

SREENIVASA INDUSTRIES

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MATERIAL SAFETY DATA SHEET

PRODUCT NAME: NICKEL ANODE

HAZARDOUS INGREDIENTS

<i>Hazardous Ingredients</i>	<i>Calculated Composition</i>	<i>C.A.S No.</i>	<i>PEL-mg/m³</i>	<i>TLV-2 mg/m³</i>
<i>Nickel (Ni)</i>	<i>99.92</i>	<i>7440-02-0</i>	<i>1</i>	<i>1</i>

PHYSICAL AND CHEMICAL DATA

Silver-grey, odorless metal discs of approximately 7/8 in. (22 mm) diameter and 3/8 in. (8 mm) thickness.

<i>Ingredient</i>	<i>Mol. Wt.</i>	<i>Specific Gravity</i>	<i>mp⁰c</i>	<i>bp⁰c</i>	<i>Sol. In H₂O g/100ml</i>
<i>Ni</i>	<i>58.71</i>	<i>8.9</i>	<i>1453</i>	<i>2732</i>	<i>0</i>

PHYSICAL HAZARDS : *None*

HEALTH HAZARDS : *Nickel*

LD₅₀ ORAL RAT > 9000 mg/kg

INHALATION

The National Toxicology program has listed Nickel as reasonably anticipated to be carcinogen based on the production of injection-site tumors. The international agency for research on Cancer (IARC) found there was inadequate evidence that metallic nickel is carcinogenic to humans but since there was sufficient evidence that it is carcinogenic to animals. IARC concluded that metallic nickel is possibly carcinogenic to humans. Epidemiological studies of workers exposed to Nickel powder and to dust and fume generated in the production of Nickel alloys and of wireless, steel have not indicated the presence of a significant respiratory cancer hazard. The inhalation of Nickel powder has no resulted in an increased incidence of malignant lung tumors in rodents.

Repeated intratracheal instillation of Nickel powder produced an increased incidence of malignant lung tumors in hamsters when administered at the maximum tolerated dose. Single intratracheal instillation on Nickel powder in hamsters at doses near the LD₅₀ produced an increased incidence of fibrosarcomas. Mesotheliomas and rhabdomyosarcomas. Inhalation of Nickel powder at concentration 15 times the PEL irritated the respiratory tract in rodents.

SKIN CONTACT

Repeated contact with metallic nickel may cause irritation to the skin and Nickel sensitivity which may result in allergic skin rashes and or asthma.

WOUNDS

Nickel metal powder has caused tumors at the site of infection in rodents. However studies do not suggest a significant risk for human from Nickel-containing.

INGESTION

The U.S National Institute for Occupational safety and health (NIOSH) concluded there is no evidence that nickel and its inorganic compounds are carcinogenic when ingested. The U.S Food and Drug administration has affirmed that nickel is generally recognized as safe (GRAS) as a direct human food ingredient.

FIRE EXISTING CONDITIONS

Skin contact can cause an allergic skin rash and/or asthma in previously sensitized individuals.

PRECAUTIONS FOR SAFE STORAGE, HANDLING AND USE

If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne nickel below the PEL. If ventilation alone cannot so control exposure, use NIOSH-Approved respirators selected according to OSHA 29 CFR 1910.134. Maintain airborne Nickel levels as low as possible.

Avoid repeated skin contact. Wear suitable gloves. Wash skin thoroughly after handling. Launder clothing and gloves as needed.

Do not store near acids. Like other metals, nickel can react with acids to liberate hydrogen gas which can form explosive mixtures in air.

Under special conditions nickel can react with carbon monoxide in reducing atmosphere to form nickel carbonyl, Ni(CO)₄ an extremely toxic gas.

SPILL, LEAK AND DISPOSAL PROCEDURE

Pick up and replace in original container.

Nickel-containing waste is normally collected to recover nickel values. Should waste disposal be deemed necessary follow EPA and local regulations.

EMERGENCY AND FIRST AID PROCEDURE

If exposure to nickel carbonyl is suspected. Seek medical attention immediately.

For skin rashes, seek medical attention.

Cleanse wounds thoroughly to remove any nickel products.

SUPPLIER NOTIFICATION

This product contains the following chemical(s) subject to the reporting requirements of section 313 of the Emergency planning and community right-to-know Act of 1998 and of 40 CFR 372 : Nickel.

Refer to the Hazardous ingredients section of this MSDS for the appropriate CAS numbers and percent by weight.

NOTE: The label must be placed under or at least adjacent to the stencilled name of the product on the container. The name of the product on the container must be identical to the name of the MSDS.

WARNING

POSSIBLE CANCER HAZARD IF INHALED CAUSE ALLERGIC REACTION

Before use read Material Safety Data Sheet

Do not breathe dust, mist or fume generated by handling or using this product.

Use with adequate ventilation.

Keep container closed.

Avoid prolonged or repeated skin contact

Wash skin thoroughly after handling.