Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

SECTION 1. IDENTIFICATION

Product name : Nickel Hydroxycarbonate

Trade name : Nickel Hydroxycarbonate 33%; Nickel Hydroxycarbonate

40%; Nickel Hydroxycarbonate 46%; Nickel Hydroxycarbonate 49%; Nickel Hydroxycarbonate 42% - 44%; Nickel

carbonate, 45.5%;

Nickel Hydroxycarbonate 49%, powder, paste, granules

pearls;

NICKEL SALTS UMN48

Product code : 30000002046

CAS-No. : 12607-70-4

Manufacturer or supplier's details

Company name of supplier :

Address :

E-mail address of person responsible for the SDS

Poison Center

Telephone : +1 800 222 1222

Hours of operation : 24HRS

Supplier

Emergency telephone num-

ber

: For transport in Europe, Central- and South America, Israel and Africa (Non-Arabic speaking countries):(+32) 3 213 15 70 For transport in the Middle East (Israel excluded) & Arabic

speaking Africa:(+32) 3 213 33 79

For transport in the USA and Canada:(+1)-877 986 4267 For transport in Asian and the Pacific (China excluded):(+65)

62 64 78 36

For transport in China:(+86) 0532 8388 9090

Hours of operation : This telephone number is available 24 hours per day, 7 days

per week.

Recommended use of the chemical and restrictions on use

Recommended use : Chemical plating of metals

Production of catalysts and catalyst precursors

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 2

Skin irritation : Category 2

Eye irritation : Category 2A

Respiratory sensitisation : Category 1

Skin sensitisation : Category 1

Germ cell mutagenicity : Category 2

Carcinogenicity (Inhalation) : Category 1A

Reproductive toxicity : Category 1B

Specific target organ toxicity

- repeated exposure

Category 1

Short-term (acute) aquatic

hazard

Category 1

Long-term (chronic) aquatic

hazard

Category 1

GHS label elements

Hazard pictograms







Signal word : Danger

Hazard statements : H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction. H319 Causes serious eye irritation.

H330 Fatal if inhaled.

H334 May cause allergy or asthma symptoms or breathing diffi-

culties if inhaled.

H341 Suspected of causing genetic defects. H350i May cause cancer by inhalation.

H360 May damage fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated

exposure.

H410 Very toxic to aquatic life with long lasting effects.

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

Precautionary statements

Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear eye protection/ face protection.

P280 Wear protective gloves.

P281 Use personal protective equipment as required.

P284 Wear respiratory protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON

CENTER/ doctor if you feel unwell. Rinse mouth.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention

P362 Take off contaminated clothing and wash before reuse. P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Substance name : Nickel carbonate hydroxide

CAS-No. : 12607-70-4

Revision Date: 02/22/2022 Version 3.1 SDS Number: 30000002046

Components

Chemical name	CAS-No.	Concentration (% w/w)
Nickel carbonate hydroxide	12607-70-4	<= 100

SECTION 4. FIRST AID MEASURES

General advice Move out of dangerous area.

Consult a physician.

Show this safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later.

Do not leave the victim unattended.

If inhaled Call a physician or poison control centre immediately.

Move to fresh air.

If unconscious, place in recovery position and get medical

attention immediately.

In case of skin contact If on skin, rinse well with water.

If on clothes, remove clothes.

If skin irritation persists, call a physician. Wash contaminated clothing before reuse.

In case of eye contact Remove contact lenses.

In the case of contact with eyes, rinse immediately with plenty

of water and seek medical advice.

Protect unharmed eye.

Keep eye wide open while rinsing.

If swallowed Clean mouth with water and drink afterwards plenty of water.

Keep respiratory tract clear.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

Take victim immediately to hospital.

Most important symptoms and effects, both acute and

delayed

Skin contact may provoke the following symptoms:

Allergic reactions

Redness

Inhalation may provoke the following symptoms:

Shortness of breath

Asthma

Ingestion may provoke the following symptoms:

Stomach/intestinal disorders In case of eye contact **Excessive lachrymation**

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment.

