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1. IDENTIFICATION

Product name: Nickelous acetate
CAS No. : 373-02-4
Brand: Macklin
Company: Shanghai Macklin Biochemical Co.,Ltd.
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Revision date: 2019/12/12

2. HAZARDS IDENTIFICATION

GHS classification

PHYSICAL HAZARDS

HEALTH HAZARDS

ENVIRONMENTAL HAZARDS

GHS label elements, including precautionary statements

Pictograms or hazard symbols

Signal word

Danger

Hazard statements

H302 Harmful if swallowed
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
H372 Causes damage to organs through prolonged or repeated exposure
H410 Very toxic to aquatic life with long lasting effects

Precautionary statements

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name
Nickel di(acetate)

Components:Nickelous acetate
CAS No.:373-02-4
Chemical Formula:$C_4H_6NiO_4$

4. FIRST AID MEASURES

4.1
Description of necessary first-aid measures
If inhaled
Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial

respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

4.2

Most important symptoms/effects, acute and delayed

Inhalation causes irritation of nose and throat. Ingestion causes vomiting. Contact with eyes causes irritation. May cause dermatitis in contact with skin. (USCG, 1999)

4.3

Indication of immediate medical attention and special treatment needed, if necessary

Basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilation if necessary. Administer oxygen by nonrebreather mask at 10 t0 15 L/min. Monitor for shock and treat if necessary . Monitor for pulmonary edema and treat if necessary . For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport . Do not use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool . Nickel and related compounds

5. FIRE-FIGHTING MEASURES

5.1

Suitable extinguishing media

Excerpt from ERG Guide 154 [Substances - Toxic and/or Corrosive (Non-Combustible)]: SMALL FIRE: Dry chemical, CO2 or water spray. LARGE FIRE: Dry chemical, CO2, alcohol-resistant foam or water spray. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal; do not scatter the material. FIRE INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. (ERG, 2016)

5.2

Specific hazards arising from the chemical

Excerpt from ERG Guide 154 [Substances - Toxic and/or Corrosive (Non-Combustible)]: Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Some are oxidizers and may ignite combustibles (wood, paper, oil, clothing, etc.). Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. For electric vehicles or equipment, ERG Guide 147 (lithium ion batteries) or ERG Guide 138 (sodium batteries) should also be consulted. (ERG, 2016)

5.3

Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

6.1

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours.Avoid contacting with skin and eye. Use personal protective equipment.Wear chemical impermeable gloves. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas.Keep people away from and upwind of spill/leak.

6.2

Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3

Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

Conditions for safe storage, including any incompatibilities

Storage temperature: Ambient; Venting: Open

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure limit values

Component

Nickel di(acetate)

CAS No.

373-02-4

NIOSH considers nickel metal and other compounds (as Ni) to be a potential occupational carcinogen. /Nickel metal and other compounds (as Ni)/

NIOSH usually recommends that occupational exposures to carcinogens be limited to the lowest feasible concentration. /Nickel metal and other compounds (as Ni)/

Recommended Exposure Limit: 10 Hr TWA 0.015 mg/cu m. /Nickel metal and other compounds (as Ni)/

Biological limit values

no data available

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

Personal protective equipment

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state

Solid. Crystalline.

Colour

Light green.

Odour

no data available

Melting point/freezing point

> 359.85°C.

Boiling point or initial boiling point and boiling range

117.1ºC at 760 mmHg

Flammability

no data available

Lower and upper explosion limit/flammability limit

no data available
Flash point
40ºC
Auto-ignition temperature
270 °C. Remarks:The test material has been determined to have a relative self-ignition temperature of 270°C.
Decomposition temperature
no data available
pH
no data available
Kinematic viscosity
no data available
Solubility
INSOL IN ALCOHOL
Partition coefficient n-octanol/water
no data available
Vapour pressure
no data available
Density and/or relative density
1.78. Temperature:23 °C.
Relative vapour density
no data available
Particle characteristics
no data available

