



Material Data Safety Sheet

Quick Identifier: Nickel

I. PRODUCT IDENTIFICATION

| | | | |
|--------------------|-----------|--------------------------|----|
| Trade Name: | Nickel | Formula: | Ni |
| Synonyms: | | Molecular Weight: | |
| CAS #: | 7440-02-0 | | |

II. HAZARDOUS INGREDIENTS

| <u>Hazardous Components:</u> | <u>OSHA PEL:</u> | <u>ACGIH TLV:</u> | <u>Other Limits:</u> |
|------------------------------------|---------------------|-----------------------|----------------------|
| Nickel | 1 mg/m ³ | 1.5 mg/m ³ | |
| Sec. 302 (EHS): | No | Sec. 304 RQ: | No |
| HMIS Ratings (0-4): Health: | N/A | Flammability: | N/A |
| HMIS Protective Equipment: | N/A | Sec. 313: | No |
| | | Reactivity: | N/A |

III. PHYSICAL DATA

| | | | |
|---|--------|--------------------------------------|-----------|
| Boiling Point: | 2732 C | Melting Point: | 1455 C |
| Specific Gravity (H₂O=1): | 8.902 | Vapor Density (Air=1): | N/A |
| Vapor Pressure (mm Hg): | N/A | Evaporation Rate: | N/A |
| % Volatiles by Volume: | N/A | Solubility in H₂O: | Insoluble |

Appearance and Odor: Silver Metallic – no odor

IV. FIRE AND EXPLOSION HAZARDS DATA

| | | | |
|--|---|-----------------|--|
| Flash Point/Method: | Not applicable | | |
| Explosive Limits: | LEL: N/A | UEL: N/A | |
| Extinguishing Media: | Non-combustible. Use extinguishing media appropriate to surroundings. | | |
| Special Fire Fighting Procedures: | Not Applicable | | |
| Unusual Fire and Explosion Hazards: | Not known | | |

V. HEALTH HAZARD INFORMATION

| | | | |
|------------------------------|----------------------------|-------------------------|---------------------------|
| Routes of Entry: | Inhalation, Skin and Eyes. | | |
| Target Organs: | N/A | | |
| Carcinogenicity: NTP: | Yes | IARC Monographs: | Yes |
| LD50/LC50: | No toxicity data recorded. | | OSHA Regulated: No |

Health Hazards (Acute and Chronic):

Inhalation:

Acute: Rare cases of asthma have been reported in individuals exposed to some forms of particulates containing nickel, particularly in the nickel sulfate form. Respiratory sensitization is possible in susceptible individuals.

Chronic: Dust may cause mild irritation to nose and throat.

Ingestion:

Acute: This is not a normal route of entry. Nickel has a low oral toxicity.

Chronic: Dust may cause mild irritation to nose and throat.

Skin:

Acute: Prolonged exposure to nickel may cause contact dermatitis or other allergic reactions especially in

sensitive individuals. Although contact with massive forms of nickel could cause dermatitis it is the finer powders which are the main hazard, especially in association with a moist environment.

Chronic: Dust may cause irritation to the skin

Eye:

Acute: Particulates containing nickel may cause irritation due to mechanical effects

Chronic: Dust may cause irritation to the eyes.

Signs and Symptoms of Exposures:

Inhalation: Irritation of nose and throat

Ingestion: Irritation of nose and throat

Skin: Irritation of skin

Eye: Irritation of eyes.

Medical Conditions Generally Aggravated by Exposure: Exposure to nickel dust or fumes may aggravate chronic respiratory.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove from exposure and seek medical attention

INGESTION: Dilute with large amount of water. Seek medical attention

SKIN: Thoroughly wash affected area with soap and water

EYE: Flush with copious amounts of water.

VI. REACTIVITY DATA

| | |
|---|----------------|
| Stability: | Stable |
| Incompatibility (Material to avoid): | Carbon 1 |
| Hazardous Decomposition Products: | None |
| Hazardous Polymerization: | Will not occur |
| Conditions to Avoid: | Not Applicable |

VII. SPILL OR LEAK PROCEDURES

| | |
|---|--|
| Steps to Be Taken in Case Material Is Released or Spilled: | Vacuum the area, and use NIOSH approved respirator. |
| Waste Disposal Method: | According to appropriate government regulations. |
| Precautions to Be Taken in Handling and Storing: | Wash thoroughly after handling, and before eating or smoking, and at the end of shift. |
| Other precautions | Do not shake clothing to remove dust. Use vacuum. |

VIII. SPECIAL PROTECTION INFORMATION

| | |
|--|---|
| Respiratory Protection: | Use NIOSH approved dust and fume mask |
| Ventilation: Local Exhaust: | Use – If not available, use respirators as specified above. |
| Mechanical (General): | N/A |
| Protective Gloves: | Recommended when contact is likely |
| Eye Protection: | Safety glasses are recommended when contact is likely |
| Other Protective Clothing or Equipment: | Avoid contamination of work clothes. |
| Work/Hygienic/Maintenance Practices: | Normal hygienic practices. |

IX. ADDITIONAL COMMENTS

Some of the chemicals listed herein are research or experimental substances which may be toxic, as defined by various governmental regulations. In accordance with Environmental Protection Agency regulations and the Toxic Substance Control Act (TSCA), these materials should only be handled by, or under the direct supervision of a "technically qualified individual", as defined in 40 CFR 710.2(aa).

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change, and the conditions of handling and use or misuse are beyond

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