

**Section 1 - Product and Company Identification**

- Material Name**                   ▪ **Novamet® Nickel Coated Graphite (25%, 60%, 75%)**
- Product Description**           ▪ Grey powder, odorless.
- Product Use**                    ▪ The combination of low density graphite with a layer of conductive nickel results in a lightweight filler ideally suited for conductive gaskets [extruded, molded, sheet and Form-in-Place] and sealants. Other applications include: plasma spray, friction products and graphitic aluminum.
- Manufacturer**                   ▪ Novamet Specialty Products Corporation  
681 Lawlins Road  
Wyckoff, NJ 07481  
United States
- Telephone**
- General**                       ▪ 201-891-7676
- Emergency**                   ▪ 800-424-9300 - CHEMTREC
- Preparation Date**               ▪ 3/8/2011
- Last Revision Date**             ▪ 3/8/2011

**Section 2 - Hazards Identification**

**Emergency Overview**

**DANGER**

Harmful to aquatic life with long lasting effects. Causes damage to organs - Lungs through prolonged or repeated exposure via Inhalation. May cause an allergic skin reaction. Suspected of causing cancer via Inhalation.

**Prevention**                   Do not handle until all safety precautions have been read and understood. Do not breathe dusts or mists. Avoid release to the environment. Do not eat, drink or smoke when using this product. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace. Use personal protective equipment as required. Wear protective gloves, clothing, and eye/face protection. Wash thoroughly after handling.

**Response**                    IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Get medical advice/attention if you feel unwell. Specific treatment, see supplemental first aid information.

**Storage/Disposal** Store locked up. Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.



May form combustible dust concentrations in air during processing.

**Physical Form**

- Solid

**Color**

- Grey

**Odor**

- Odorless

**OSHA**

- Carcinogen

**WHMIS**

- Class D - Poisonous and Infectious Materials - Division 2 - Subdivision A, Class D - Poisonous and Infectious Materials - Division 2 - Subdivision B



**EU**

- Toxic - T, Sensitizer - , Carcinogenic Substances - Category 3 - Carc.Cat.3  
R52/53, R40, R43, R48/23



**GHS**

- Chronic Hazards to the aquatic environment - Category 3, Specific Target Organ Toxicity Repeated Exposure - Category 1, Skin Sensitizer - Category 1, Carcinogenicity - Category 2

**Route Of Entry**

- Inhalation, Skin, Eye

**Target Organs**

- Lungs

**Medical Conditions**

- Disorders of the lungs, Skin

**Aggravated by Exposure**

**NFPA:**



**Potential Health Effects**

**Inhalation**

**Acute (Immediate)**

- Exposure to dust may cause irritation.

**Chronic (Delayed)**

- Repeated and prolonged inhalation of nickel particles may cause chronic lung inflammation and lung fibrosis.

**Skin**

**Acute (Immediate)**

- Exposure to dust may cause mechanical irritation. May cause skin sensitization. Symptoms include redness, and skin rash.

**Chronic (Delayed)**

- Repeated and prolonged exposure to nickel can cause a type of dermatitis specifically referred to as "nickel" itch.

**Eye**

**Acute (Immediate)**

- Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.

**Chronic (Delayed)**

- No data available.

**Ingestion**

**Acute (Immediate)**

- Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.

**Chronic (Delayed)**

- No data available.

## Carcinogenic Effects

- 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 stainless steel have not indicated the presence of a significant respiratory cancer hazard. The inhalation of nickel powder has not resulted in an increased incidence of malignant lung tumours in rodents.

Carcinogenic Effects			
	CAS	IARC	NTP
Nickel	7440-02-0	Group 2B-Possible Carcinogen	Reasonably Anticipated to be Human Carcinogen

## Potential Environmental Effects

- May cause long lasting harmful effects to aquatic life.

See Section 12 for Ecological Information.

## Section 3 - Composition/Information on Ingredients

Hazardous Components						
Chemical Name	CAS	%(weight)	UN;EINECS	LD50/LC50	EU Classification & R Phrases	Other
Graphite	7782-42-5	25% TO 75%	231-955-3	NDA	NDA	STOT RE 1; *
Nickel	7440-02-0	25% TO 75%	231-111-4	NDA	Carc.Cat.3; R40 R43 T; R48/23	Carc. 2; STOT RE 1; Skin Sens. 1; Aquatic Chronic 3;

Under United States Regulations (29 CFR 1900.1200 - Hazard Communication Standard), this product is considered hazardous. In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS). According to European Directive 1999/45/EC this preparation is considered dangerous. According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous. According to the Globally Harmonized Standard for Classification and Labeling (GHS) this product is considered hazardous.

