Date of issue: 28/11/2017
Date of revision: 18/03/2020

Safety Data Sheet

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

Product identifier:

Product name: Nickel(II)sulfate,6-hydrate

SDS No. : 5417E-2

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.
Address: 3-1, Honmachibashi, Chuo-ku,Osaka ,JAPAN
Division: Safety Management Dept. of Chemicals
Telephone number: +81-6-6946-8061
FAX: +81-6-6946-1607
e-mail address: kagakuhinanzenkanri@kishida.co.jp

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Acute toxicity (Oral): Category 3
Respiratory sensitization: Category 1
Skin sensitization: Category 1
Carcinogenicity: Category 1A
Specific target organ toxicity - repeated exposure: Category 1(respiratory apparatus/system)
Specific target organ toxicity - repeated exposure: Category 2(liver; testicle)

(Note) GHS classification without description: Not classified/Classification not possible

Label elements



Signal word: Danger

HAZARD STATEMENT

Toxic if swallowed
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
May cause cancer
Causes damage to organs through prolonged or repeated exposure(respiratory apparatus/system)
May cause damage to organs through prolonged or repeated exposure(liver; testicle)

PRECAUTIONARY STATEMENT

Prevention

Do not breathe dust/fume/gas/mist/vapors/spray.
In case of inadequate ventilation wear respiratory protection. (as specified by the manufacturer/supplier or the competent authority.)
Wash contaminated parts thoroughly after handling.
Wear protective gloves.
Contaminated work clothing should not be allowed out of the workplace.
Do not eat, drink or smoke when using this product.

Response

Get medical advice/attention if you feel unwell.
IF exposed or concerned: Get medical advice/attention.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth.

Disposal

Dispose of contents/container in accordance with local/national regulation.

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Nickel(II)sulfate,6-hydrate
Content (%):98(min)
Chemical formula:NiSO4・6H2O
Chemicals No, Japan:1-813
CAS No.:10101-97-0
MW:262.85

Note : The figures shown above are not the specifications of the product.

4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical attention/advice if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth.
Immediately call a POISON CENTER or doctor/physician.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.
Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Containers may explode when heated.
Fire may produce irritating, corrosive and/or toxic gases.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face peace operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Avoid raising dust.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Wear protective gloves, protective clothing or face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Take off contaminated clothing and wash it before reuse.

Storage

Conditions for safe storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Container and packaging materials for safe handling

Glass

Polyethylene

8. Exposure controls/personal protection

Control parameters

Adopted value

(Nickel(II)sulfate,6-hydrate)

ACGIH(1996) TWA: 0.1mg-Ni/m3(I) (Lung dam; nasal cancer) (soluble compounds)

TWA: 0.2mg-Ni/m3(I) (Lung cancer) (insoluble compounds)

OSHA-PEL

Nickel(II)sulfate,6-hydrateTWA: 1mg-Ni/m3 (Metal and insoluble compounds)

TWA: 1mg-Ni/m3 (Soluble compounds)

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystal or crystalline powder

Color: Green to pale blue-green

Odor: Odourless

pH data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Melting point/Freezing point data is not available.

Decomposition temperature data is not available.

Flammability (gases, liquids and solids) data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Vapor pressure data is not available.

Relative vapor density (Air=1) data is not available.

Density and/or relative density: 2.07

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Soluble

n-Octanol/water partition coefficient data is not available.

No Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Efflorescent material.

Possibility of hazardous reactions

(As Nickel(II)sulfate,anhydride)
Decomposes at 848° C. This produces toxic fumes of sulfur trioxide and nickel monoxide. See ICSC 0926. See ICSC 1202. Reacts with oxidants. This generates fire and explosion hazard.
The solution in water is a weak acid. (ICSC 0063)

Conditions to avoid
Contact with incompatible materials.
Contact with fire source.

Incompatible materials
Oxidizing agents

Hazardous decomposition products
Sulfur oxides, Sulfur trioxide, Nickel monoxide

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11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)
[GHS Cat. Japan, base data]
(Nickel(II)sulfate,6-hydrate)
female rat LD50=275mg/kg (NITE risk assessment, 2008)

Irritant properties
Skin corrosion/irritation data is not available.
Serious eye damage/irritation data is not available.

Sensitization

Respiratory sensitization
[GHS Cat. Japan, base data]
(Nickel(II)sulfate,6-hydrate)
cat. 1; JSOH recommendation, 2013

Skin sensitization
[GHS Cat. Japan, base data]
(Nickel(II)sulfate,6-hydrate)
cat. 1; JSOH recommendation, 2013

Mutagenic effects data is not available.

Carcinogenicity
[GHS Cat. Japan, base data]
(Nickel(II)sulfate,6-hydrate)
cat.1A; IARC Gr. 1 (IARC, 2012 et al.)
(Nickel(II)sulfate,6-hydrate)
IARC-Gr.1 : Carcinogenic to humans
(Nickel(II)sulfate,6-hydrate)
ACGIH-A1(1996) : Confirmed Human Carcinogen (Lung cancer)

Reproductive toxicity data is not available.

STOT

STOT-single exposure data is not available.

STOT-repeated exposure

[cat.1]
[GHS Cat. Japan, base data]
(Nickel(II)sulfate,6-hydrate)
respiratory apparatus (NITE primary risk assessment, 2008)

[cat.2]
[GHS Cat. Japan, base data]
(Nickel(II)sulfate,6-hydrate)
liver; testicle (NITE primary risk assessment, 2008)

Aspiration hazard data is not available.

Additional data

May cause lung disorders by massive inhalation of powdered substance.
-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

12. Ecological Information

Ecotoxicity

Ecotoxicity data is not available.

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

Bioaccumulative potential data is not available.

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No.: 3288
Proper Shipping Name :
TOXIC SOLID, INORGANIC, N.O.S.
Class or division : 6.1
Packing group : III
ERG GUIDE No.: 151
Special provisions No.: 223; 274

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 3288
Proper Shipping Name :
TOXIC SOLID, INORGANIC, N.O.S.
Class or division : 6.1
Packing group : III
Special provisions No.: 223; 274

IATA Dangerous Goods Regulations

UN No.: 3288
Proper Shipping Name :
TOXIC SOLID, INORGANIC, N.O.S.
Class or division : 6.1
Hazard labels : Toxic
Packing group : III
Special provisions No.: A3; A5

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

MARPOL Annex V – Prevention of pollution by garbage discharge

Carcinogenicity: cat.1, 1A, 1B

Nickel(II)sulfate,6-hydrate
Specific target organ toxicity - repeated exposure: cat.1
Nickel(II)sulfate,6-hydrate

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
US major regulations
Chemicals listed in TSCA Inventory
Nickel(II)sulfate,6-hydrate
Other regulatory information
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

GHS classification and labelling
Acute Tox. 3: H301 Toxic if swallowed
Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
Skin Sens. 1: H317 May cause an allergic skin reaction
Carc. 1A: H350 May cause cancer
STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure
Reference Book
Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN IMDG Code, 2018 Edition (Incorporating Amendment 39-18)
IATA Dangerous Goods Regulations (60th Edition) 2019
Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)
2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2019 TLVs and BEIs. (ACGIH)
http://monographs.iarc.fr/ENG/Classification/index.php
Supplier's data/information
General Disclaimer
This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.
The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.
The GHS classification data given here is based on current Japan official data (NITE published in 2018).