Safety Data Sheet

In accordance with CFR 1910.1200 (OSHA HCS)

SDS No. 1035 Date of review: July 2, 2019

1 Identification of substance and company

Product name: ***Nickel (II) acetylacetonate, hydrate***

Product code: 12593

Relevant use and restrictions on use: Research and product development

Manufacturer/Supplier: Noah Technologies Corporation
1 Noah Park
San Antonio, Texas 78249-3419
Phone: 210-691-2000
Fax: 210-691-2600
Web site: www.noahtech.com

Emergency information: CHEMTREC
800-424-9300

2 Hazards identification

Emergency Overview:

Pictogram(s):

Signal word(s): Warning

Hazard statements:
H302 Harmful if swallowed
H317 May cause an allergic skin reaction
H350 May cause cancer

Precautionary statements:
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/ vapors/ spray
P264 Wash skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P272 Contaminated work clothing should not be allowed out of the workplace
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection
P301+312+330 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
P302+352 IF ON SKIN: Wash with plenty of soap and water
P308+313 IF exposed or concerned: Get medical advice/ attention
P333+313 If skin irritation or rash occurs: Get medical advice/ attention
P363 Wash contaminated clothing before reuse
P405 Store locked up
P501 Dispose of contents/ container to an approved waste disposal plant

GHS Classification:
Acute toxicity, Oral - 4
Skin sensitization - 1
Carcinogenicity - 1A

Hazards not otherwise classified: None

HMIS ratings (scale 0-4):

Health hazard:	2*
Flammability:	0
Physical hazard:	0

3 Composition/Information on ingredients

Chemical name: Nickel (II) acetylacetonate, hydrate

Designation:

CAS number: 120156-44-7 (hydrate)
3264-82-2 (anhydrous)

EC number: 221-875-7

Formula: $Ni(C_5O_2H_7)_2.xH_2O$

Synonyms: Nickel bis(2, 4-pentanedionate), Ni(acac)2

4 First aid measures

After inhalation:	Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
After skin contact:	Wash off with soap and plenty of water. Consult a physician.
After eye contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
After ingestion:	Never give anything by mouth to an unconscious person. Rinse mouth out with water. Consult a physician.
Information for doctor:	Show this safety data sheet to the doctor in attendance
Symptoms/effects; acute and delayed:	May liberate 2,4-pentanedione upon decomposition. 2,4-Pentanedione has the following toxicological hazards: toxic, irritant, neurological hazard, teratogen, possible mutagen, target organ - thymus. In humans, 2,4-prntanedione is reported to cause contact dermatitis and contact urticaria. Nickel and nickel compounds may cause a form of dermatitis known as nickel itch. They may also cause intestinal disorders, convulsions and asphyxia. Airborne nickel contaminated dusts are regarded as carcinogenic to the respiratory tract.
Immediate medical attention and special treatment needed:	No data available

5 Fire-fighting measures

Suitable and unsuitable extinguishing agents:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
Special hazards caused by the material, its products of combustion or resulting gases:	Nickel oxides, carbon monoxide and dioxide
Special fire fighting procedures:	Wear self-contained breathing apparatus (SCBA) and fully protective fire fighting equipment/clothing
Unusual fire and explosion hazard:	No data available

6 Accidental release measures

Person-related safety precautions:	Use personal protective equipment. Avoid dust formation. Avoid breathing dust.
Measures for environmental protection:	Do not let product enter drains
Measures for cleaning/collecting:	Sweep or scoop up and remove. Place in a suitable container for proper disposal.
Additional information:	See Section 7 for information on safe handling See Section 8 for information on personal protective equipment See Section 13 for information on disposal See Section 15 for regulatory information

7 Handling and storage

Information for safe handling:	Avoid contact with skin and eyes. Avoid formation of dust. Use with adequate ventilation.
Information about protection against explosions and fires:	Normal measures for preventive fire protection.
Storage requirements to be met by storerooms and containers:	Keep container tightly closed in dry and well-ventilated place; hygroscopic
Incompatibility (avoid contact with):	Strong acids and oxidizers
Further information about storage conditions:	No further information available

8 Exposure controls/personal protection

Ventilation requirements:	Use with adequate ventilation
Components with exposure limits that require monitoring:	OSHA PEL: TWA 1.0 mg(Ni)/m3 NIOSH REL: TWA 0.015 mg(Ni)/m3: Potential occupational carcinogen
Additional information:	No further information available
General protective and hygienic measures:	The usual precautionary measures for handling chemicals should be adhered to Keep away from foodstuffs, beverages and food Instantly remove any soiled and impregnated garments Wash hands during breaks and at the end of the work Avoid contact with the eyes and skin
Personal protective equipment:	
Respiratory protection:	Filter-dust, fume, mist respirator
(Use only NIOSH or CEN approved Equipment)	
Hand protection:	Impervious gloves
Eye protection:	Safety glasses with side-shields
Skin protection:	Protective work clothing
Additional protective equipment:	Sufficient to prevent contact. Emergency eyewash and safety shower.
Precautionary labeling:	Wash thoroughly after handling Do not get in eyes, on skin or on clothing Do not breathe dust, vapor, mist, or gas