### Key to abbreviations

\* = Self Classified

See Section 11 for Toxicological Information.

## Section 4 - First Aid Measures

### Inhalation

- Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.

### Skin

- IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If symptoms of sensitization occur seek medical attention.

### Eye

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.

### Ingestion

- Get medical attention. Rinse mouth. Do not give anything by mouth to an unconscious person.

See Section 2 for Potential Health Effects.

## Section 5 - Fire Fighting Measures

### Extinguishing Media

- LARGE FIRE: Water spray, fog or regular foam.  
SMALL FIRES: Dry chemical, CO<sub>2</sub>, water spray or regular foam.

### Unsuitable Extinguishing Media

- No data available.

- Firefighting Procedures**
  - **LARGE FIRES:** Cool containers with flooding quantities of water until well after fire is out.
  - LARGE FIRES:** Move containers from fire area if you can do it without risk.
  - LARGE FIRES:** Do not scatter spilled material with high pressure water streams.
  - LARGE FIRES:** Dike fire-control water for later disposal.
  - Keep unauthorized personnel away.
  - Stay upwind.
- Unusual Fire and Explosion Hazards**
  - Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. May oxidize to nickel oxide if exposed to high temperatures within a fire. Under special conditions nickel can react with carbon monoxide in reducing atmospheres to form Nickel Carbonyl, Ni(CO)<sub>4</sub>, a toxic gas. Metal powders when heated in reducing atmospheres may become pyrophoric.
- Hazardous Combustion Products**
  - Nickel oxide, carbon dioxide and carbon monoxide.
- Protection of Firefighters**
  - Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

## Section 6 - Accidental Release Measures

- Personal Precautions**
  - Do not touch or walk through spilled material.
- Emergency Procedures**
  - As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. Keep unauthorized personnel away. Stay upwind.
- Environmental Precautions**
  - **LARGE SPILLS:** Prevent entry into waterways, sewers, basements or confined areas.
- Containment/Clean-up Measures**
  - Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect spills by wet sweeping or vacuuming with the vacuum exhaust passing through a high efficiency particulate arresting (HEPA) filter if exhaust is discharged into the work place. Wear appropriate nationally approved respirators if collection and disposal of spills is likely to cause the concentration limits of airborne nickel to exceed the locally prescribed exposure limits. Nickel containing material is normally collected to recover nickel values.
- Prohibited Materials**
  - No data available.

## Section 7 - Handling and Storage

- Handling**
  - Do not use in areas without adequate ventilation. Wear appropriate respirator if handling is likely to cause the concentration of airborne nickel to exceed the locally prescribed exposure limits. Do not breathe (dust, vapor or spray mist) Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
- Storage**
  - Ventilate enclosed areas. Keep container closed. Store locked up. Do not store near acids or reactive substances.
- Special Packaging Materials**
  - No data available.
- Incompatible Materials or Ignition Sources**
  - Acids, ammonium nitrate, perchlorates, phosphorous, selenium and sulfur.

## Section 8 - Exposure Controls/Personal Protection

### Personal Protective Equipment

#### Pictograms



#### Respiratory

- For limited exposure use an N95 dust mask. For prolonged exposure use an air -

purifying respirator with high efficiency particulate air (HEPA) filters. 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 symptoms are experienced.

**Eye/Face**

**Hands**

**Skin/Body**

**General Industrial Hygiene Considerations**

**Engineering Measures/Controls**

- Wear safety glasses.
- Wear appropriate gloves.
- Wear long sleeves and/or protective coveralls.
- Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Avoid prolonged or repeated skin contact.
- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. It is recommended that dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is not leakage from the equipment). Use only appropriately classified electrical equipment.

Exposure Limits/Guidelines						
	Result	ACGIH	Australia	Canada Ontario	Canada Quebec	China
Nickel (7440-02-0)	TWAs	1.5 mg/m3 TWA (inhalable fraction)	1 mg/m3 TWA	1 mg/m3 TWAEV (inhalable)	1 mg/m3 TWAEV	1 mg/m3 TWA
	STELs	Not established	Not established	Not established	Not established	2.5 mg/m3 STEL
Graphite (7782-42-5)	TWAs	2 mg/m3 TWA (all forms except graphite fibers, respirable fraction)	3 mg/m3 TWA (containing no asbestos and <1% crystalline silica, all forms except fibres, natural and synthetic, respirable dust)	2 mg/m3 TWAEV (except graphite fibres, respirable)	2 mg/m3 TWAEV (except graphite fibres, respirable dust, containing no asbestos and less than 1% crystalline silica)	4 mg/m3 TWA (total dust); 2 mg/m3 TWA (respirable dust)
	STELs	Not established	Not established	Not established	Not established	8 mg/m3 STEL (total dust); 4 mg/m3 STEL (respirable dust)
Exposure Limits/Guidelines (Con't.)						
	Result	China Highly Toxic Goods	France	Germany DFG	Ireland	Israel
Nickel (7440-02-0)	TWAs	1 mg/m3 TWA	1 mg/m3 VME; 1 mg/m3 VME (metal gratings)	Not established	0.5 mg/m3 TWA	1.5 mg/m3 TWA (inhalable fraction)
	STELs	2.5 mg/m3 STEL	Not established	Not established	Not established	Not established
Graphite (7782-42-5)	TWAs	Not established	2 mg/m3 VME (alveolar fraction)	Not established	Not established	2 mg/m3 TWA (respirable fraction, all forms except graphite fibers)
	MAKs	Not established	Not established	1.5 mg/m3 MAK (respirable fraction); 4 mg/m3 MAK (inhalable fraction)	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Japan	Korea	Mexico	New Zealand	NIOSH
Nickel (7440-02-0)	TWAs	1 mg/m3 OEL	1 mg/m3 TWA	1 mg/m3 TWA	1 mg/m3 TWA	0.015 mg/m3 TWA
		0.5 mg/m3 OEL			3 mg/m3 TWA (all forms except	

Graphite (7782-42-5)	TWAs	(respirable dust); 2 mg/m3 OEL (total dust)	2 mg/m3 TWA (respirable fraction)	2 mg/m3 TWA	graphite fibres, respirable dust containing <1% free silica)	2.5 mg/m3 TWA (respirable dust)
Exposure Limits/Guidelines (Con't.)						
	Result	OSHA	Singapore	Spain	Sweden	Switzerland
Nickel (7440-02-0)	MAKs	Not established	Not established	Not established	Not established	0.5 mg/m3 MAK (inhalable)
	TWAs	1 mg/m3 TWA	1 mg/m3 PEL	1 mg/m3 VLA-ED	0.5 mg/m3 LLV (total dust)	Not established
Graphite (7782-42-5)	MAKs	Not established	Not established	Not established	Not established	2.5 mg/m3 MAK (respirable); 5 mg/m3 MAK (inhalable)
	TWAs	Not established	2 mg/m3 PEL (respirable dust)	2 mg/m3 VLA-ED (dust)	5 mg/m3 LLV (total dust)	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	Taiwan				
Nickel (7440-02-0)	TWAs	1 mg/m3 TWA				

## Exposure Control Notations

### Australia

▪Nickel (7440-02-0): **Sensitizers:** (sensitiser)

### Japan

▪Nickel (7440-02-0): **Carcinogens:** (Group 2B - Possibly Carcinogenic to Humans (metal)) | **Carcinogens:** (Group 1 - Carcinogenic to Humans (except Ni metal, Evaluation does not necessarily apply to all individuals within the group)) | **Sensitizers:** (Group 2 airway sensitizer; Group 1 skin sensitizer)

### Russia

▪Nickel (7440-02-0): **Carcinogens:** (Carcinogen) | **Sensitizers:** (Allergenic substance)

### ACGIH

▪Nickel (7440-02-0): **Carcinogens:** (A5 - Not Suspected as a Human Carcinogen)

### Germany DFG

▪Nickel (7440-02-0): **Carcinogens:** (Category 1 (causes cancer in man)) | **Carcinogens:** (Category 1 (causes cancer in man)) | **Sensitizers:** (respiratory and skin sensitizer) | **Sensitizers:** (respiratory and skin sensitizer)

▪Graphite (7782-42-5): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to (inhalable fraction, respirable fraction))

## Exposure Limits Supplemental

### Thailand

▪Graphite (7782-42-5): **Mineral Dusts:** (15 mppcf TWA)

### Israel

▪Nickel (7440-02-0): **Biological Markers of Occupational Exposure:** (15 µg/L Medium: urine)

### OSHA

▪Graphite (7782-42-5): **Mineral Dusts:** (15 mppcf TWA)

### ACGIH

▪Nickel (7440-02-0): **TLV Basis - Critical Effects:** (dermatitis; pneumoconiosis)

▪Graphite (7782-42-5): **TLV Basis - Critical Effects:** (pneumoconiosis (all forms except graphite fibres))

## Key to abbreviations

MSHA = Mine Safety and Health Administration

LLV = Limit Level Value is the exposure limit for 8-hour work day

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

STEL = Short Term Exposure Limits are based on 15-minute exposures

TWAEV = Time-Weighted Average Exposure Value

VME = Valeur Moyenne d'Exposition is the maximum permissible concentration for a work day

VLA-ED = Valor Límite Ambiental Exposición Diaria is the limit for the daily average concentration

ACGIH = American Conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

OEL = Occupational Exposure Limit

## Section 9 - Physical and Chemical Properties

- Physical Form**                      ▪ Solid
- Appearance/Description**       ▪ Grey powder, odorless.

<b>Color :</b> Grey		<b>Odor :</b> Odorless	
<b>Taste :</b> NDA		<b>Odor Threshold :</b> NDA	
<b>Boiling Point:</b>	NDA	<b>Vapor Pressure:</b>	NDA
<b>Melting Point:</b>	NDA	<b>Vapor Density:</b>	NDA
<b>Specific Gravity:</b>	NDA	<b>Evaporation Rate:</b>	NDA
<b>Density:</b>	NDA	<b>VOC (Wt.):</b>	NDA
<b>Bulk Density:</b>	0.6 to 3.6 g/cm <sup>3</sup>	<b>VOC (Vol.):</b>	NDA
<b>pH:</b>	NDA	<b>Volatiles (Wt.):</b>	NDA
<b>Water Solubility:</b>	Insoluble	<b>Volatiles (Vol.):</b>	NDA
<b>Solvent Solubility:</b>	NDA	<b>Flash Point:</b>	NDA
<b>Viscosity:</b>	NDA	<b>Flash Point Test Type:</b>	NDA
<b>Half-Life:</b>	NDA	<b>UEL:</b>	NDA
<b>Octanol/Water Partition coefficient:</b>	NDA	<b>LEL:</b>	NDA
<b>Coefficient of water/oil distribution:</b>	NDA	<b>Autoignition:</b>	NDA
<b>Bioaccumulation Factor:</b>	NDA	<b>Bioconcentration Factor:</b>	NDA
<b>Biochemical Oxygen Demand BOD/BOD5:</b>	NDA	<b>Chemical Oxygen Demand:</b>	NDA
<b>Persistence:</b>	NDA	<b>Degradation:</b>	NDA

## Section 10 - Stability and Reactivity

- Stability**                               ▪ Stable under normal temperatures and pressures. Material does not pose a dust explosion hazard. Dust explosivity classification group: B.
- Hazardous Polymerization Conditions to Avoid**       ▪ Hazardous polymerization not indicated.
- Hazardous exothermic reaction improbable. This product can react vigorously with acids to liberate hydrogen, which can form explosive mixtures with air. Under special conditions nickel can react with carbon monoxide in reducing atmospheres to form nickel carbonyl, Ni(CO)<sub>4</sub>, a toxic gas. Metal powders when heated in reducing atmospheres may become pyrophoric.
- Incompatible Materials**           ▪ Nickel can react with acids to liberate hydrogen gas which can form explosive mixtures in air. Nickel powder can also react explosively or incandescently with substances such as ammonium nitrate, perchlorates, phosphorous, selenium, sulfur, etc.
- Hazardous Decomposition Products**   ▪ No data available.

## Section 11 - Toxicological Information

- Other Material Information**       ▪ No test data available on material as a whole. Exposure to dusts may cause mechanical irritation. Exposure to nickel has been shown to cause skin sensitization. Nickel is a possible carcinogen. Repeated and prolonged inhalation of dusts of this material may cause lung damage.

