

TCI AMERICA **SAFETY DATA SHEET**

Revision number: 3 Revision date: 10/17/2016

IDENTIFICATION

Product name: Bis(2,4-pentanedionato)nickel(II) Hydrate

Product code:

For laboratory research purposes. Product use: Restrictions on use: Not for drug or household use.

Company: TCI America

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Environmental Health Safety and Security

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2. HAZARD(S) IDENTIFICATION

OSHA Haz Com: CFR 1910.1200: Acute Toxicity - Oral [Category 4]

Sensitization - Respiratory [Category 1] Sensitization - Skin [Category 1] Carcinogenicity [Category 1A]

Specific Target Organ Toxicity (Repeated Exposure) [Category 1]

Danger! Signal word:

Harmful if swallowed Hazard Statement(s):

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause an allergic skin reaction

May cause cancer

Causes damage to organs: Respiratory System through prolonged or repeated exposure.

Pictogram(s) or Symbol(s):





Precautionary Statement(s):

[Response]

[Disposal]

[Prevention] Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. Avoid breathing dusts or mists. In case of inadequate ventilation wear respiratory protection. Contaminated work

clothing must not be allowed out of the workplace. Wear protective gloves. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective

gloves, protective clothing, eye protection and face protection. Do not breathe dusts or mists

If swallowed: Immediately call a poison center or doctor. Rinse mouth. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If exposed or concerned: Get medical advice

or attention. Get medical advice or attention if you feel unwell.

[Storage] Store locked up.

Dispose of contents and container in accordance with US EPA guidelines for the classification and

determination of hazardous waste listed in 40 CFR 261.3. (See Section 13)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture: Substance

Components: Bis(2,4-pentanedionato)nickel(II) Hydrate

 $\begin{array}{lll} \textbf{Percent:} & > 98.0\%(T) \\ \textbf{CAS Number:} & 3264-82-2 \\ \textbf{Molecular Weight:} & 256.91(Anh) \\ \textbf{Chemical Formula:} & C_{10}H_{14}NiO_4 \cdot xH_2O \\ \end{array}$

Synonyms: Acetylacetone Nickel(II) Salt Hydrate , Nickel(II) Acetylacetonate Hydrate

4. FIRST-AID MEASURES

Inhalation: May cause coughing, difficult breathing and nausea. Call a poison center or doctor if you feel unwell.

Effects of exposure (inhalation) to substance may be delayed. Inhalation of vapors or contact with substance will result in contamination and potential harmful effects. Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s)

involved and take precautions to protect themselves.

Skin contact: Call a poison center or doctor if you feel unwell. Effects of exposure (skin contact) to substance may be

delayed. Remove and wash contaminated clothing before re-use. Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Treat symptomatically and supportively. Ensure that medical personnel are aware of the

material(s) involved and take precautions to protect themselves.

Eye contact: If this chemical contacts the eyes, immediately wash (irrigate) the eyes with large amounts of water,

occasionally lifting the lower and upper eyelids. If eye irritation persists get medical advice/attention. Move victim to fresh air. Check for and remove any contact lenses. Keep victim warm and guiet. Treat

symptomatically and supportively. Effects of exposure to substance may be delayed. Ensure that medical

personnel are aware of the material(s) involved and take precautions to protect themselves.

Ingestion: Harmful if swallowed. Effects of exposure (ingestion) to substance may be delayed. If swallowed, seek

medical advice immediately and show the container or label. Do not use mouth-to-mouth method if victim ingested the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Loosen tight clothing such as a collar, tie, belt or waistband. If a person vomits place them in the recovery position so that vomit will not reenter the mouth

and throat. Rinse mouth. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Symptoms/effects:

Acute: No data available

Delayed: May cause skin sensitization. Possibly carcinogenic to humans.

Immediate medical attention: WARNING: It might be hazardous to the person providing aid to give mouth-to-mouth respiration, because

the inhaled material is harmful. CAUTION: Victim may be a source of contamination. If breathing has stopped, perform artificial respiration. Use first aid treatment according to the nature of the injury. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, CO₂, water spray, or alcohol-resistant foam. Consult with local fire authorities before

attempting large scale fire fighting operations.

Specific hazards arising from the chemical

Hazardous combustion products: These products include: Carbon oxides Metallic oxides
Other specific hazards: Closed containers may explode from heat of a fire.

Special precautions for fire-fighters:

Use water spray or fog; do not use straight streams. Dike fire-control water for later disposal; do not scatter the material. Containers may explode when heated. Move containers from fire area if you can do it without risk.

Special protective equipment for fire-fighters:

Wear positive pressure self-contained breathing apparatus (SCBA). Structural fire fighters' protective clothing provides limited protection in fire situations ONLY; it may not be effective in spill situations. Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.

6. ACCIDENTAL RELEASE MEASURES

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Personal precautions: Avoid contact with skin, eyes, and clothing. Keep people away from and upwind of spill/leak. Do not touch

damaged containers or spilled material unless wearing appropriate protective clothing (Section 8). Warn unnecessary personnel to move away. Stop leak if you can do it without risk. Ensure adequate ventilation.

Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Personal protective equipment: Splash goggles. Wear protective clothing (chemical resistant suit and chemical resistant boots). Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear protective gloves

respirator. Be sure to use a MSHA/NIOSH approved respira (nitrile).

Emergency procedures: Prevent dust cloud. Do not clean-up or dispose except under supervision of a specialist. In case of a spill

and/or a leak, always shut off any sources of ignition, ventilate the area, and excercise caution. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Warn personnel to move away. Prevent entry into sewers, basements or confined areas; dike if needed.

