



## SAFETY DATA SHEET

# Nickel (II) sulfate 98 +% pure

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

<i>Trade name:</i>	Nickel (II) sulfate 98 +% pure
<i>Product no.:</i>	NIS7834
<i>Other means of identification:</i>	EC No.: 600-152-3 CAS No.: 10101-97-0

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

<i>Relevant identified uses of the substance or mixture:</i>	Industrial purposes, Laboratory use
<i>Uses advised against:</i>	None known.

### 1.3. Details of the supplier of the safety data sheet

<i>Company and address:</i>	<b>Laboratoriumdiscounter</b> Zandvoortstraat 75 1976BN Ijmuiden Netherlands Tel: +31 255 700 210 <a href="http://www.laboratoriumdiscounter.nl/en/">www.laboratoriumdiscounter.nl/en/</a>
<i>E-mail:</i>	<a href="mailto:info@laboratoriumdiscounter.nl">info@laboratoriumdiscounter.nl</a>
<i>Revision:</i>	17/02/2023
<i>SDS Version:</i>	1.0

### 1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).  
See section 4 "First aid measures".

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Acute Tox. 4; H302, Harmful if swallowed.  
Skin Irrit. 2; H315, Causes skin irritation.  
Skin Sens. 1; H317, May cause an allergic skin reaction.  
Acute Tox. 4; H332, Harmful if inhaled.  
Resp. Sens. 1; H334, May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Muta. 2; H341, Suspected of causing genetic defects.  
Carc. 1A; H350, May cause cancer.  
Repr. 1B; H360, May damage fertility or the unborn child.  
STOT RE 1; H372, Causes damage to organs through prolonged or repeated exposure.  
Aquatic Acute 1; H400, Very toxic to aquatic life.  
Aquatic Chronic 1; H410, Very toxic to aquatic life with long lasting effects.

### 2.2. Label elements



Compiled in accordance with REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

*Hazard pictogram(s):*



*Signal word:*

Danger

*Hazard statement(s):*

Harmful if swallowed or if inhaled. (H302+H332)  
Causes skin irritation. (H315)  
May cause an allergic skin reaction. (H317)  
May cause allergy or asthma symptoms or breathing difficulties if inhaled. (H334)  
Suspected of causing genetic defects. (H341)  
May cause cancer. (H350)  
May damage fertility or the unborn child. (H360)  
Causes damage to organs through prolonged or repeated exposure. (H372)  
Very toxic to aquatic life with long lasting effects. (H410)

*Safety statement(s):*

*General:*

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*Prevention:*

Obtain special instructions before use. (P201)  
Do not breathe dust. (P260)  
Wear eye protection/protective gloves/protective clothing. (P280)

*Response:*

IF exposed or concerned: Get medical advice/attention. (P308+P313)  
Get medical advice/attention if you feel unwell. (P314)

*Storage:*

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*Disposal:*

Dispose of contents/container in accordance with local regulation. (P501)

*Hazardous substances:*

Nickel(II) sulfate hexahydrate

*Additional labelling:*

Restricted to professional users.

### 2.3. Other hazards

*Additional warnings:*

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.  
This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

Product/substance	Identifiers	% w/w	Classification	Note
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Nickel(II) sulfate hexahydrate	CAS No.: 10101-97-0 EC No.: 600-152-3 UK-REACH: Index No.:	95-100%	Acute Tox. 4, H302 Skin Irrit. 2, H315 Skin Sens. 1, H317 Acute Tox. 4, H332 Resp. Sens. 1, H334 Muta. 2, H341 Carc. 1A, H350 Repr. 1B, H360 STOT RE 1, H372 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
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### 3.2. Mixtures

Not applicable. This product is a substance.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

### Other information

[1] European occupational exposure limit.

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### *General information:*

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

#### *Inhalation:*

Upon breathing difficulties or irritation of the respiratory tract: Bring the injured person into fresh air. Make sure the injured person is continuously monitored. Prevent shock by keeping the injured person warm and calm. If breathing ceases, give mouth-to-mouth resuscitation. If unconscious, roll the injured person into recovery position. Call an ambulance.

#### *Skin contact:*

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

#### *Eye contact:*

Upon irritation of the eye: Remove contact lenses and open eyes widely. Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Seek medical assistance and

*Ingestion:*

continue flushing during transport.

In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting unless this is recommended by a doctor. Hold head facing down to prevent vomit returning mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.

*Burns:*

Not applicable.

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

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact. Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

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

IF exposed or concerned:

Get immediate medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

*Information to medics:*

Bring this safety data sheet or the label from this product.

**SECTION 5: FIREFIGHTING MEASURES****5.1. Extinguishing media**

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

**5.2. Special hazards arising from the substance or mixture**

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

**5.3. Advice for firefighters**

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

Hazchem Code: 2Z

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Avoid direct contact with spilled substances.

**6.2. Environmental precautions**

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

**6.3. Methods and material for containment and cleaning up**

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.



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Minor spills are collected with a cloth. Collection and disposal of the material shall be done with minimum creation of dust. Sweep and collect. Shall be contained in suitable and tightly closed disposal containers.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

#### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Avoid direct contact with the product.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

### 7.2. Conditions for safe storage, including any incompatibilities

*Recommended storage material:*

Keep only in original packaging.

*Storage temperature:*

Room temperature 15 to 25°C

*Incompatible materials:*

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Nickel(II) sulfate hexahydrate

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 0,1 (as Ni)

Annotations:

Sen = Capable of causing occupational asthma.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.

EH40/2005 Workplace exposure limits (Fourth Edition 2020).

#### DNEL

No data available.

#### PNEC

No data available.

### 8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

*General recommendations:*

Smoking, drinking and consumption of food is not allowed in the work area.

*Exposure scenarios:*

There are no exposure scenarios implemented for this product.

*Exposure limits:*

Professional users are subjected to the



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<i>Appropriate technical measures:</i>	legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.
<i>Hygiene measures:</i>	Do not recirculate outlet air that contain the substances.
<i>Measures to avoid environmental exposure:</i>	Take off contaminated clothing and wash it before reuse.
	Keep damming materials near the workplace. If possible, collect spillage during work.

### 8.3. Individual protection measures, such as personal protective equipment

*Generally:* Use only UKCA marked protective equipment.

#### *Respiratory Equipment:*

Type	Class	Colour	Standards	
S/SL	P2	White	EN149	

#### *Skin protection:*

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

#### *Hand protection:*

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0,2	> 480	EN374-2, EN374-3, EN388	

#### *Eye protection:*

Type	Standards	
Safety glasses with side shields.	EN166	

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<i>Physical state:</i>	Solid
<i>Colour:</i>	Teal
<i>Odour / Odour threshold:</i>	None
<i>pH:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Density (g/cm<sup>3</sup>):</i>	2,07 g /cm <sup>3</sup> (20 °C)
<i>Kinematic viscosity:</i>	Does not apply to solids.
<i>Particle characteristics:</i>	Testing not relevant or not possible due to



	the nature of the product.
<b>Phase changes</b>	
<i>Melting point/Freezing point (°C):</i>	≥53 °C
<i>Softening point/range (waxes and pastes) (°C):</i>	Does not apply to solids.
<i>Boiling point (°C):</i>	Does not apply to solids.
<i>Vapour pressure:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Relative vapour density:</i>	Does not apply to solids.
<i>Decomposition temperature (°C):</i>	848 °C (watervrij) (ECHA)
<b>Data on fire and explosion hazards</b>	
<i>Flash point (°C):</i>	Does not apply to solids.
<i>Flammability (°C):</i>	Testing not relevant or not possible due to the nature of the product.
<i>Auto-ignition temperature (°C):</i>	Testing not relevant or not possible due to the nature of the product.
<i>Lower and upper explosion limit (% v/v):</i>	Does not apply to solids.
<b>Solubility</b>	
<i>Solubility in water:</i>	≥625 g /l 0 °C
<i>n-octanol/water coefficient:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Solubility in fat (g/L):</i>	Testing not relevant or not possible due to the nature of the product.
<b>9.2. Other information</b>	
<i>Other physical and chemical parameters:</i>	No data available.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

No data available.

### 10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

### 10.3. Possibility of hazardous reactions

None known.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as



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### **retained and amended in UK law**

#### **Acute toxicity**

Harmful if swallowed.  
Harmful if inhaled.

#### **Skin corrosion/irritation**

Causes skin irritation.

#### **Serious eye damage/irritation**

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

#### **Respiratory sensitisation**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

#### **Skin sensitisation**

May cause an allergic skin reaction.

#### **Germ cell mutagenicity**

Suspected of causing genetic defects.

#### **Carcinogenicity**

May cause cancer.

#### **Reproductive toxicity**

May damage fertility or the unborn child.

