

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: Nickel**Formula :** Ni**Product Code:** R-Ni-1001**Chemical Family:** Metal**Synonyms:** Nickel Metal**Atomic Weight:** 58.69**Manufacturer:**

Rhexon Metals Co., Ltd.

Red Stone Technology Building, No.512 Wenchuan Rd, Shanghai, China 201906

Tel: +86 21 33191726

Fax: +86 21 33191728

Email: info@rhexon.com

Http:www.rhexon.com

EMERGENCY PHONE:**SMEC:** (0086) 21 24027777 (Monday-Friday 8:30a.m.-16:30p.m.)

(0086) 120 (24 Hours)

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS No.	Wt%
Ni	7440-02-0	100

SECTION 3 HAZARDS IDENTIFICATION

ROUTES OF ENTRYInhalation Skin Eyes Ingestion Others **CARCINOGEN LISTED IN**NTP IARC Monographs OSHA Regulated **POTENTIAL HEALTH EFFECTS:****Inhalation:**

Acute: May cause irritation to the upper respiratory tract, mucous membranes and nasal cavities. May cause pulmonary asthma attacks, metal fume fever, non-infectious pneumonia.

Chronic: Prolonged or repeated inhalation may cause pneumitis.

Skin:

Acute: May cause irritation.

Chronic: May sensitize the skin (nickel itch). May cause allergic dermatitis, eczematous dermatitis and may be accompanied a week later with superficial skin

ulcers, which may discharge and become crusted.

Eyes:

Acute: May cause irritation.

Chronic: May cause conjunctivitis.

Ingestion:

Acute: Nickel is poison by ingestion. Large doses may cause intestinal disorders, convulsions and asphyxia.

Chronic: May cause nickel toxicity.

Signs and Symptoms:

Inhalation: May cause a red, dry, sore nose and throat, coughing and shortness of breath.

Skin: May cause red, itching, swelling, burning and ulcers.

Eyes: May cause red, itching and watering.

Ingestion: May cause gastritis, convulsions, asphyxia, giddiness, nausea, diarrhea and vomiting. Nickel toxicity may cause: gastroenteritis; Nervous symptoms such as tremor, chorea-like movements and paralysis occur prior to death, which occurs mostly from heart failure.

Target Organs: May affect the nasal cavities, respiratory system, lungs, blood, mucous membranes, gastrointestinal, eyes and skin.

SECTION 4 FIRST AID MEASURES

Eyes: Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

Skin: Remove contaminated clothing; brush material off skin; wash affected area with mild soap and water; seek medical attention if symptoms persist.

Inhalation: Remove victim to fresh air; keep warm and quiet; give oxygen if breathing is difficult and seek medical attention.

Ingestion: Give 1-2 glasses of milk or water and induce vomiting; seek medical attention immediately. Never induce vomiting or give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURE

Flammable Properties:

Flash point: Not Applicable

Method used: Unknown

Explosive limits: LEL/UEL: Not applicable

Auto-ignition Temperature: Not applicable

Unusual Fire and Explosion Hazards:

Contact with strong acids may form flammable and explosive hydrogen gas.

Contact with sulfur may cause evolution of heat.

Nickel reacts violently with fluorine, ammonium nitrate, hydrazine, ammonia, (H₂+dioxane), performic acid, phosphorous, selenium, sulfur and (Ti+KClO₃).

Powders may ignite spontaneously in air.

Extinguishing Media: Use suitable extinguishing media for surrounding materials or type of fire.

Special Fire Fighting Procedures: Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Wear appropriate respiratory and protective equipment specified in section VIII-control measures. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

SECTION 7 HANDLING AND STORAGE

Handling: Nickel metal should be stored in covered containers to avoid contamination because of dampness and dust. Partly used containers should be recovered. In welding, precautions should be taken for airborne contaminants which may originate from components of the welding rod. Arc or spark generated when welding or burning could be a source of ignition for combustible and flammable materials.

Storage: Store this material in a cool, dry and well-ventilated area. Keep containers tightly closed.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Local and general exhaust ventilation is recommended to control any airborne contaminants and to reduce potential exposure.

Personal protection

Eyes: wear chemical safety glasses or goggles

Skin: gloves are recommended when handling solids

Respirator: A NIOSH approved air purifying respirator with a particulate filter or a HEPA dust mask is recommended under certain circumstances where airborne concentrations are expected to be elevated or when ventilation is not available. Avoid breathing dust.

Other: avoid the use of contact lens in high fume and dust areas. Maintain good housekeeping. Clear up spills immediately. Source of clear water should be available. Good person hygiene is essential. Avoid eating, drinking, or smoking in the work area. Wash hand thoroughly with soap and water immediately upon leaving the working area.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Silvery-white, metallic pieces

Odor: no odor

Boiling Point: 2730.00 C (4946.0 F)

Melting Point: 1455.00 C (2651.0 F)

Specific Gravity: 8.90

Solubility in water: insoluble

PH: No data

Percent volatile: no data

SECTION 10 STABILITY AND REACTIVITY

General: stable

Conditions to Avoid: None

Incompatible Materials: Oxidizing agents, sulfur compounds, hydrogen and oxygen, magnesium silicate, methanol, organic solvents, aluminum, aluminum chloride, ethylene, p-dioxane, strong acids, fluorine, ammonium nitrate, performic acid, selenium, ammonia, hydrazine, phosphorus, titanium chlorate, potassium chlorate, wood and other combustibles.

Hazardous Decompositions or byproducts: Nickel carbonyl, oxides of nitrogen, hydrogen gas.

Hazardous Polymerization: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Carcinogenicity

Occupational Safety & Health Administration (OSHA) NO
U.N. International Agency for Research on Cancer (IRAC) YES

Irritancy of product : may be a irritancy

Sensitization to product: not established

Reproductive toxicity: not establish

Mutagenicity: not established

Teratogenicity: not established

synergistic products: not established

SECTION 12 ECOLOGICAL INFORMATION

Do not allow material to be released to the environment without proper governmental permits.

SECTION 13 DISPOSAL CONSIDERATIONS

Consult local or national regulations to ensure proper disposals

SECTION 14 TRANSPORT INFORMATION

Not a hazardous material for transportation. Transport in accordance with applicable regulations and requirements.

SECTION 15 OTHER INFORMATION

HMIS Hazard Rating

Minimal 0 ; Slight 1 ; Moderate 2; Serious 3; Extreme 4

Health 0

Flammability 0

Reactivity: 0

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