Methods and materials for containment and cleaning up:

ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if without risk. Ventilate the area. Absorb with an inert material and put the spilled material in an appropriate waste disposal container. Use clean non-sparking tools to collect absorbed material.

Environmental precautions:

Keep away from living quarters. Do not let product enter drains. Prevent further leakage or spillage if safe to do so. Water runoff can cause environmental damage. Prevent entry into sewers, basements or confined areas; dike if needed.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid inhalation of vapor or mist. Manipulate under an adequate fume hood. Do not ingest. Avoid contact

with skin and eyes. Avoid exposure - obtain special instructions before use. Avoid prolonged or repeated exposure. Normal measures for preventive fire protection. Good general ventilation should be sufficient to control airborne levels. Keep container dry. Handle and open container with care. Wear suitable protective clothing, gloves and eye/face protection. When using do not eat, drink, or smoke. Keep away from sources

of ignition.

Conditions for safe storage: Store locked up. Keep containers tightly closed in a cool, well-ventilated place. Keep away from

incompatibles. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid prolonged storage periods. Store under inert gas (e.g. Argon). Hygroscopic material, store

in a tightly sealed container.

Storage incompatibilities: Combustible substances, Store away from oxidizing agents

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits: No data available

Appropriate engineering controls:

Handle only in a fully enclosed system and equipment. Good general ventilation should be sufficient to control airborne levels. Ventilation is normally required when handling or using this product. Eyewash fountains should be provided in areas where there is any possibility that workers could be exposed to the substance. Follow safe industrial engineering/laboratory practices when handling any chemical.

Personal protective equipment

Respiratory protection: Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent.

Hand protection: Wear protective gloves.

Eye protection: Safety glasses.

Skin and body protection: Wear protective clothing (chemical resistant suit and chemical resistant boots).

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C): Solid

Form: Crystal - Powder
Color: Pale blue - Blue
Odor: No data available
Odor threshold: No data available

Melting point/freezing point: No data available pH: No data available Boiling point/range: No data available Vapor pressure: No data available **Decomposition temperature:** No data available No data available Vapor density: Relative density: No data available **Dynamic Viscosity:** No data available

Kinematic Viscosity: No data available

Partition coefficient: No data available Evaporation rate: No data available

n-octanol/water (log Pow) (Butyl Acetate = 1)

9. PHYSICAL AND CHEMICAL PROPERTIES

Flash point: No data available Autoignition temperature: No data available

Flammability (solid, gas):

No data available

Flammability or explosive limits:

Lower:

No data available

Upper: No data available

Solubility(ies):

Water: Soluble

Soluble: Alcohols, Benzene, Chloroform

Insoluble: Ether

10. STABILITY AND REACTIVITY

Reactivity: Not Available.

Chemical Stability: Stable under recommended storage conditions. (See Section 7)

Possibility of Hazardous Reactions: No hazardous reactivity has been reported.

Conditions to avoid:
Incompatible materials:
Hazardous Decomposition Products:

Avoid excessive heat and light.
Strong oxidizing agents
No data available

11. TOXICOLOGICAL INFORMATION

RTECS Number: SA2100000

Acute Toxicity:

ipr-mus LD50:125 mg/kg

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:

No data available

IARC: Group 1 (Carcinogenic to NTP: a (Known to be carcinogens). OSHA: No data available

humans).

Reproductive toxicity:

No data available

Routes of Exposure: Inhalation, Eye contact, Ingestion, Skin contact.

Symptoms related to exposure:

Overexposure may result in serious illness or death. Inhalation causes irritation of the lungs and respiratory system. Skin contact may result in sensitization. Readily absorbed through skin.

Potential Health Effects:

No specific information available; skin and eye contact may result in irritatation. May be harmful if inhaled or ingested.

Target organ(s):

Causes damage to organs: Respiratory System through prolonged or repeated exposure.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Fish: No data available
Crustacea: No data available
Algae: No data available

Persistence and degradability: No data available Bioaccumulative potential (BCF): No data available

12. ECOLOGICAL INFORMATION

Mobillity in soil: Partition coefficient: n-octanol/water (log Pow) Soil adsorption (Koc): Henry's Law:

No data available No data available

No data available No data available

constant (PaM3/mol)

13. DISPOSAL CONSIDERATIONS

Listed waste

U165/Naphthalene

Disposal of product:

Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains,

water ways, or the soil.

Disposal of container:

Dispose of as unused product. Do not re-use empty containers.

Observe all federal, state and local regulations when disposing of the substance. Other considerations:

14. TRANSPORT INFORMATION

DOT (US)

IATA

IMDG

15. REGULATORY INFORMATION

Toxic Substance Control Act (TSCA 8b.):

This product is ON the EPA Toxic Substances Control Act (TSCA) inventory.

US Federal Regulations

CERCLA Hazardous substance and Reportable Quantity:

SARA 313: Not Listed **SARA 302:** Not Listed

State Regulations

State Right-to-Know

Massachusetts Not Listed **New Jersey** Not Listed Pennsylvania Not Listed California Proposition 65: Not Listed

Other Information

HMIS Classification: NFPA Rating:

Health: Health: 2 Flammability: 0 Flammability: 0 Instability: Physical: n

International Inventories

WHMIS hazard class: D2A: Materials causing other toxic effects. (Very Toxic)

D2B: Materials causing other toxic effects. (Toxic)

EC-No: 221-875-7

16. OTHER INFORMATION

Revision date: 10/17/2016 Revision number: 3

16. OTHER INFORMATION

TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.