

Section 1 : Chemical Product and Company Identification

Product Name : Nickel sulphate hexahydrate

CAS no. : 10101-97-0

K-REACH Reg. No. : 04-1809-03012

K-Ministry of Employment and Labor Reg. No. : AA05543-0000000001

EC / List no. : 600-152-3

Synonym :

IUPAC names : Nickel(ii) sulphate, Niciel(2+) Sulfate

Regulatory process names : Nickel sulphate, nickel sulfate

Chemical formula : NiSO₄.6H₂O

Contact Information :

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Section 2 : Hazards Identification

Health hazards

Acute toxicity (oral)	Category 4
Acute toxicity (inhalation)	Category 4
Skin irritation	Category 2
Skin sensitization	Category 1
Respiratory sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1B
Specific target organ toxicity repeated exposure	Category 1
Hazardous to the aquatic environment, short-term(acute)	Category 1
Hazardous to the aquatic environment, long-term(chronic)	Category 1

Pictogram(s) :



Signal Word : **Danger**

Hazard Statements

H302	Harmful if swallowed.
H332	Harmful if inhaled.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H360D	May damage 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.

Precautionary Statements prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust, fume, gas, mist, vapours, spray.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P281	Use personal protective equipment as required.
P363	Wash contaminated clothing before reuse.
P308+P313	If exposed or concerned : Get medical advice/attention.
P301+P310	If swallowed : Immediately call a posisoncenter or doctor / physician.

Storage

P405	Store in a locked storage area.
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Disposal

P501	Dispose of contents/container to relevant regulations and law.
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Other hazards which do not result in classification

NFPA Grade(0-4 stage)	
Health	2
Fire	0
Reactivity	0

Section 3 : Composition and Information on Ingredients

Composition:

Chemical name	Identification	Contents
Nickel sulphate hexahydrate	CAS No. : 10101-97-0 K-REACH Reg. No. : 04-1809-03012 K-Ministry of Employment and Labor Reg. No. : AA05543-0000000001 EC No. : 600-152-3	95-100%

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 :

In case of contact, immediately wash skin 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 : Not available.

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

Methods and materials for containment and cleaning up :

Small Spill :

Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill :

Use a shovel to put the material into a convenient waste disposal container.

Finish cleaning by spreading water on the concentration level above TLV.

Check TLV on the MSDS and with local authorities.

Personal precautions, protective equipment and emergency procedures :

Do not touch spilled materials.

Stop leak if possible without personal risk.

Environmental precautions :

Atmosphere : Not available

Soil : Dig holding area such as lagoon, pond or pit for containment.

Cover with plastic sheet or tarp to minimize spreading and protect from contact with water.

Underwater : Add an alkaline material.

Collect spilled material using mechanical equipment.

Keep out of water supplies and sewers.

Section 7 : Handling and Storage

Precautions :

Keep locked up Do not ingest. Do not breathe dust.

In case of insufficient ventilation, wear suitable respiratory equipment if ingested, seek medical advice immediately and show the container or the label.

Avoid contact with skin and eyes.

Storage :

Carcinogenic, teratogenic or mutagenic materials should be stored in a separate locked 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 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 :

Municipal law : TWA : 0.1 (mg/m³) Consult local authorities for acceptable exposure limits.

Acgih TWA : N/A

Biological exposure standard : N/A

Section 9 : Physical and Chemical Properties

Physical state and appearance : Solid. (Crystalline solid)

Odor : Odorless.

Taste : Not available.

Molecular Weight : 262.85 g/mole

Color : Emerald-green.

PH(1% sole / water) : Not available.

Boiling Point : Not available.

Specific Gravity : 2.03 (Water = 1)

Vapor Pressure : Not applicable.

Vapor Density : 9.1 (Air = 1)

Volatility : Not available

Odor Threshold : Not available.

Water / Oil Dist. Coeff : Not available.

Ionicity (in Water) : Not available.

Dispersion Properties : See solubility in water.

Solubility : Soluble in cold water, hot water.

Section 10 : Stability and Reactivity Data

Reactivity : Stable at normal temperatures and pressure.

Chemical stability : Will not polymerize.

Conditions to avoid(E.G.Static discharge, shock or vibration) :

Avoid generating dust.

Keep out of water supplies and sewers.

Hazardous decomposition products : N/A

Polymerization : No

Section 11 : Toxicological Information

Potential acute health effects

Inhalation : Irritating to respiratory system. May cause sensitization by inhalation.

Ingestion : Harmful if swallowed.

Skin contact : May cause sensitization by skin contact.

Eye contact : No known significant effects or critical hazards.

Acute toxicity

Acute oral toxicity : LD50 281 ~ 361.9 mg/kg [Rat] (ECHA)

Acute inhalation toxicity : LC50 (4h) air 2.48 mg/L [Rat] (ECHA)

Acute skin toxicity : Not available.

Special Remarks on Toxicity to Animals : Not available.

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.

BOD and COD : Not available.

Products of Bildegradation :

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

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

Disposal method :

Dispose of contents/container to in accordance with regional/national.

Disposal considerations :

Dispose in accordance with all applicable regulations.

Section 13 : Disposal Considerations

Disposal method :

Dispose of contents/container to in accordance with regional/national.

Disposal considerations :

Dispose in accordance with all applicable regulations.

Section 14 : Transport Information

IMDG

- UN No.	3077
- Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
- Hazard Class	9
- Packing Group	III
- Environmental hazards	Yes
- Marine pollutant	Yes

DOT

- UN-No	3077
- Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
- Hazard Class	9
- Packing Group	III
- Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Section 15 : Other Regulatory Information

Other Regulations : OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910. 1200)

Other Classifications :

WHMIS (Canada) :

CLASS D-1B : Material Causing immediate and serious toxic effects (TOXIC).

CLASS D-2A : Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R22-Harmful if swallowed. R38-Irritating to skin.

R41-Risk of serious damage to eyes. R45-may cause cancer.

HMIS (U.S.A) :

Health Hazard : 2

Fire Hazard : 0

Reactivity : 0

Personal Protection : E

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 goggle.

Section 16 : Other Information

References : Regulation of industrial safety a health measure.
Regulation of harmfulness chemistry substance the administration law.
Regulation of wasted material the administration law.
Regulation of dangerous article safety the administration law.

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