Unsuitable extinguishing

media

High volume water jet

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

Specific hazards during fire-

fighting

Do not allow run-off from fire fighting to enter drains or water

courses.

Hazardous combustion prod-

ucts

Nickel compounds

Further information : Collect contaminated fire extinguishing water separately. This

must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations.

Special protective equipment:

for firefighters

Wear self-contained breathing apparatus for firefighting if nec-

essary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- :

tive equipment and emergency procedures

Use personal protective equipment.

Avoid dust formation. Avoid breathing dust.

Ensure adequate ventilation. Evacuate personnel to safe areas.

Evacuate personner to sale areas

Prevent product from entering drains.

Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform

respective authorities.

Methods and materials for

Environmental precautions

containment and cleaning up

Wipe up with absorbent material (e.g. cloth, fleece).

SECTION 7. HANDLING AND STORAGE

Advice on protection against

fire and explosion

Provide appropriate exhaust ventilation at places where dust

is formed.

Advice on safe handling : Avoid formation of respirable particles.

Do not breathe vapours/dust.

Avoid exposure - obtain special instructions before use.

Avoid contact with skin and eyes. For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the ap-

plication area.

Provide sufficient air exchange and/or exhaust in work rooms. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be empl oyed in any process in which this mixture is being

used.

Conditions for safe storage : Prevent unauthorized access.

Keep container tightly closed in a dry and well-ventilated

place.

Containers which are opened must be carefully resealed and

kept upright to prevent leakage.

Electrical installations / working materials must comply with

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

the technological safety standards.

To maintain product quality, do not store in heat or direct sun-

light.

Further information on stor-

age stability

Keep in a dry place.

No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Nickel carbonate hydroxide	12607-70-4	TWA	1 mg/m3 (Nickel)	OSHA Z-1
		TWA	1 mg/m3 (Nickel)	OSHA P0
		TWA	0.015 mg/m3 (Nickel)	NIOSH REL
		TWA (Inhal- able fraction)	0.2 mg/m3 (Nickel)	ACGIH

Engineering measures : Handle only in a place equipped with local exhaust (or other

appropriate exhaust).

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an

approved filter.

When workers are facing concentrations above the exposure

limit they must use appropriate certified respirators.

Wear a NIOSH-approved respirator

Category 21C air-purifying respirator equipped with a full

facepiece and high efficiency particulate filters.

Hand protection

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : 0.12 mm

Material : PVC
Break through time : > 480 min
Glove thickness : 1.1 mm

Material : Neoprene
Break through time : > 480 min
Glove thickness : 0.35 mm

Glove length : Long sleeve gloves

Glove length : Long sleeve gloves

Eye protection : Wear safety glasses with side shields or goggles.

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

Skin and body protection : Footwear protecting against chemicals

Protective measures : Ensure that eye flushing systems and safety showers are

located close to the working place.

Hygiene measures : Avoid contact with skin, eyes and clothing.

General industrial hygiene practice.

Wash hands before breaks and immediately after handling

the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder

Colour : green

Odour : odourless

Melting point/range : Decomposition

Flash point : Not applicable

Flammability (solid, gas) : The product is not flammable.

Self-ignition : $> 752 \, ^{\circ}\text{F} \, / > 400 \, ^{\circ}\text{C}$

Density : 2.96 g/cm3 (72.5 °F / 22.5 °C)

Solubility(ies)

Water solubility : 0.0329 g/l practically insoluble

Auto-ignition temperature : $> 752 \, ^{\circ}\text{F} \, / > 400 \, ^{\circ}\text{C}$

Decomposition temperature : 464 °F / 240 °C

Viscosity

Viscosity, kinematic : data waiving in REACH dossier

Oxidizing properties : No data available

Self-heating substances : Not applicable

Molecular weight : 304.18 g/mol

Metal corrosion rate : Not corrosive to metals

Minimum ignition energy : not determined

SECTION 10. STABILITY AND REACTIVITY

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

Reactivity : Stable at normal ambient temperature and pressure.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reac-

tions

Stable under recommended storage conditions.

