

## **MATERIAL SAFETY DATA SHEET**

### **NICKEL NITRATE Hexahydrate 99% AR** **MSDS CAS: 13478-00-7**

#### **Section 1: Chemical Product and Company Identification**

##### **Section 1: Chemical Product**

**Product Name:** NICKEL NITRATE Hexahydrate AR

**CAS#:** 13478-00-7

**Synonym:** Nickel (II) Nitrate hexahydrate

**Chemical Name:** Not Available

**Chemical Formula:** Ni(NO<sub>3</sub>)<sub>2</sub>.6H<sub>2</sub>O

**Brand:** OXFORD

##### **Details Of The Supplier Of The Safety Data Sheet :**

**Company identification:**      **OXFORD LAB FINE CHEM LLP**  
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,  
Navghar, Vasai (East). Palghar - 401 210.  
Mumbai, Maharashtra, INDIA.  
Tel: 91-250-2390989  
Tel/Fax: 91-250-2390032

#### **Section 2: Composition and Information on Ingredients**

##### **Composition:**

| Name                          | CAS #      | % by Weight |
|-------------------------------|------------|-------------|
| Nickel Nitrate Hexahydrate AR | 13478-00-7 | 100         |

**Toxicological Data on Ingredients:** Nickel nitrate: ORAL (LD50): Acute: 1620 mg/kg [Rat].

## Section 3: Hazards Identification

### Potential Acute Health Effects:

Very hazardous in case of ingestion, of inhalation. Hazardous in case of skin contact (irritant), of eye contact (irritant). Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation.

### Potential Chronic Health Effects:

Very hazardous in case of ingestion, of inhalation. Hazardous in case of skin contact (irritant), of eye contact (irritant). **CARCINOGENIC EFFECTS:** Classified A1 (Confirmed for human.) by ACGIH, 1 (Proven for human.) by IARC, + (PROVEN) by OSHA. Classified 2 (Reasonably anticipated.) by NTP. **MUTAGENIC EFFECTS:** Not available. **TERATOGENIC EFFECTS:** Not available. **DEVELOPMENTAL TOXICITY:** Not available. The substance is toxic to lungs, the nervous system, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

## Section 4: First Aid Measures

### Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

### Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention.

**Serious Skin Contact:** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Serious Inhalation:** Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

**Ingestion:** Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** Non-flammable.

**Auto-Ignition Temperature:** Not applicable.

**Flash Points:** Not applicable.

**Flammable Limits:** Not applicable.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Not applicable.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** Not applicable.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

## Section 6: Accidental Release Measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill:** Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## Section 7: Handling and Storage

**Precautions:** Keep locked up Keep away from heat. Keep away from sources of ignition. Keep away from combustible material Do not ingest. Do not breathe dust. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and

## Section 7: Handling and Storage (Continued)

show the container or the label. Avoid contact with skin and eyes Keep away from incompatibles such as combustible materials.

**Storage:** Oxidizing materials should be stored in a separate safety storage cabinet or room.

## Section 8: Exposure Controls/Personal Protection

**Engineering Controls:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:** Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** TWA: 0.1 (mg/m<sup>3</sup>) Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid. (Crystalline solid.)

|                             |                    |
|-----------------------------|--------------------|
| <b>Odor</b>                 | : odourless.       |
| <b>Taste</b>                | : Not available.   |
| <b>Molecular Weight</b>     | : 290.81 g/mole    |
| <b>Color</b>                | : Green crystals.  |
| <b>pH (1% soln/water)</b>   | : 3.5 - 5.5        |
| <b>Boiling Point</b>        | : 1370 °C          |
| <b>Melting Point</b>        | : 57°C (134.6°F)   |
| <b>Critical Temperature</b> | : Not available.   |
| <b>Specific Gravity</b>     | : 2.05 (Water = 1) |
| <b>Vapor Pressure</b>       | : Not applicable.  |
| <b>Vapor Density</b>        | : Not available.   |
| <b>Volatility</b>           | : Not available.   |
| <b>Odor Threshold</b>       | : Not available.   |

## Section 9: Physical and Chemical Properties (Continued)

|                        |   |
|------------------------|---|
| Water/Oil Dist. Coeff. | : Not available.                                    |
| Ionicity (in Water)    | : Not available.                                    |
| Dispersion Properties  | : See solubility in water, methanol.                |
| Solubility             | : Easily soluble in cold water. Soluble in methanol |

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:** Highly reactive with combustible materials.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** No.

## Section 11: Toxicological Information

**Routes of Entry:** Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (LD50): 1620 mg/kg [Rat]. Chronic Effects on Humans: **CARCINOGENIC EFFECTS:** Classified A1 (Confirmed for human.) by ACGIH, 1 (Proven for human.) by IARC, + (PROVEN) by OSHA. Classified 2 (Reasonably anticipated.) by NTP. The substance is toxic to lungs, the nervous system, mucous membranes.

**Other Toxic Effects on Humans:**

Very hazardous in case of ingestion, of inhalation. Hazardous in case of skin contact (irritant).

**Special Remarks on Toxicity to Animals:** Not available.

## Section 11: Toxicological Information (Continued)

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Not available.

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are more toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13: Disposal Considerations

**Waste Disposal:**

## Section 14: Transport Information

**Land transport (ADR-RID)**

**Proper shipping name:** NICKEL NITRATE

**UN N°:** 2725

**H.I. nr:** 50

**ADR - Class:** 5.1

**Labelling - Transport:** 5.1 : Oxidizing substances.

**ADR - Group:** III

## Section 14: Transport Information (Continued)

### Sea transport (IMDG) [English only]

Proper shipping name: NICKEL NITRATE

UN N°: 2725

IMO-IMDG - Class or division: 5.1

IMO-IMDG - Packing group: III

### Air transport (ICAO-IATA) [English only]

Proper shipping name: NICKEL NITRATE

UN N°: 2725

IATA - Class or division: 5.1

IATA - Packing group: III

## Section 15: Other Regulatory Information

### Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Nickel nitrate  
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Nickel nitrate  
Pennsylvania RTK: Nickel nitrate  
Massachusetts RTK: Nickel nitrate  
TSCA 8(b) inventory: Nickel nitrate  
SARA 313 toxic chemical notification and release reporting: Nickel nitrate  
CERCLA: Hazardous substances.: Nickel nitrate

### Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

### Other Classifications:

WHMIS (Canada): CLASS C: Oxidizing material. CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R22- Harmful if swallowed. R36/38- Irritating to eyes and skin. R45- May cause cancer.

### HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection: E



## Section 15: Other Regulatory Information (Continued)

### National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 0

Specific hazard:

### Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

## Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

### *Disclaimer:*

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The information contained herein in good faith but makes no representations as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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