

Safety Data Sheet

#89966140 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
Nickel sulfate hexahydrate	10101-97-0	NiSO ₄ · 6H ₂ O	10	07 Oct 2026

SECTION 1

Identification

1.1 Product identifier

Product name Nickel sulfate hexahydrate

CAS number 10101-97-0

EC / EINECS number 600-152-3

Chemical formula NiSO₄ · 6H₂O

Molecular weight 262.84

SMILES O.O.O.O.O.O.[O-]S(=O)(=O)[O-].[Ni+2]

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

For research and development. Laboratory chemicals. Manufacture of substances. Not suitable for human or veterinary purposes.

1.3 Details of the supplier of the safety data sheet

Molekula Limited
1 Millennium Way, Newton Aycliffe
Durham, DL5 6JW, United Kingdom
info@molekula.com · +44 (0) 3302 000333

1.4 Emergency telephone number

0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

2.1 Classification of the substance or mixture

Acute Tox. 4 - H302

Acute Tox. 4 - H332

Resp. Sens. 1 - H334

Skin Sens. 1 - H317

Muta. 2 - H341

Carc. 1A - H350

Repr. 1B - H360

STOT RE 1 - H372

Aquatic Acute 1 - H400

Aquatic Chronic 1 - H410

2.2 Label elements



DANGER

CODE	HAZARD STATEMENT
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
H350i	May cause cancer by inhalation
H360	May damage fertility or the unborn child
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
CODE	PRECAUTIONARY STATEMENT
P201	Obtain special instructions before use
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
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P302+P352	IF ON SKIN: Wash with soap and water
P304+P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell
P308+313	IF exposed or concerned: Get medical advice/attention
P501	Dispose of contents/container to an approved waste disposal plant

2.3 Other hazards

Not classified as PBT or vPvB according to current EU criteria.

SECTION 3

Composition / information on ingredients**3.1 Substances**

Name	Nickel sulfate hexahydrate
CAS number	10101-97-0
EC number	600-152-3
Concentration / purity	~100%
Classification according to Regulation (EC) No 1272/2008	Acute Tox. 4 - H302 Acute Tox. 4 - H332 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Muta. 2 - H341 Carc. 1A - H350 Repr. 1B - H360 STOT RE 1 - H372 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410
Hazard statements	H302, H315, H317, H332, H334, H341, H350i, H360, H372, H400, H410
Acute toxicity estimate (ATE)	<i>No data available</i>
Impurities / stabilising additives	<i>Not applicable</i>

SECTION 4

First-aid measures**4.1 Description of first aid measures**

Inhalation	Move to fresh air, keep warm and at rest; give oxygen if breathing is difficult and get medical attention.
Skin contact	Remove substance immediately with soap and water; get medical attention if symptoms are severe or persist.
Eye contact	Remove contact lenses, open eyelids wide and rinse with water; get medical attention if discomfort continues.
Ingestion	Rinse mouth, give a few small glasses of water or milk, do not induce vomiting; get medical attention if symptoms are severe or persist.

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel. First aiders/ medical personnel need to protect themselves.

4.2 Most important symptoms and effects, both acute and delayed

Treat symptomatically.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically; may cause sensitisation or allergic reactions in sensitive individuals.

SECTION 5

Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Not flammable; use alcohol-resistant foam, carbon dioxide, dry powder or water fog suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Sulphur oxides, Nickel/nickel oxides, Not combustible.
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Wear positive-pressure SCBA and protective clothing (EN469); keep upwind, cool containers with water and contain run-off.

SECTION 6

Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing (Section 8), avoid dust inhalation and contact with skin and eyes; use respiratory protection if ventilation is inadequate.

6.2 Environmental precautions

Avoid discharge into drains, watercourses, onto the ground or the aquatic environment.

6.3 Methods and material for containment and cleaning up

Collect spillage with shovel and broom into sealed waste containers, flush area with water and do not empty into drains.

6.4 Reference to other sections

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

7.1 Precautions for safe handling

Read and follow manufacturer's recommendations and wear protective clothing as described in Section 8.

7.2 Conditions for safe storage, including any incompatibilities

Storage temperature Ambient

Conditions for safe storage (incompatibilities) Store tightly closed and locked up in a dry, well-ventilated place; keep away from strong oxidizers and strong acids.

7.3 Specific end use(s)

See Section 1.2.

SECTION 8

Exposure controls / personal protection**8.1 Control parameters**

Occupational exposure limits (OEL / WEL) *Not applicable*

DNEC/PNEC data *Not applicable*

8.2 Exposure controls

Eye / face protection Safety glasses
Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.

Skin / hand protection Gloves: Nitrile Rubber, 0.11mm (480 mins).

Respiratory protection Dust mask (FFP2/FFP3)
Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.

