.1 Product Identifiers
Product Code GRM1397
Product Name Nickel (II) nitrate hexahydrate, Extra pure

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet
Produced by HiMedia Laboratories Pvt. Ltd.
Address 23, Vadhani Indl.Estate, LBS Marg, Mumbai 400 086, India.
Tel. No. +91-22-2500 0970, +91-22-2500 1607
Fax No. +91-22-2500 2468

1.4 Emergency Tel. No.
Emergency Tel.No. Please contact the regional HiMedia representation in your country

2. Hazards Identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Oxidising liquids;Oxidising solids (Category 2)
Oxidising liquids;Oxidising solids (Category 3)
Acute toxicity, oral (Category 4)
Skin corrosion/irritation (Category 2)
Sensitisation, Skin (Category 1)
Serious eye damage/eye irritation (Category 1)
Acute toxicity, inhalation (Category 4)
Sensitisation, respiratory (Category 1)
Germ cell mutagenicity (Category 2)
Specific target organ toxicity, repeated exposure (Category 1)
Hazardous to the aquatic environment, long-term hazard (Category 1)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
May cause cancer by inhalation.
May cause harm to the unborn child.
Contact with combustible material may cause fire.
Harmful by inhalation and if swallowed.
Irritating to skin.
Risk of serious damage to eyes.
May cause sensitization by inhalation and skin contact.
Toxic: danger of serious damage to health by prolonged exposure
Very toxic to aquatic organisms, may cause long-term adverse. Effects in the aquatic environment.
Possible risk of irreversible effects.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008 [CLP]
Pictogram
Signal word Danger

Hazard Statement(s)
H272 May intensify fire; oxidizer
H302 Harmful if swallowed
H315 Causes skin irritation
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
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.
P220 Keep/Store away from clothing/combustible materials.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.


Symbol(s)

R-Phrase(s)
R49 May cause cancer by inhalation.
R61 May cause harm to the unborn child.
R8 Contact with combustible material may cause fire.
R20/22 Harmful by inhalation and if swallowed.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R42/43 May cause sensitization by inhalation and skin contact.
R48/23 Toxic: danger of serious damage to health by prolonged exposure
R50/53 Very toxic to aquatic organisms, may cause long-term adverse. Effects in the aquatic environment.
R68 Possible risk of irreversible effects.

S-Phrase(s)
S53 Avoid exposure - obtain special instructions before use.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S60 This material and its container must be disposed of as hazardous waste.
S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

2.3 Other hazards - none

3. Composition/Information on Ingredients

3.1 Substances

Molecular Formula \( \text{Ni(NO}_3\text{)}_2 \cdot 6\text{H}_2\text{O} \)

Molecular Weight. 290.79

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel (II) nitrate hexahydrate, Extra pure</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>13478-00-7</td>
</tr>
<tr>
<td>EC-No.</td>
<td>236-068-5</td>
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</table>
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. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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
No data available

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

5. Fire Fighting 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

Nickel/nickel oxides

5.3 Precautions for fire-fighters

Wear self-contained breathing apparatus for fire fighting if necessary.

5.4 Further information
No data available

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 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.

6.4 Reference to other sections
For disposal see Section 13.

7 Handling and Storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

7.3 Conditions for safe storage, including any incompatibilities
Store in cool place. 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.

Recommended Storage Temperature: Store below 30°C

7.3 Specific end uses
No data available

8 Exposure Controls/Personal Protection

8.1 Control parameters
Components with workplace control parameters
8.2 Exposure controls

Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Hygiene measure
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands face after working with the substance.

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). 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.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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 work place.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK(EN 14387) respirator cartridges as a backup to the 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).

Environment exposure controls
Do not empty into drains.

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>Green to blue-green deliquescent crystals or powder or chunks</td>
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<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour Threshold</td>
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<tr>
<td>Odour Threshold</td>
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<tr>
<td>pH</td>
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<td>Melting/freezing point</td>
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<tr>
<td>Initial boiling point and boiling range</td>
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<tr>
<td>Flash point</td>
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<tr>
<td>Upper/lower flammability or explosive limits</td>
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<tr>
<td>Vapour pressure</td>
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<td>Vapour density</td>
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<tr>
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<td>Water Solubility</td>
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<td>Partition coefficient: n-octanol/Water</td>
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<tr>
<td>Autoignition Temperature</td>
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<tr>
<td>Decomposition Temperature</td>
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<tr>
<td>Viscosity</td>
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<tr>
<td>Explosive properties</td>
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<tr>
<td>Oxidizing properties</td>
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</tr>
</tbody>
</table>

9.2 Other safety information
No data available

10 Stability and Reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
No data available
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

11 Toxicological Information

11.1 Information on toxicological effects

Acute toxicity
No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Aspiration hazard
No data available

Potential Health Effects

Inhalation.
Refer Section 2

Skin
Refer Section 2

Eyes
Refer Section 2

Ingestion
Refer Section 2

Additional Information
RTECS : QR7300000

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 PBT and vPvB assessment
No data available

12.6 Other adverse effects
No data available

13 Disposal Considerations

13.1 Waste treatments methods
Product
Offer surplus and non-recyclable solutions to a licenced disposal company. Contact a licenced professional waste disposal service to dispose of this material.

13.2 **Contaminated packaging**

Dispose of as unused product.

14 **Transport Information**

14.1 **UN-No.**

ADR/RID: 2725  
IMDG: 2725  
IATA: 2725

14.2 **UN proper shipping name**

ADR/RID: Nickel (II) nitrate hexahydrate, Extra pure  
IMDG: Nickel (II) nitrate hexahydrate, Extra pure  
IATA: Nickel (II) nitrate hexahydrate, Extra pure

14.3 **Transport hazard class(es)**

ADR/RID: 5.1  
IMDG: 5.1  
IATA: 5.1

14.4 **Packaging group**

ADR/RID: 3  
IMDG: 3  
IATA: 3

14.5 **Environmental hazards**

ADR/RID: No  
IMDG: Marine Pollutant: Yes  
IATA: No

14.6 **Special precautions for use**

No data available

15 **Regulatory Information**

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

15.1 **Safety health and environment regulations/legislation specific for the substance or mixture**

No data available

15.2 **Chemical Safety Assessment**

No data available

16 **Other Information**

**Further information**

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