9 Physical and chemical properties

Physical state:	Powder
Color:	Light green
Odor:	Characteristic odor

Odor threshold:	No data available
Molecular Weight (Calculated):	256.91 (anhydrous)
pH	No data available
Melting point/freezing point/range:	230 - 240 C (decomposes)
Boiling point/range:	Decomposes
Sublimation temperature/start:	No data available
Decomposition temperature:	No data available
Flammability (solid, gas):	No data available
Flash point:	No data available
Autoignition temperature:	No data available
Danger of explosion:	No data available
Flammable limits:	No data available
Lower:	No data available
Upper:	No data available
Evaporation Rate:	No data available
Vapor pressure (mm Hg):	No data available
Vapor density:	No data available
Specific gravity:	1.455
Bulk density:	No data available
Solubility in/Miscibility with water:	No data available
Partition coefficient n-octanol/water:	No data available
Viscosity:	No data available

10 Stability and reactivity

Reactivity:	No data available
Chemical stability:	Stable under recommended storage conditions
Possibility of hazardous reactions:	No data available
Conditions to be avoided:	Excessive heat See section 7 for information on proper handling and storage
Materials to be avoided:	Strong acids and oxidizers
Dangerous reactions:	No data available
Hazardous decomposition products: (thermal and other)	Nickel oxides, carbon monoxide and dioxide

11 Toxicological information

LD/LC50 values that are relevant for classification:	intraperitoneal-mouse LD_{50}: 125 mg/kg
Irritation or corrosion of skin:	No data available
Irritation or corrosion of eyes:	No data available
Primary irritant or corrosive effect:	
on the skin:	May cause irritation
on the eye:	May cause irritation
Sensitization:	No data available
Potential health effects:	
Inhalation:	May cause irritation to the upper respiratory tract and mucous membranes
Ingestion:	No data available
Skin:	May cause irritation
Eyes:	May cause irritation
Signs and symptoms of exposure:	May liberate 2,4-pentanedione upon decomposition. 2,4-Pentanedione has the following toxicological hazards: toxic, irritant, neurological hazard, teratogen, possible mutagen, target organ - thymus. In humans, 2,4-prntanedione is reported to cause contact dermatitis and contact urticaria. Nickel and nickel compounds may cause a form of dermatitis known as nickel itch. They may also cause intestinal disorders, convulsions and asphyxia. Airborne nickel contaminated dusts are regarded as carcinogenic to the respiratory tract. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known
Carcinogenicity:	IARC Group 1 - Carcinogenic to humans NTP - Known to be human carcinogen
Additional information:	No additional information available

12 Ecotoxicological information

Toxicity:	
Toxicity to fish:	No data available
Toxicity to daphnia and other aquatic invertebrates:	No data available
Toxicity to algae:	No data available

Persistence and degradability:

Biodegradability: No data available

Bioaccumulative potential:

Bioaccumulation: No data available

Mobility in soil: No data available

Other adverse effects: No additional information available

13 Disposal considerations

Recommendation: Consult state, local or national regulation for proper disposal
Allow professional disposal company to handle waste
Must be specially treated under adherence to official regulations

Unclean packagings recommendation: Disposal must be made according to official regulations

14 Transport information

Land transport DOT

Proper shipping name: Chemicals Non-Hazardous

Technical name: Nickel (II) acetylacetonate

Air transport ICAO-TI and IATA-DGR:

Proper shipping name: Chemicals Non-Hazardous

Technical name: Nickel (II) acetylacetonate

UPS Ground / FedEx Ground

Proper shipping name: Chemicals Non-Hazardous

Technical name: Nickel (II) acetylacetonate

UPS Air

Proper shipping name: Chemicals Non-Hazardous

Technical name: Nickel (II) acetylacetonate

15 Regulatory information

SARA Section 302 Extremely Hazardous components and corresponding TPQs: Not subject

SARA Section 311 / 312 hazards: Acute Health Hazard, Chronic Health Hazard

SARA Section 313 components: This product contains chemical(s) subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-to-know Act of 1986 and 40CFR372

California Proposition 65 components: WARNING! This product contains a chemical known to the State of California to cause cancer

TSCA: Material is listed on TSCA Inventory

16 Other information

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulation are subject to change and the conditions of handling and use, or misuse are beyond our control. NOAH MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use.