

# Otto Chemie Pvt Ltd

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## MATERIAL DATA SAFETY SHEET

### Nickel Oxide, 99.999%

#### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Nickel oxide

Catalog Numbers:, N 1527

**Synonyms:** Nickel oxide; Nickel monoxide; Nickalous oxide; Green nickel oxide; Nickel protoxide.

**Company Identification:**

#### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
1313-99-1	Nickel monoxide	99.999%	215-215-7

#### Section 3 - Hazards Identification

##### EMERGENCY OVERVIEW

Appearance: green powder.

**Warning!** Causes eye, skin, and respiratory tract irritation. May cause allergic skin reaction. May cause cancer by inhalation.

**Target Organs:** Lungs, respiratory system, eyes, skin.

##### Potential Health Effects

**Eye:** Dust may cause mechanical irritation. Causes eye irritation.

**Skin:** Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May cause dermatitis.

**Ingestion:** Causes gastrointestinal irritation with nausea, vomiting and diarrhea.

**Inhalation:** Causes respiratory tract irritation. May cause allergic respiratory reaction.

**Chronic:** Repeated inhalation is associated with nasal and nasopharyngeal cancer. Symptoms of overexposure to nickel can cause sensitization, dermatitis, allergic asthma and pneumonitis.

#### Section 4 - First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes. Get medical aid.

**Skin:** In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

#### Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:**Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 0; Instability: 0

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Do not breathe dust. Use only with adequate ventilation.

**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

### Exposure Limits

**Chemical Name** Nickel oxide

**ACGIH** 0.2 mg/m<sup>3</sup> TWA (inhalable fraction, as Ni) (listed under Nickel, inorganic compounds, insoluble).

**NIOSH** 0.015 mg/m<sup>3</sup> TWA (as Ni, except Nickel carbonyl) (listed under Nickel compounds). 10 mg/m<sup>3</sup> IDLH (as Ni, except Nickel carbonyl) (listed under Nickel compounds).

**OSHA - Final PELs** 1 mg/m<sup>3</sup> TWA (as Ni) (listed under Nickel insoluble compounds). 1 mg/m<sup>3</sup> TWA (as Ni) (listed under Nickel soluble compounds).

**OSHA Vacated PELs:** Nickel monoxide: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

**Respirators:** Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

**Physical State:** Powder

**Appearance:** green

**Odor:** odorless

**pH:** Not available.

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Evaporation Rate:** Not applicable.

**Viscosity:** Not applicable.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 1960 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Insoluble.

**Specific Gravity/Density:** 6.67

**Molecular Formula:** NiO

**Molecular Weight:** 74.7

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Dust generation.

**Incompatibilities with Other Materials:** Fluorine, hydrogen sulfide.

**Hazardous Decomposition Products:** None.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 1313-99-1: QR8400000; QR8430000

**LD50/LC50:**

Not available.

Oral rat LDLo: 5000 mg/kg. (RTECS)

**Carcinogenicity:**

CAS# 1313-99-1:

**ACGIH:** A1 - Confirmed Human Carcinogen (listed as 'Nickel, inorganic compounds, insoluble').

**California:** carcinogen, initial date 10/1/89

**NTP:** Known carcinogen (listed as Nickel compounds).

**IARC:** Group 1 carcinogen

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Mutagenicity:** No information available.

**Neurotoxicity:** No information available.

Other Studies:

## Section 12 - Ecological Information

No information available.

## Section 13 - Disposal Considerations

Waste Disposal

Comply with Federal, State, and local regulation. If approved, remove to land disposal area.

## Section 14 - Transport Information

	<b>US DOT</b>	<b>Canada TDG</b>
Shipping Name:	TOXIC SOLID, INORGANIC, N.O.S.*Not Regulated	
Hazard Class:	6.1	
UN Number:	UN3288	
Packing Group:	III	

## Section 15 - Regulatory Information

**Risk Phrases:**

R 43 May cause sensitization by skin contact.

R 49 May cause cancer by inhalation.

R 53 May cause long-term adverse effects in the aquatic environment.

## Section 16 - Additional Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages.

OSHA: Occupational Safety & Health