Conditions to avoid : None known.

Incompatible materials : Strong acids

Hazardous decomposition

products

No decomposition if stored normally.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

Components:

Nickel carbonate hydroxide:

Acute oral toxicity : LD50 (Rat, female): 2,000 mg/kg

Method: OECD Test Guideline 425

Acute inhalation toxicity : LC50 (Rat, male): 0.2437 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Skin corrosion/irritation

Components:

Nickel carbonate hydroxide:

Species : Rabbit Exposure time : 4 h

Method : OECD Test Guideline 404

Result : Skin irritation

GLP : yes

Serious eye damage/eye irritation

Product:

Remarks : No data available

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

Components:

Nickel carbonate hydroxide:

Species : Rabbit
Result : Eye irritation

Method : OECD Test Guideline 405

Respiratory or skin sensitisation

Components:

Nickel carbonate hydroxide:

Exposure routes : Inhalation Species : Humans

Result : May cause sensitisation by inhalation.

GLP : no

Exposure routes : Skin contact Species : Humans

Result : May cause sensitisation by skin contact.

GLP : no

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Components:

Nickel carbonate hydroxide:

Genotoxicity in vitro : Test system: Mammalian-Animal

Method: OECD Test Guideline 476

Result: Conflicting results have been seen in different studies.

GLP: yes

Genotoxicity in vivo : Species: Mammalian-Animal

Method: OECD Test Guideline 474

Result: negative

Remarks: Based on read across from structural related sub-

stance

nickel sulphate

Germ cell mutagenicity -

Assessment

In vitro tests showed mutagenic effects

Carcinogenicity

Product:

Remarks : No data available

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

Components:

Nickel carbonate hydroxide:

Species : Rat, male and female

Application Route : Oral Exposure time : 104 weeks

Dose : 10; 30; 50 mg/kg body weight

Frequency of Treatment : daily

NOAEL : 11 mg/kg bw/day

Method : OECD Test Guideline 451

Result : negative GLP : yes

Remarks : unit expressed as mg metal/kg

Based on read across from structural related substance

nickel sulphate

Carcinogenicity - Assess-

ment

Positive evidence from human epidemiological studies (inhala-

tion)

IARC Group 1: Carcinogenic to humans

Nickel carbonate hydroxide 12607-70-4

(Nickel compounds)

OSHANo component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP Known to be human carcinogen

Nickel carbonate hydroxide 12607-70-4

(Nickel Compounds)

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Components:

Nickel carbonate hydroxide:

Effects on fertility : Species: Rat

Application Route: Oral

Dose: 0; 1; 2,5; 5;10 milligram per kilogram

General Toxicity - Parent: NOAEL: 10 mg/kg body weight General Toxicity F1: NOAEL: 10 mg/kg body weight

Method: OECD Test Guideline 416

Remarks: Based on read across from structural related sub-

stance

nickel sulphate

Species: Rat

Application Route: inhalation (dust/mist/fume)
Duration of Single Treatment: 13 Weeks
General Toxicity - Parent: NOAEL: 0.45 mg/m³
Remarks: unit expressed as mg metal/m³

Based on read across from structural related substance

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

nickel sulphate

Reproductive toxicity - As-

sessment

Clear evidence of adverse effects on development, based on

animal experiments.

