

MATERIAL SAFETY DATA SHEET

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Emergency Phone Numbers:  
CHEMTREC: 800/424-9300  
POISON CENTER: 800/562-8236

Date of Last Revision: 10/16/96

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SECTION 1

PRODUCT IDENTIFICATION

CHEMICAL NAME(S) AND SYNONYM(S): **Nickel** FORMULA: **Ni**

CHEMICAL FAMILY: **Metal** CHEM. ABSTRACT NO.: **7440-02-0**

TSCA: **Product is listed.** CAL. MOLECULAR WEIGHT: **58.69**

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SECTION 2

INGREDIENTS/SUMMARY OF HAZARDS

<u>INGREDIENT(S)</u>	<u>CAS #</u>	<u>%</u>	<u>TLV</u>	<u>OSHA PEL</u>
Nickel	7440-02-0	99	1.0mg/m3	1.0 mg/M3

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SECTION 3

PHYSICAL DATA

BOILING POINT (°C) : 2730 DENSITY (gm/cc): NA

VAPOR PRESSURE: 1mm @ 1810°C % VOLATILE BY VOLUME: NA

REACTION WITH WATER: None EVAPORATION RATE: NA

SOLUBILITY WITH WATER: Insoluble MELTING POINT (°C): 1455

APPEARANCE/ODOR: Silvery-white, hard, malleable and ductile metal.  
Odorless

OTHER:

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**SECTION 4**

**FIRE AND EXPLOSION HAZARD DATA**

FLASHPOINT/METHOD: NA

AUTOIGNITION TEMP (°C): NA

FLAMMABILITY: NO

EXTINGUISHING MEDIA: ( ) Water ( ) Foam ( ) Class D Extinguisher  
(x) Dry Chemical ( ) CO(2)  
(x) Other (specify): Soda Ash or Lime

**Extinguishers**

SPECIAL FIRE FIGHTING PROCEDURES: Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Poisonous gases are produced in fire, including Nickel Carbonyl.

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**SECTION 5**

**HEALTH HAZARD DATA**

HMIS HAZARD RATING:

HEALTH:	3	FLAMMABILITY:	4
REACTIVITY:	4	PERSONAL PROTECTION:	X

ROUTE(S) OF ENTRY: (x) Inhalation (x) Skin ( ) Eyes ( )  
Ingestion

**EFFECTS OF OVEREXPOSURE** (acute and chronic)

INHALATION: May cause irritation to the upper respiratory tract.

DERMAL/EYE CONTACT: May cause slight eye irritation. Repeated or prolonged contact may cause skin irritation.

OTHER (specify): NTP has classified Ni as a Group 2B Carcinogen, possibly carcinogenic to humans. This classification is used where there is inadequate evidence in humans and limited evidence in animals. Only the dust and fumes from the roasting of nickel sulphide ores are carcinogenic to humans.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Pre-existing lung disorders.

EMERGENCY AND FIRST AID PROCEDURES:

INGESTION: Induce vomiting. Seek Medical attention. Note: DO NOT make unconscious person vomit.

INHALATION: Remove victim to fresh air. Administer oxygen. Seek medical attention.

SKIN: Brush material off skin. Wash affected area with soap and water.

EYES: Flush eyes with water for 15 mins. Seek medical attention.

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**SECTION 6**

REACTIVITY DATA

STABILITY:  Stable  Unstable  
CONDITIONS CONTRIBUTING TO UNSTABILITY: None

INCOMPATIBILITY (materials to avoid):

Water  Combustible materials  Strong bases  
 Reducing Agents  Strong oxidizing materials  Strong acids  
 Other (specify): Contact with mineral acids will release hydrogen.

HAZARDOUS DECOMPOSITION PRODUCTS: At temperatures above the melting point, nickel oxide fumes may be formed.

HAZARDOUS POLYMERIZATION:  May occur  Will not occur

CONDITIONS TO AVOID: Nickel is soluble in acids. Contact with mineral acids liberates hydrogen gas which may form explosive mixtures in air.

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**SECTION 7**

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wearing full protective clothing, isolate the area and insure proper ventilation. Vacuum up spill and place in a container for proper disposal.

WASTE DISPOSAL METHOD: In accordance with regulations.

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## SECTION 8

### SPECIAL PROTECTIVE INFORMATION

RESPIRATORY PROTECTION: (Specify type) NIOSH/MSHA approved respirator

VENTILATION: LOCAL EXHAUST: Use local exhaust to meet TLV requirements

MECHANICAL (General): NA

SPECIAL: NA

PROTECTIVE GLOVES: Recommended

EYE PROTECTION: (x) Safety Glasses with Side Shields

( ) Chemical Workers Dust-Proof Goggles (under dusting conditions)

( ) Gas-Tight Goggles or Equivalent

( ) Other (specify):

OTHER PROTECTIVE EQUIPMENT: Maintain sink, safety shower and eyewash fountain in the work area. Wear full protective clothing at all times.

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## SECTION 9

### SPECIAL PRECAUTIONS AND TRANSPORTATION REGULATIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in tightly closed containers in a cool, dry place. Wash hands and face thoroughly after handling. Nickel should be stored to avoid contact with strong acids (such as hydrochloric, sulfuric and nitric) since violent reactions occur. Store away from fluorine, ammonia, phosphorus, sulfur, selenium, hydrazine and performic acid.

TRANSPORTATION REQUIREMENTS: Not classified

DOT CLASS:

UN NUMBER:

IMCO CLASS:

OTHER:

ND = No Data Found      NA = Not Applicable

## MATERIAL SAFETY DATA SHEET

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