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MATERIAL SAFETY DATA SHEET (MSDS)

NICKEL SULPHATE AR (HEXAHYDRATE)

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

1.1. Product identifier

Trade name : NICKEL SULPHATE AR (HEXAHYDRATE)

Product code : N0144700500

Identification of the product : NICKEL SULPHATE AR(HEXAHYDRATE) 99%
 CAS No: 10101-97-0

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

Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification SUVCHEM
 Chaitanya Tower, 2nd Floor, Office # 206,
 Siddharth Nagar, S.V. Road,
 Goregaon (West), Mumbai - 400062,
 Maharashtra, India.
 Contact: +91 22 28725393 / 94 / 95
 Email ID: info@suvchem.com/care@suvchem.com

1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [Office hours]

2. Hazards identification -DSD

2.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Classification : T; R48/23
 Xn; R20/22
 Xi; R38
 Xn ; R42/43
 N; R50-53

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Specific Target Organ Toxicity - Single exposure - Category 2 - Warning (CLP : STOT SE 2) H371
 Specific Target Organ Toxicity - Repeated exposure - Category 1 - Danger (CLP : STOT RE 1) H372
 Skin sensitisation - Category 1 - Warning (CLP : Skin Sens. 1) H317
 Respiratory sensitization - Category 1 - Danger (CLP : Resp. Sens. 1) H334
 Skin irritation - Category 2 - Warning (CLP : Skin Corr. 2) H315
 Acute toxicity, Inhalation - Category 4 - Warning (CLP : Acute Tox. 4) H332
 Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302

MATERIAL SAFETY DATA SHEET (MSDS)
NICKEL SULPHATE AR (HEXAHYDRATE)
2. Hazards identification -DSD (continued)

Environmental hazards : Hazardous to the aquatic environment - Acute hazard - Category 1 - Warning (CLP : Aquatic Acute 1) H400
 Hazardous to the aquatic environment - Chronic hazard - Category 1 - Warning (CLP : Aquatic Chronic 1) H410

2.2. Label elements
Labelling EC 67/548 or EC 1999/45
Symbol(s)

Symbol(s)

: Xn : Harmful
 N : Dangerous for the environment

R Phrase(s)

: R49 : May cause cancer by inhalation.
 R61 : May cause harm to the unborn child.
 R20/22 : Harmful by inhalation and if swallowed.
 R38 : Irritating to skin.
 R42/43 : May cause sensitization by inhalation and skin contact.
 R48/23 : Toxic : danger of serious damage to health by prolonged exposure through inhalation.
 R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R68 : Possible risks 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 when 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.

Labelling Regulation EC 1272/2008 (CLP)
Hazard pictograms

Signal words

: Danger

Hazard statements

: H302 : Harmful if swallowed.
 H315 : Causes skin irritation.
 H334 : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H317 : May cause an allergic skin reaction.
 H332 : Harmful if inhaled.
 H372 : Causes damage to organs through prolonged or repeated exposure.
 H371 : May cause damage to organs.
 H410 : Very toxic to aquatic life with long lasting effects.

MATERIAL SAFETY DATA SHEET (MSDS)
NICKEL SULPHATE AR (HEXAHYDRATE)
2. Hazards identification -DSD (continued)
Precautionary statements
• Prevention

: P285: In case of inadequate ventilation wear respiratory protection.
 P280: Wear protective gloves, protective clothing, eye protection, face protection.
 P271: Use only outdoors or in a well-ventilated area.
 P260: Do not breathe dust, fume, gas, mist, vapours, spray.
 P273: Avoid release to the environment.
 P264: Wash 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.

• Response

: P302+P352: IF ON SKIN : Wash with plenty of soap and water.
 P301+P312: IF SWALLOWED : Call a POISON CENTER or doctor if you feel unwell.
 P309+P311: IF exposed or if you feel unwell : Call a POISON CENTER or doctor.
 P391: Collect spillage.
 P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.
 P333+P313: If skin irritation or rash occurs : Get medical advice.
 P342+P311: If experiencing respiratory symptoms : Call a POISON CENTER or doctor.
 P363: Wash contaminated clothing before reuse.
 P314: Get medical advice if you feel unwell.