10. STABILITY AND REACTIVITY

10.1
Reactivity
NIOSH considers nickel metal and other compounds (as Ni) to be a potential occupational carcinogen. Nickel metal and other compounds (as Ni)
10.2
Chemical stability
no data available
10.3
Possibility of hazardous reactions
Not flammableNICKEL ACETATE is a green, crystalline material, mildly toxic and carcinogenic. Combustible when exposed to heat or flame. When heated to decomposition it emits acrid smoke and irritating fumes [Lewis, 3rd ed., 1993, p. 909].
10.4
Conditions to avoid
no data available
10.5
Incompatible materials
no data available
10.6
Hazardous decomposition products
Toxic gases and vapors (such as nickel carbonyl) may be released ... in the decomp of nickel cmpd. Nickel & sol nickel cmpd

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Oral: no data available
Inhalation: no data available
Dermal: no data available
Skin corrosion/irritation
no data available
Serious eye damage/irritation
no data available

Respiratory or skin sensitization
no data available
Germ cell mutagenicity
no data available
Carcinogenicity
A4: Not classifiable as a human carcinogen. Nickel, soluble inorganic compounds (NOS), as Ni
Reproductive toxicity
no data available
STOT-single exposure
no data available
STOT-repeated exposure
no data available
Aspiration hazard
no data available

12. ECOLOGICAL INFORMATION

12.1
Toxicity
Toxicity to fish: LC50 - Oncorhynchus mykiss (previous name: Salmo gairdneri) - 15.3 mg/L - 96 h. Remarks:Ni.
Toxicity to daphnia and other aquatic invertebrates: LC50 - Ceriodaphnia dubia - 276 µg/L - 48 h. Remarks:Hardness=268 mg/L as CaCO3.
Toxicity to algae: EC50 - Spermatozopsis exsultans - 263 µg/L - 72 h.
Toxicity to microorganisms: EC50 - activated sludge - 33 mg/L - 30 min. Remarks:Respiration rate.
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
Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
Contaminated packaging
Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. TRANSPORT INFORMATION

14.1
UN Number
ADR/RID: Not dangerous goods. (For reference only, please check.)
IMDG: Not dangerous goods. (For reference only, please check.)
IATA: Not dangerous goods. (For reference only, please check.)
14.2
UN Proper Shipping Name
ADR/RID: Not dangerous goods. (For reference only, please check.)
IMDG: Not dangerous goods. (For reference only, please check.)
IATA: Not dangerous goods. (For reference only, please check.)

14.3
Transport hazard class(es)
ADR/RID: Not dangerous goods. (For reference only, please check.)
IMDG: Not dangerous goods. (For reference only, please check.)
IATA: Not dangerous goods. (For reference only, please check.)
14.4
Packing group, if applicable
ADR/RID: Not dangerous goods. (For reference only, please check.)
IMDG: Not dangerous goods. (For reference only, please check.)
IATA: Not dangerous goods. (For reference only, please check.)
14.5
Environmental hazards
ADR/RID: Yes
IMDG: Yes
IATA: Yes
14.6
Special precautions for user
no data available
14.7
Transport in bulk according to IMO instruments
no data available

15. REGULATORY INFORMATION

15.1
Safety, health and environmental regulations specific for the product in question
Chemical name
Common names and synonyms
CAS number
EC number
Nickel di(acetate)
Nickel di(acetate)
373-02-4
206-761-7
European Inventory of Existing Commercial Chemical Substances (EINECS)
Listed.
EC Inventory
Listed.
United States Toxic Substances Control Act (TSCA) Inventory
Listed.
China Catalog of Hazardous chemicals 2015
Not Listed.
New Zealand Inventory of Chemicals (NZIoC)
Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)
Listed.
Vietnam National Chemical Inventory
Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)
Listed.
Korea Existing Chemicals List (KECL)
Listed.

16. OTHER INFORMATION

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority.The products are supposed to be used promptly after purchase in

consideration of safety.Some new information or amendments may be added afterwards.If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only.In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal.Safe usage conditions shall be set up on each user's own responsibility.