

# MATERIAL SAFETY DATA SHEET

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## 1. PRODUCT IDENTIFICATION

Formula CAS No.: 12607-70-4  
TSCA CAS No.: 3333-67-3  
Trade Name: Nickel Carbonate, Basic

Formula:  $2NiCO_3 \cdot 3Ni(OH)_2 \cdot 4H_2O$  Molecular Wt.: 587.58  
Synonyms: (Mineral) zaratite: nickel carbonate

## 2. HAZARDOUS INGREDIENTS

Ingredients (CAS No.)	WT PCT		PEL	TLV(TWA)	
	(APPROX)	MG/M3		MG/M3	PPM
Nickel (II) Carbonate (3333-67-3)	98	1(Ni)		1(Ni)	

NE: not established

The TLV's are given for guidance; local applicable regulations should always be followed. Ingredients are those present at 1% or greater, or at 0.1% or greater if listed as potential carcinogens by OSHA/IARC/NTP. Proprietary ingredient identities are available in accordance with 29 CFR 1910.1200.

CFR 1910.1200.

Carcinogen: NTP – anticipated; IARC – yes OSHA – no

## 3. PHYSICAL AND CHEMICAL CHARACTERISTICS

NA – not applicable, NE = not established, D = decomposes

Boiling Point, 760 mm Hg (deg C): NA

Melting/Freezing Point (deg C): D at >400 F

Specific Gravity (Water = 1): 2.6

Vapor Pressure (mm Hg): NA

Vapor Density (Air = 1): NA

Water Solubility (% by WT): Negligible

Volatiles (% by WT): Loses  $CO_2$  &  $H_2O$  above – 400 F

Evaporation Rate (Butyl Acetate = 1): NA

pH of solution: NA

Appearance/Odor: Odorless, light green powder.

## 4. PHYSICAL HAZARD DATA

Nickel carbonate is not considered to be a fire hazard.

Flash Point (deg C): NA

Test Method: NA

Flammable Limits (% by VOL): NA

Autoignition Temp. (deg C): NA

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Flash Point (deg C): NA  
Flammable Limits (% by VOL): NA  
Autoignition Temp. (deg C): NA  
Test Method: NA

Extinguishing Media: Use carbon dioxide, dry chemical. DO NOT flush into sewer or stream. Heavy metals toxic to marine life and some crops. Also retards sludge decomposition in sewage treatment.

Special Fire Fighting Procedures: Use NIOSH approved self-contained breathing apparatus with full facepiece operated on the pressure demand or other positive pressure mode. Use special protective clothing.

Unusual Fire or Explosion Hazards: Not considered to be an explosion hazard.

NA: not applicable

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## **5. REACTIVITY DATA**

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Thermal Stability: Stable under ordinary conditions of use and storage

Incompatibility: Acids, ammonia.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: Fumes of nickel or NiO at metallurgical temperatures (>850 C).

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## **6. HEALTH HAZARD INFORMATION**

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Effects of Overexposure:

Symptoms of Ingestion: Irritating to the digestive tract. Symptoms may include; nausea, vomiting, abdominal pain and diarrhea. Absorption is poor, but should it occur, symptoms might include; giddiness, capillary damage, myocardial weakness, central nervous system depression, and kidney and liver damage.

Symptoms of Inhalation: May cause irritation of the upper respiratory tract; symptoms may include coughing, sore throat, and shortness of breath.

Symptoms of skin Contact: May cause skin irritation, redness and pain.

Symptoms of Eye Contact: May cause irritation, redness, pain, discoloration, and damage.

Chronic exposure: Prolonged or repeated skin exposure may cause dermatitis. May aggravate other pre-existing conditions, such as; skin diseases, allergies, and lung diseases.

Toxicity Data:

Oral Toxicity: LDLO; 5mg/kg (guinea pig) as Ni  
Intraperitoneal Toxicity: LDLO; 12mg/kg (rat) as Ni

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## **VII. EMERGENCY AND FIRST AID PROCEDURES**

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**Eye Contact:** IMMEDIATELY, flush with large amounts of water for at least 15 minutes while holding eyelids apart. Washing within one minute is essential to achieve maximum effectiveness. Get immediate medical attention after flushing.

**Skin Contact:** Wash affected area thoroughly with water. Remove contaminated clothing and laundry before reuse. Get medical attention promptly.

**Inhalation:** Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Ingestion:** Never give anything by mouth to an unconscious person. Induce vomiting immediately by giving two glasses of water, or milk if available and sticking finger down throat. Call a physician immediately.

Notes to physician - none

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## **VIII. INDUSTRIAL HYGIENE AND OCCUPATIONAL CONTROL PROCEDURES**

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**Ventilation:** A system of local exhaust is recommended to keep employee exposure below the Airborne Exposure Limits. Local exhaust is usually preferred because it controls the emission at its source, preventing dispersion of it into the general work area. Refer to the ACGIH document "Industrial Ventilation, A Manual of Recommended Practices" for details.

**Respiratory Protection:** NIOSH/MSHA approved respirator if exposure may, or does exceed occupational exposure limits. Generally, a dust/mist respirator may be worn in areas where the TLV is exceeded up to ten times. Alternatively, a supplied air full facepiece respirator or airlined hood may be worn.

**Eye Protection:** Chemical splash goggles or face shield. Contact lenses should not be worn when working with this material.

**Skin Protection:** Use rubber or neoprene impervious gloves and body-covering clothing.

**Personal Hygiene:** Wash thoroughly after handling.

An eye wash fountain and quick-drench facilities should be maintained in the work area.

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## **IX. SAFE HANDLING, STORAGE, AND USE PRECAUTIONS**

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**Precautionary Measures:** Avoid contact with skin, eyes, and clothing.

Wear protective clothing, gloves, and splash goggles or shield.

Wash thoroughly after using. Avoid breathing dust or mist. Use with adequate ventilation.

Store in a cool, dry place and well ventilated area. Areas in which exposure to nickel metal or soluble nickel compounds may occur should be clearly identified and access to the area should be limited to authorized personnel.

Protect from physical damage.

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## **X. ENVIRONMENTAL AND DISPOSAL PROCEDURES**

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Spill/Leak Clean-Up Procedures: Vacuum up spilled material. Avoid misting. Package for reclamation or recovery. Whatever cannot be saved may be disposed of in an approved landfill.

Disposal Method: Dispose of in an approved chemical waste landfill in accordance with applicable Federal, State, and local regulations.

Superfund Reportable Quantity (RQ): not required

Hazardous Waste No.: not regulated

SARA Title III: This product contains nickel (7440-02-0)  
(Section 313) which is subject to reporting.

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## **XI. TRANSPORTATION DATA**

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DOT Shipping Name: Chemicals, N.O.S.

DOT Hazard Class: Not Regulated

Hazardous Ingredients: Not applicable except under "Additional Warnings and Information".

Identification Number: None

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## **XII. ADDITIONAL WARNINGS AND INFORMATION**

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"WARNING: THIS PRODUCT MAY CONTAIN A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, OR BIRTH DEFECTS, AND/OR OTHER REPRODUCTIVE HARM"

It is reasonable to assume that all nickel compounds contain arsenic, cadmium, chromium, and lead in concentrations ranging from a few parts per billion to several hundred parts per million.

All information presented herein is given in good faith and is based on sources and tests considered to be reliable but cannot be guaranteed. It is the user's full responsibility to accept risk for the safety, toxicity, handling, storage, and use of the product as well as to determine the suitability of the product for a specific purpose. We make no warranty as to the results to be obtained in using the product; therefore the user must assume all risks.