#### **STOT-single exposure**

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

#### **STOT-repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

#### **Aspiration hazard**

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

### **11.2. Information on other hazards**

#### **Long term effects**

**Carcinogenic effects:** This product contains substances considered or proven to be carcinogenic. The carcinogenic effects may be triggered subsequent to exposure through inhalation, skin contact or ingestion.

**Reproductive toxicity:** This product contains teratogenic substances, which may produce anomalies and/or developmental defects to the human offspring. Adverse effects include: death, growth retardation, congenital disorders, delayed mental development, and functional disorders. This product contains reprotoxic substances, which may harm the reproductive capacity. Adverse effects include: sterility, effects on the sexual function, lowered effective fertility and dysfunctional menstrual cycle.

**Irritation effects:** This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

#### **Endocrine disrupting properties**

Not applicable.

#### **Other information**

Nickel(II) sulfate hexahydrate has been classified by IARC as a group 1 carcinogen.

## **SECTION 12: ECOLOGICAL INFORMATION**

### **12.1. Toxicity**

No data available.



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**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**

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

**12.6. Endocrine disrupting properties**

Not applicable.

**12.7. Other adverse effects**

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment methods**

Product is covered by the regulations on hazardous waste.

HP 4 - Irritant (skin irritation and eye damage)

HP 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP 6 - Acute toxicity

HP 7 - Carcinogenic

HP 10 - Toxic for reproduction

HP 11 - Mutagenic

HP 13 - Sensitising

HP 14 - Ecotoxic

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

**EWC code**

Not applicable.

**Specific labelling**

Not applicable.

**Contaminated packing**

Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: TRANSPORT INFORMATION

	<b>14.1 UN / ID</b>	<b>14.2 UN proper shipping name</b>	<b>14.3 Hazard class(es)</b>	<b>14.4 PG*</b>	<b>14.5 Env**</b>	<b>Other information:</b>
ADR	UN3077	ENVIRONMENTAL LY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	Class: 9 Labels: 9 Classification code: M7	III	Yes	Limited quantities: 5 kg Tunnel restriction code:



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	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
			 			(-) See below for additional information.
IMDG	UN3077	ENVIRONMENTAL LY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	Class: 9 Labels: 9 Classification code: M7  	III	Yes	Limited quantities: 5 kg EmS: F-A S-F See below for additional information.
IATA	UN3077	ENVIRONMENTAL LY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	Class: 9 Labels: 9 Classification code: M7  	III	Yes	See below for additional information.

\* Packing group

\*\* Environmental hazards

**Additional information**

These substances when carried in single or combination packaging's containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR/IMDG/IATA provided the packaging's meet the general provisions of 4.1.1.1, 4.1.1.2, 4.1.1.4 - 4.1.1.8 (ADR, IMDG) / 5.0.2.4.1, 5.0.2.6.1.1, 5.0.2.8 (IATA).

ADR / See Table A, Section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.  
 IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.  
 IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.  
 Hazchem Code: 2Z

**14.6. Special precautions for user**

Not applicable.

**14.7. Maritime transport in bulk according to IMO instruments**



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No data available.

## SECTION 15: REGULATORY INFORMATION

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

*Restrictions for application:*

Restricted to professional users.  
People under the age of 18 shall not be exposed to this product.  
Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

*Demands for specific education:*

No specific requirements.

*SEVESO - Categories / dangerous substances:*

E1 - ENVIRONMENTAL HAZARDS, Qualifying quantity (lower-tier): 100 tonnes / (upper-tier): 200 tonnes

*Additional information:*

Not applicable.

*Sources:*

The Management of Health and Safety at Work Regulations 1999.  
The Health and Safety at Work etc. Act 1974  
Regulations 2013.  
Control of Major Accident Hazards (COMAH) Regulations 2015.  
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.  
Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.  
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

### 15.2. Chemical safety assessment

No

## SECTION 16: OTHER INFORMATION

### Full text of H-phrases as mentioned in section 3

H302, Harmful if swallowed.

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.

H350, May cause cancer.

H360, May damage fertility or the unborn child.



Compiled in accordance with REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

H372, Causes damage to organs through prolonged or repeated exposure.

H400, Very toxic to aquatic life.

H410, Very toxic to aquatic life with long lasting effects.

### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

### Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

The classification of the substance/mixture in regard of environmental hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

### The safety data sheet is validated by

Laboratoriumdiscounter



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## Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en