STOT - single exposure

Product:

Remarks : No data available

STOT - repeated exposure

Product:

Remarks : No data available

Components:

Nickel carbonate hydroxide:

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Repeated dose toxicity

Components:

Nickel carbonate hydroxide:

Species : Rat, male and female

NOAEL : 2.2 mg/kg LOAEL : 6.7 mg/kg Application Route : Oral Exposure time : 104 weeks Dose : 10; 30; 50

Method : OECD Test Guideline 451

GLP : yes

Remarks : unit expressed as mg metal/kg

Based on read across from structural related substance

nickel sulphate

Species : Rat, females
NOAEL : 0.2 mg/kg
Application Route : Inhalation
Exposure time : 13 weeks

Method : OECD Test Guideline 413
Remarks : unit expressed as mg metal/m³

Based on read across from structural related substance

nickel sulphide

Further information

Product:

Remarks : No data available

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia dubia (water flea)): 0.0124 mg/l

Exposure time: 7 DAYS Remarks: Fresh water

Components:

Nickel carbonate hydroxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 15.3 mg/l

Exposure time: 96 h

Remarks: Based on read across from structural related sub-

stance

Nickel chloride

unit expressed as mg metal/l

Fresh water

Toxicity to daphnia and other :

aquatic invertebrates

LC50 (Ceriodaphnia dubia (water flea)): 0.013 mg/l

Exposure time: 48 h

Remarks: unit expressed as mg metal/l

Fresh water

Based on read across from structural related substance

Nickel chloride

Toxicity to algae/aquatic

plants

EC50 (Pseudokirchneriella subcapitata (algae)): > 0.0815 - <

0.148 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Fresh water

Based on read across from structural related substance

EC50 (Pseudokirchneriella subcapitata (algae)): > 0.0253 - <

0.365 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Fresh water

Based on read across from structural related substance

NOEC (Desmodesmus sp.): 0.0225 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201 Remarks: unit expressed as mg metal/l

Fresh water

Based on read across from structural related substance

Toxicity to fish (Chronic tox-

icity)

NOEC (Danio rerio (zebra fish)): 0.04 mg/l

Exposure time: 8 days Remarks: Fresh water

Based on read across from structural related substance

nickel sulphate

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

NOEC (Pimephales promelas (fathead minnow)): 0.057 mg/l

Exposure time: 32 days Remarks: Fresh water

Based on read across from structural related substance

Nickel chloride

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 0.04 mg/l

Exposure time: 42 days Remarks: Fresh water

Based on read across from structural related substance

Nickel chloride

NOEC (Daphnia magna (Water flea)): > 0.09 mg/l

Exposure time: 21 DAYS Remarks: Fresh water

Based on read across from structural related substance

Nickel acetate

Toxicity to microorganisms : EC50: 33 mg/l

Exposure time: 30 min Method: ISO 8192

Remarks: unit expressed as mg metal/l

Based on read across from structural related substance

Toxicity to soil dwelling or-

ganisms

NOEC (Eisenia fetida (earthworms)): 180 mg/kg

Exposure time: 21 days

Remarks: unit expressed as mg metal/kg

Based on read across from structural related substance

NOEC: 320 mg/kg Exposure time: 28 days

Remarks: unit expressed as mg metal/kg

Based on read across from structural related substance

Plant toxicity : NOEC: 88 mg/kg

Exposure time: 60 d

Species: Avena sativa (oats)

Remarks: unit expressed as mg metal/kg

Based on read across from structural related substance

EC10: 34 mg/kg Exposure time: 63 d

Species: Lactuca sativa (lettuce)

Remarks: unit expressed as mg metal/kg

Based on read across from structural related substance

Sediment toxicity : EC10 (Chironomus riparius): 762 mg/kg

Remarks: unit expressed as mg metal/kg

Fresh water

Based on read across from structural related substance

EC10 (Tubifex tubifex): 1103 mg/kg Remarks: unit expressed as mg metal/kg

Fresh water

Based on read across from structural related substance

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

EC10 (Hyalella azteca): 82 mg/kg Remarks: unit expressed as mg metal/kg

Fresh water

Based on read across from structural related substance

Toxicity to terrestrial organ-

isms

NOEC (Anas platyrhynchos (Mallard duck)): 800

Exposure time: 90 days

Remarks: Based on read across from structural related sub-

stance

Persistence and degradability

No data available

Bioaccumulative potential

Components:

Nickel carbonate hydroxide:

Bioaccumulation : Bioconcentration factor (BCF): > 1,631

Method: field study

Remarks: terrestrial environment

Based on read across from structural related substance

Bioconcentration factor (BCF): 270

Method: field study Remarks: Fresh water

Based on read across from structural related substance

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Pro-

tection of Stratospheric Ozone - CAA Section 602 Class I

Substances

Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological infor-

mation

Very toxic to aquatic life with long lasting effects.