Other protection Wear appropriate clothing to prevent any possibility of skin contact; wash after use and do not eat, drink or smoke when using.

Environmental exposure controls Keep container tightly sealed; check emissions comply with environmental protection legislation, using scrubbers, filters or process modifications if necessary.

SECTION 9

Physical & chemical properties**9.1 Information on basic physical and chemical properties**

Appearance / physical state Crystalline solid
DERIVED FROM: LITERATURE

Colour Blue-green.
DERIVED FROM: LITERATURE

Odour Odourless
DERIVED FROM: LITERATURE

Melting / freezing point 53°C/127.4°F
DERIVED FROM: LITERATURE

Boiling point *No data available*

Flammability *No data available*

Lower and upper explosion limit *No data available*

Flash point *Not applicable*

Auto-ignition temperature *No data available*

Decomposition temperature > 280°C/536°F
DERIVED FROM: LITERATURE

pH	4.0 - 6.0 (5% aq. solution) DERIVED FROM: LITERATURE
Acidity	Neutral DERIVED FROM: LITERATURE
Kinematic viscosity	<i>No data available</i>
Solubility	Freely soluble in water DERIVED FROM: LITERATURE
Partition coefficient n-octanol/water (log value)	<i>Not applicable</i>
Vapour pressure	<i>No data available</i>
Density (g/mL)	2.07 g/mL DERIVED FROM: LITERATURE
Relative vapour density	<i>No data available</i>
Particle characteristics	<i>No data available</i>

9.2 Other information

No data available

SECTION 10

Stability & reactivity

10.1 Reactivity

See the other subsections of Section 10 for further details.

10.2 Chemical stability

Stable at normal ambient temperatures and under prescribed storage conditions.

10.3 Possibility of hazardous reactions

Reacts violently with strong acids.

10.4 Conditions to avoid

Avoid excessive heat for prolonged periods of time.

10.5 Incompatible materials

Strong acids. Strong oxidising agents.

10.6 Hazardous decomposition products

Does not decompose when used and stored as recommended; thermal decomposition or combustion may produce toxic gases or vapours. See section 5

SECTION 11

Toxicological information

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

Acute toxicity (LD50 / LC50) LD50 Oral - Rat - 361.9 mg/kg
Acute toxicity estimate Inhalation - 4 h - 1.6 mg/l - dust/mist

Skin corrosion / irritation	<i>Not applicable</i>
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Eye corrosion / irritation	<i>Not applicable</i>
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Respiratory / skin sensitisation	<i>Not applicable</i>
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Carcinogenicity	<i>Not applicable</i>
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Mutagenicity	Suspected of causing genetic defects.
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Reproductive toxicity	May damage fertility or the unborn child.
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STOT (single / repeated exposure)	<i>Not applicable</i>
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Aspiration hazard	<i>Not applicable</i>
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11.2 Information on other hazards

This product does not contain any known or suspected endocrine disruptors.

SECTION 12

Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects ($0.1 < L(E)C50 \leq 1$ mg/l; M factor acute 1, chronic 1).

12.2 Persistence and degradability

Not applicable

12.3 Bioaccumulative potential

Not applicable

12.4 Mobility in soil

Not applicable

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Endocrine disrupting properties

See Section 11.2.

12.7 Other adverse effects

No data available

SECTION 13

Disposal considerations

13.1 Waste treatment methods

Do not empty into drains; dispose of surplus and non-recyclable products via a licensed waste disposal contractor; incineration or landfill only when recycling is not feasible.

SECTION 14

Transport information**14.1 UN number or ID number**

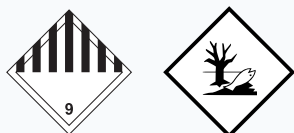
UN3077

14.2 UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

14.3 Transport hazard class(es)

9

**14.4 Packing group**

III

14.5 Environmental hazards

Environmentally hazardous substance/marine pollutant

14.6 Special precautions for user

Special precautions for user Always transport in closed containers that are upright and secure; ensure persons transporting the product know what to do in the event of an accident or spillage. EmS F-A, S-F.

Transport category 3

Tunnel code -

Packing instruction (ADR) P002

Packing instruction (IMDG) P002

14.7 Maritime transport in bulk according to IMO instruments*No data available*

SECTION 15

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

Substance-specific regulations (e.g. licences) *Not applicable*

REACH code Y110

ECHA notification *Not applicable*

15.2 Chemical safety assessment

Not required

SECTION 16

Other information

Revision notes / other information

This SDS replaces version 1, revision date 01/12/2021.

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as "No data available" carry no recorded value; fields shown as "Not applicable" were assessed as not relevant to this substance. For queries, contact Molekula at info@molekula.com.