• Storage
• Disposal considerations

: P405: Store locked up.
 : P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards
Other hazards

: The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

3. Composition/information on ingredients

Substance / Preparation : NICKEL SULPHATE AR(HEXAHYDRATE) 99%

Substance.

Contains no other components or impurities which will influence the classification of the product.

4. First aid measures
4.1. Description of first aid measures
Inhalation

: If experiencing respiratory symptoms : Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

MATERIAL SAFETY DATA SHEET (MSDS)
NICKEL SULPHATE AR (HEXAHYDRATE)
4. First aid measures (continued)

Skin contact	: Specific treatment (see on this label). Get medical advice. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs :
Eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell.

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

Symptoms relating to use	: Causes damage to organs through prolonged or repeated exposure. Causes skin irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May cause damage to organs. Danger of serious damage to health by prolonged exposure through inhalation. Swallowing a small quantity of this material will result in serious health hazard.
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4.3. Indication of any immediate medical attention and special treatment needed

General information	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
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5. Fire-fighting measures
5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.
Surrounding fires	: Use water spray or fog for cooling exposed containers.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products	: Under fire conditions, hazardous fumes will be present.
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5.3. Advice for fire-fighters

Protection against fire	: Do not enter fire area without proper protective equipment, including respiratory protection.
Special procedures	: Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

MATERIAL SAFETY DATA SHEET (MSDS)
NICKEL SULPHATE AR (HEXAHYDRATE)
6. Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures

- For emergency responders** : Equip cleanup crew with proper protection.
Ventilate area.
Avoid breathing dust, fume, gas, mist, vapours, spray.
- For non-emergency personnel** : Evacuate unnecessary personnel.

6.2. Environmental precautions

- Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Clean up methods** : On land, sweep or shovel into suitable containers. Store away from other materials.

6.4. Reference to other sections

See section 8. Exposure controls/personal protection

7. Handling and storage
7.1. Precautions for safe handling

- Personal protection** : Wash thoroughly after handling. Do not breathe dust, fume, gas, mist, vapours, spray. Do not eat, drink or smoke when using this product.
- Handling** : Avoid breathing dust, fume, gas, mist, vapours, spray. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not breathe dust, fume, gas, mist, vapours, spray. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
- Technical protective measures** : Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

- Storage** : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.
- Storage - away from** : Strong bases. Strong acids. Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

- Specific end use(s)** : None.

MATERIAL SAFETY DATA SHEET (MSDS)
NICKEL SULPHATE AR (HEXAHYDRATE)
8. Exposure controls/personal protection
8.1. Exposure controls

Personal protection	: Avoid all unnecessary exposure.
• Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. In case of inadequate ventilation wear respiratory protection.
• Hand protection	: Wear protective gloves.
• Skin protection	: Wear suitable protective clothing.
• Eye protection	: Chemical goggles or safety glasses.
• Others	: When using, do not eat, drink or smoke.

8.2. Control parameters

Occupational Exposure Limits	: No data available.
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9. Physical and chemical properties
9.1. Information on basic physical and chemical properties

Physical state at 20 °C	: Solid.
Colour	: Emerald green crystalline
Odour	: Odorless
Odour threshold	: No data available.
pH value	: Not applicable.
Melting point [°C]	: 1000C
Decomposition point [°C]	: N/A
Critical temperature [°C]	: N/A
Auto-ignition temperature [°C]	: N/A
Flammability (solid, gas)	: N/A
Flash point [°C]	: N/A
Boiling point [°C]	: N/A
Initial boiling point [°C]	: N/A
Final boiling point [°C]	: N/A
Evaporation rate	: N/A
Vapour pressure [20°C]	: N/A
Vapour pressure mm/Hg	: N/A
Vapour density	: N/A
Density [g/cm³]	: 2,03
Relative density, gas (air=1)	: N/A

MATERIAL SAFETY DATA SHEET (MSDS)
NICKEL SULPHATE AR (HEXAHYDRATE)
9. Physical and chemical properties (continued)

Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: 75.6 g/100 cc water
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: 4.5
Viscosity at 40°C [mm ² /s]	: N/A

9.2. Other information

Explosive properties	: N/A
Explosion limits - upper [%]	: N/A
Explosion limits - lower [%]	: N/A
Oxidising properties	: No data available.