Components:

Nickel carbonate hydroxide:

Results of PBT and vPvB

assessment

not applicable for inorganic substances

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water

courses or the soil.

Do not contaminate ponds, waterways or ditches with chemi-

cal or used container.

Send to a licensed waste management company.

Dispose of as hazardous waste in compliance with local and

national regulations.

Contaminated packaging : Empty remaining contents.

Dispose of contaminated packaging as if unused product.

Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3288

Proper shipping name : TOXIC SOLID, INORGANIC, N.O.S.

(nickel hydroxycarbonate)

Class : 6.1 Packing group : II Labels : 6.1





Marine pollutant : yes

IATA-DGR

UN/ID No. : UN 3288

Proper shipping name : Toxic solid, inorganic, n.o.s.

(nickel hydroxycarbonate)

Class : 6.1
Packing group : II
Labels : Toxic



Packing instruction (cargo

aircraft)

676

Maximum quantity : 100.00 KG

Packing instruction (passen-

ger aircraft)

669

Maximum quantity : 25.00 KG
Environmentally hazardous : yes

IMDG-Code

UN number : UN 3288

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

Proper shipping name : TOXIC SOLID, INORGANIC, N.O.S.

(nickel hydroxycarbonate)

Class : 6.1
Packing group : II
Labels : 6.1



EmS Code : F-A, S-A Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

UN/ID/NA number : UN 3288

Proper shipping name : Toxic solid, inorganic, n.o.s.

(nickel hydroxycarbonate)

Class : 6.1
Packing group : II
Labels : TOXIC





ERG Code : 151 Marine pollutant : yes

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Carcinogenicity

Germ cell mutagenicity Reproductive toxicity

Acute toxicity (any route of exposure) Serious eye damage or eye irritation

Skin corrosion or irritation Respiratory or skin sensitisation

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels es-

tablished by SARA Title III, Section 313:

Nickel carbonate 12607-70-4 100 %

hydroxide

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

Nickel carbonate hydrox- 12607-70-4

100 %

ide

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311. Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

Nickel carbonate hydrox- 12607-70-4

100 %

ide

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Nickel carbonate hydroxide

12607-70-4

Maine Chemicals of High Concern

Nickel carbonate hydroxide

12607-70-4

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

California Prop. 65

WARNING: This product can expose you to chemicals including Nickel carbonate hydroxide, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances

Nickel carbonate hydroxide

12607-70-4

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

California Permissible Exposure Limits for Chemical Contaminants

Nickel carbonate hydroxide 12607-70-4

The components of this product are reported in the following inventories:

TSCA : All substances listed as active on the TSCA inventory

AIIC : On the inventory, or in compliance with the inventory

DSL : All components of this product are on the Canadian DSL

ENCS : On the inventory, or in compliance with the inventory

ISHL : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

CH INV : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

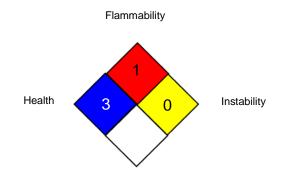
No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

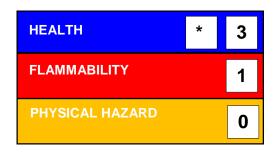
Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

NFPA 704:



Special hazard

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA P0 : USA. OSHA - TABLE Z-1 Limits for Air Contaminants -

1910.1000

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA P0 / TWA : 8-hour time weighted average OSHA Z-1 / TWA : 8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization: IECSC - Inventory of Existing Chemical Substances in China: IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI -Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New

Version 3.1 US SDS Number: 300000002046 Revision Date: 02/22/2022

Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 02/22/2022

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN