Material Safety Data Sheet
Nickel Metal

MSDS# 16240

Section 1 - Chemical Product and Company Identification
MSDS Name: Nickel Metal
Catalog Numbers: N40-500
Synonyms:
Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 7440-02-0
Chemical Name: NICKEL
%: 100.0
EINECS#: 231-111-4

Hazard Symbols: XN
Risk Phrases: 40 43

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Caution! May cause respiratory tract irritation. May cause eye irritation. May cause allergic skin reaction. May cause liver and kidney damage. May cause cancer in humans. Target Organs: Kidneys, liver, respiratory system.

Potential Health Effects
Eye: May cause eye irritation.
Skin: May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May cause severe irritation and possible burns. May cause dermatitis.
Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea.
Inhalation: Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count. Inhalation of a mist of this material may cause respiratory tract irritation. Breathing Nickel (Dust and Fume) can cause a sore or hole in the "bone" (septum) dividing the inner nose.
Chronic: Prolonged or repeated skin contact may cause sensitization dermatitis and possible destruction and/or ulceration. May cause respiratory tract cancer.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Get medical aid if irritation develops or persists. Wash clothing before reuse. Flush skin with plenty of soap and water.
If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an
Ingestion: unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician: There exists several chelation agents. The determination of there use should be made only by qualified medical personnel.

Antidote: There exists several chelation agents. The determination of there use should be made only by qualified medical personnel.

Section 5 - Fire Fighting Measures

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Dust can be an explosion hazard when exposed to heat or flame.

Confining and smothering is preferable to applying water. DO NOT USE WATER, CO2, OR FOAM DIRECTLY ON FIRE ITSELF. Use DRY sand, sodium chloride powder, graphite powder, copper powder or Lith-X powder. Dousing metallic fires with water may generate hydrogen gas, an extremely dangerous explosion hazard, particularly if fire is in a confined environment.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 3; flammability: 1; instability: 0;

Section 6 - Accidental Release Measures

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

Spills/Leaks: Very fine particles can cause a fire or explosion. Eliminate all ignition sources. Reduce airborne dust and prevent scattering by moistening with water. Sweep up, then place into a suitable container for disposal. Carefully scoop up and place into appropriate disposal container. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICKEL</td>
<td>1.5 mg/m3 (inhalable fraction)</td>
<td>0.015 mg/m3 TWA</td>
<td>1 mg/m3 TWA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m3 IDLH</td>
<td></td>
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</tbody>
</table>

OSHA Vacated PELs: NICKEL: 1 mg/m3 TWA

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

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.
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a
Respirators: 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: Solid
- Color: white to gray white
- Odor: none reported
- pH: Not available
- Vapor Pressure: 1 mm Hg @ 1810 C
- Vapor Density: Not available
- Evaporation Rate: Not available
- Viscosity: Not applicable.
- Boiling Point: 2730 deg C (4,946.00°F)
- Freezing/Melting Point: 1455 deg C (2,651.00°F)
- Decomposition Temperature: Not available
- Solubility in water: Insoluble in water.
- Specific Gravity/Density: 8.90
- Molecular Formula: Ni
- Molecular Weight: 58.69

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Condition to Avoid: Incompatible materials, dust generation.
Incompatibilities with Other Materials: Not available
Hazardous Decomposition Products: Toxic and highly flammable nickel carbonyl.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 7440-02-0: QR5950000 QR6126100 QR6555000 QR7120000
LD50/LC50: RTECS: Not available.
Carcinogenicity: NICKEL - California: carcinogen, initial date 10/1/89 NTP: Suspect carcinogen IARC: Group 1
carcinogen (Nickel compounds).
Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: No information available.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not regulated as a hazardous material
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

USA RQ: CAS# 7440-02-0: 100 lb final RQ (no reporting of releases of this hazardous substan
European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:
  R 40 Limited evidence of a carcinogenic effect.
  R 43 May cause sensitization by skin contact.

Safety Phrases:
  S 22 Do not breathe dust.
  S 36 Wear suitable protective clothing.

WGK (Water Danger/Protection)

CAS# 7440-02-0: Not available

Canada

CAS# 7440-02-0 is listed on Canada's DSL List

Canadian WHMIS Classifications: D2A

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7440-02-0 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 7440-02-0 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 3/19/1998
Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility 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 the company 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 the company has been advised of the possibility of such damages.

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