10. Stability and reactivity
10.1. Reactivity

Reactivity	: Not established.
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10.2. Chemical stability

Chemical stability	: Stable under recommended storage conditions.
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10.3. Possibility of hazardous reactions

Hazardous reactions	: Not established.
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10.4. Conditions to avoid

Conditions to avoid	: Direct sunlight. Extremely high or low temperatures.
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10.5. Incompatible materials

Materials to avoid	: Strong acids. Strong bases.
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10.6. Hazardous decomposition products

Hazardous decomposition products	: Fumes. Carbon monoxide. Carbon dioxide.
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MATERIAL SAFETY DATA SHEET (MSDS)
NICKEL SULPHATE AR (HEXAHYDRATE)
11. Toxicological information
11.1. Information on toxicological effects
Acute toxicity

- Inhalation : Harmful if inhaled.
- Dermal : Based on available data, the classification criteria are not met.
- Ingestion : Harmful if swallowed.

Corrosion : Based on available data, the classification criteria are not met.

Irritation : Causes skin irritation.

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

Mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Toxic for reproduction : Based on available data, the classification criteria are not met.

STOT-single exposure : Causes damage to organ.

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Based on available data, the classification criteria are not met.

12. Ecological information
12.1. Toxicity

Toxicity information : Very toxic to aquatic life with long lasting effects.

12.2. Persistence - degradability

Persistence - degradability : May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

Bioaccumulative potential : Not established.

12.4. Mobility in soil

Mobility in soil : Not established.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

12.6. Other adverse effects

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MATERIAL SAFETY DATA SHEET (MSDS)

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12. Ecological information (continued)

Environmental precautions : Avoid release to the environment.

13. Disposal considerations

13.1. Waste treatment methods

General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.
 Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

14. Transport information

14.1. Land transport (ADR-RID)

Proper shipping name : TOXIC SOLID, INORGANIC, N.O.S.
 UN N° : 3288
 H.I. nr : 60
 ADR - Class : 6.1
 Labelling - Transport : 6.1 : Toxic substances.



ADR - Classification code : T5
 ADR - Group : III
 ADR - Packing instructions : P002 R001 LP002
 ADR - Limited Quantity : 5 KG
 ADR - Tunnel code : E : Passage forbidden through tunnels of category E.



14.2. Sea transport (IMDG). [English only]

Proper shipping name : TOXIC SOLID, INORGANIC, N.O.S.
 UN N° : 3288
 IMO-IMDG - Class or division : 6.1 : Toxic substances.
 IMO-IMDG - Packing group : III

MATERIAL SAFETY DATA SHEET (MSDS)
NICKEL SULPHATE AR (HEXAHYDRATE)
14. Transport information (continued)

IMO- IMDG - Packing instructions : P002 LP02
 IMO-IMDG - Limited quantities : 5 kg
 IMO-IMDG - Marine pollution : Yes
 EMS-Nr : F-A S-A

14.3. Air transport (ICAO-IATA) [English only]

Proper shipping name : TOXIC SOLID, INORGANIC, N.O.S.
 UN N° : 3288
 IATA - Class or division : 6.1 : Toxic substances.
 IATA - Packing group : III
 IATA - Passenger and Cargo Aircraft : ALLOWED
 - Passenger and Cargo - Packing instruction : 670
 - Passenger and Cargo - Maximum Quantity/Packing : 100 kg
 IATA - Cargo only : ALLOWED
 - Cargo only - Packing instruction : 677
 - Cargo only - Maximum Quantity/ Packing : 200 kg
 IATA - Limited Quantities : 10 kg
 ERG-Nr : 6L

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

Safety, health and environmental regulations/legislation specific for the substance or mixture : Ensure all national/local regulations are observed.
 REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.
 REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

15.2. Chemical Safety Assessment

Chemical Safety Assessment : It has not been carried out.

16. Other information

Revision : Revision - See : *
 Abbreviations and acronyms : PBT: persistent, bioaccumulative and toxic.
 vPvB: very persistent and very bioaccumulative

MATERIAL SAFETY DATA SHEET (MSDS)

NICKEL SULPHATE AR (HEXAHYDRATE)

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

DISCLAIMER:

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation 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.

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