

Revision: 2.0
(Replaces revision 1.1 of 16 April 2021)Revision date: 20 April 2021
Date printed: 12 August 2023**Section 1. Identification****1.1 Product Identifier** 1849

Product Name NICKEL NITRATE 6H2O
CAS Number 13478-00-7
REACH Registration No 01-2119492333-38-XXXX
Molecular Formula $Ni(NO_3)_2 \cdot 6H_2O = 290.79$

1.2 Relevant identified uses of the substance or mixture & uses advised against

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

1.3 Supplier Vickers Laboratories Ltd

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(Have this document to hand)**Section 2. Hazards Identification****2.1 Classification of the substance or mixture****Classification according to regulation 1272/2008/EC**

Oxidising solid, category 2	H272: May intensify fire; oxidizer.
Acute toxicity, category 4 (oral)	H302: Harmful if swallowed.
Skin corrosion/irritation, category 2	H315: Causes skin irritation.
Acute toxicity, category 4 (inhalation)	H332: Harmful if inhaled.
Serious eye damage/irritation, category 1	H318: Causes serious eye damage.
Respiratory sensitization, category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization, category 1	H317: May cause an allergic skin reaction.
Germ cell mutagenicity, category 2	H341: Suspected of causing genetic defects.
Carcinogenicity, category 1A	H350: May cause cancer.
Reproductive toxicity, category 1B	H360: May damage fertility or the unborn child.
Spec target organ tox - repeat, category 1	H372: Causes damage to organs through prolonged or repeated exposure.
Hazard to aquatic environment, category 1	H400: Very toxic to aquatic life.
Hazard to aquatic environment, category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements**Labelling according to regulation 1272/2008/EC**

Signal word Danger

Hazard Pictograms



Hazard Statements

May intensify fire; oxidizer. Harmful if inhaled or swallowed. Causes skin irritation. Causes serious eye damage. May cause cancer. May damage fertility or the unborn child. Suspected of causing genetic defects. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Very toxic to aquatic life with long lasting effects. May cause an allergic skin reaction. May be fatal if swallowed and enters airways. Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves / protective clothing / eye protection / face protection. Wash thoroughly after handling. Avoid breathing dust / fume / gas / mist / vapours / spray. If skin irritation or a rash occurs: Get medical advice/attention.

Section 3. Composition

3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Nickel Nitrate Hexahydrate	13478-00-7		01-2119492333-38-XXXX	>98%	Ox. Sol. 2, Acute Tox. 4 (O), Skin Irrit. 2, Acute Tox. 4 (I), Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1, Muta. 2, Carc. 1A, Repr. 1B, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1

Section 4. First Aid

4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. If discomfort persists OBTAIN MEDICAL ATTENTION.
Skin	Wash off skin thoroughly with water.
Inhalation	Remove from exposure. If material has reacted with an acid to form, nitrous fumes, Obtain immediate medical attention even if patient is not complaining of discomfort.
Ingestion	Wash out the patients mouth thoroughly with water. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

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

No further relevant information available.

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

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

Extinguishing Media	Water spray.
Unsuitable Media	Nothing specified.

5.2 Special hazards arising from the substance or mixture

Hazards	May evolve toxic fumes if involved in a fire. Mixtures with combustible materials are flammable. Mixtures with finely divided combustible materials can react explosively.
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5.3 Advice for firefighters

Advice for firefighters	Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.
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Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection Evacuate area immediately. If contact with acid is possible, use full protective clothing and breathing apparatus. Only re-enter area with full protective clothing and breathing apparatus.

6.2 Environmental precautions

Environmental Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.

6.3 Methods and material for containment and cleaning up

Major Spillage Cover area of spill with lime. Allow time for the hydrolysis to take place. Sweep up, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Minor Spillage Cover area of spill with lime. Allow time for the hydrolysis to take place. Sweep up, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath dust. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains dust concentrations to a minimum.

7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage . Store in a suitable area for oxidising agents. Keep well separated from combustible materials.

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits	
			Long Term (8hr TWA)	Short Term 15min period
Nickel Nitrate Hexahydrate	13478-00-7	>98%	-	-

Exposure data source(s) No occupational exposure data currently available.

8.2 Exposure controls

Respiratory Protection Wear NIOSH/MSHA-approved respirator. Use only in a chemical fume hood.

Hand Protection Wear gloves.

Eye Protection Use tightly fitting chemical splash proof glasses or goggles.

Skin Protection Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.

Special Hazards No special precautions required.

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance Olive green crystalline powder.

Odour No specific odour.

pH Not applicable

Boiling Point	Not available
Melting Point	56°C
Flash Point	Not applicable
Upper Flammable Limit	Not applicable
Lower Flammable Limit	Not applicable
Auto Ignition	Not applicable
Explosive Properties	May explode when heated.
Oxidising Properties	Yes.
Vapour Pressure	Not applicable
Relative Density	2.0500
Water Solubility	Completely soluble in water.

9.2 Other information

No data available.

Section 10. Stability & Reactivity

10.1	Reactivity	No data available.
10.2	Chemical Stability	Stable under normal conditions
10.3	Possibility of hazardous reactions	No data available.
10.4	Conditions to Avoid	Avoid contact with acids or combustible materials.
10.5	Incompatible Materials	Acids : reacts to form poisonous nitrous fumes. Combustible materials.
10.6	Hazardous Decomposition Products	Not flammable but will assist a fire, producing irritant and toxic fumes of oxides of nitrogen.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Eyes	Contact with the solid or dust will be irritating to the eyes.
Skin	Contact with the solid or dust will be irritating to the skin. Skin contact can lead to erythema & nodular eruption on the fingers, wrists & forearms. Harmful in contact with skin.
LD50 Skin	Not available
Ingestion	Harmful if swallowed.
LD50 Oral	1620mg/kg Rat
Inhalation	Harmful by inhalation. The dust will produce irritation of the eyes, nose, throat and respiratory tract. Inhalation of the dust will cause asthmatic type response in sensitive individuals.
LD50 Inhalation	1.6mg/l Acute toxicity estimate
TCLo	Not available
Carcinogenicity	Carcinogen by inhalation.
Mutagenicity	Under investigation.
Reproductive Effects	No information is available.
Other Information	To the best of our knowledge, the chemical, physical, & toxicological properties have not been thoroughly investigated.

Section 12. Ecological

12.1	Toxicity	Nickel salts are harmful to the environment.
	LC50 Algal	Not available
	LC50 Crustacea	0.9mg/l Daphnia magna (48 hours)
	LC50 Fish	Not 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 & vPvB assessment	Assessment not required.
12.6	Other adverse effects	None known at present.

Section 13. Disposal Considerations

13.1 Waste treatment methods

Disposal Methods	Dissolve in water and adjust pH to 7, then precipitate out as the sulphide. Filter off the insoluble material and dispose of at a licensed land-fill site. Destroy excess sulphide with sodium hypochlorite, neutralise the solution and wash to drain with copious amounts of water.
Contaminated Packaging	Use a licensed waste disposer.

Section 14. Transport Information

14.1	UN Number	2725
14.2	Proper Shipping Name	Nickel nitrate
14.3	Transport classes	
	UN classification	5.1
	Subsidiary hazard(s)	None
	Transport category	3
	ADR Hazard ID	50
	Tunnel Restriction Code	E
14.4	Packing Group	III
14.5	Environment hazards	See section 12.
14.6	Special precautions for user	No special precautions required.
14.7	Transport in bulk	Not transported in bulk.



Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for substance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification	Oxidising solid, category 2; Acute toxicity, category 4 (oral); Skin corrosion/irritation, category 2; Acute toxicity, category 4 (inhalation); Serious eye damage/irritation, category 1; Respiratory sensitization, category 1; Skin sensitization, category 1; Germ cell mutagenicity, category 2; Carcinogenicity, category 1A; Reproductive toxicity, category 1B; Spec target organ tox - repeat, category 1; Hazard to aquatic environment, category 1; Hazard to aquatic environment, category 1
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Signal word Danger

Hazard Pictograms



Hazard Statements H272, H302+H332, H315, H318, H350, H360, H341, H334, H410, H317, H304, H372
 May intensify fire; oxidizer. Harmful if inhaled or swallowed. Causes skin irritation. Causes serious eye damage. May cause cancer. May damage fertility or the unborn child. Suspected of causing genetic defects. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Very toxic to aquatic life with long lasting effects. May cause an allergic skin reaction. May be fatal if swallowed and enters airways. Causes damage to organs through prolonged or repeated exposure.

Hazard Statements (Packs of 500ml/g or less) H272, H350, H360, H341, H334, H410, H302, H315, H317, H318, H332, H372

May intensify fire; oxidizer. May cause cancer. May damage fertility or the unborn child. Suspected of causing genetic defects. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Very toxic to aquatic life with long lasting effects. Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Harmful if inhaled. Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements P201, P202, P280, P264, P261, P333+P313
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves / protective clothing / eye protection / face protection. Wash thoroughly after handling. Avoid breathing dust / fume / gas / mist / vapours / spray. If skin irritation or a rash occurs: Get medical advice/attention.

Precautionary Statements P201, P202
(Packs of 500ml/g or less)
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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