Component Name	Concentration	CAS	Data
Nickel	25% TO 75%	7440-02-0	<b>Acute Toxicity:</b> orl-rat TDLo:200 mg/kg; ihl-rbt TCLo:130 ug/m3/6H/35W-I; ihl-rat TCLo:0.5 mg/m3/24H/13W-C; ihl-rat TCLo:0.4 mg/m3/40W-I; <b>Reproductive:</b> orl-rat TDLo:158 mg/kg (multigenerations)

**Key to abbreviations**

TD = Toxic Dose

TC = Toxic Concentration

## Section 12 - Ecological Information

- |                                  |   |
|----------------------------------|---|
| <b>Ecological Fate</b>           | ▪ No data available.  |
| <b>Persistence/Degradability</b> | ▪ No data available.  |
| <b>Bioaccumulation Potential</b> | ▪ No data available.  |
| <b>Mobility in Soil</b>          | ▪ No data available.  |
| <b>Other Information</b>         | ▪ May cause long-term adverse effects in the aquatic environment. Nickel is extremely toxic to citrus plants. |

## Section 13 - Disposal Considerations

- |                |   |
|----------------|---|
| <b>Product</b> | ▪ Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. |
|----------------|---|

## Section 14 - Transportation Information

**DOT - United States - Department of Transportation**

Shipping Name: Not Regulated

**TDG - Canada - Transport of Dangerous Goods**

Shipping Name: Not Regulated

**IMO/IMDG –International Maritime Transport**

Shipping Name: Not Regulated

**ADN - Europe Transport of Dangerous Goods by Road/Inland Waterway**

Shipping Name: Not Regulated

**IATA - International Air Transport Association**

Shipping Name: Not Regulated

**ADR - Europe Transport of Dangerous Goods by Road/Inland Waterway**

Shipping Name: Not Regulated

**RID - Europe Transport of Dangerous Goods by Railways**

Shipping Name: Not Regulated

## Section 15 - Regulatory Information

**SARA Hazard Classifications**  
**Risk & Safety Phrases**

- Acute, Chronic
- R40 Limited evidence of a carcinogenic effect.
- R43 May cause sensitisation by skin contact.
- R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.
- R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- S24 Avoid contact with skin.
- S36/37 Wear suitable protective clothing and gloves.

State Right To Know				
Component	CAS	MA	NJ	PA
Graphite	7782-42-5	Yes	Yes	Yes
Nickel	7440-02-0	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Graphite	7782-42-5	Yes	No	Yes	Yes	No
Nickel	7440-02-0	Yes	No	Yes	Yes	No

Inventory (Con't.)				
Component	CAS	Japan ENCS	Korea KECL	TSCA
Graphite	7782-42-5	No	Yes	Yes
Nickel	7440-02-0	No	Yes	Yes

**Australia**

**Labor**

**Australia - Hazardous Substances - Substances Requiring Health Surveillance**

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

**Australia - High Volume Industrial Chemicals List**

- Nickel 7440-02-0 25% TO 75%
- Graphite 7782-42-5 25% TO 75%

**Australia - List of Designated Hazardous Substances - Classification**

- Nickel 7440-02-0 25% TO 75% T Carc.Cat.3 R40, R48/23, R43
- Graphite 7782-42-5 25% TO 75% Self classification required (respirable dust, all forms except fibres)

**Environment**

**Australia - National Pollutant Inventory (NPI) Substance List**

- Nickel 7440-02-0 25% TO 75% 10 tonnes/year Threshold category 1 (Nickel and compounds); 2000 tonnes/year Threshold category 2b (Nickel and compounds); 60000 MWH Threshold category 2b (Nickel and compounds); 20 MW Threshold category 2b (Nickel and compounds)
- Graphite 7782-42-5 25% TO 75% Not Listed

**Australia - Ozone Protection Act - Scheduled Substances**

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

**Australia - Priority Existing Chemical Program**

- Nickel 7440-02-0 25% TO 75% Standby chemical
- Graphite 7782-42-5 25% TO 75% Not Listed

## Canada

### Labor

#### Canada - WHMIS - Classifications of Substances

- Nickel 7440-02-0 25% TO 75% D2A, D2B; B6, D2A (Raney)
- Graphite 7782-42-5 25% TO 75% D2A (natural); D2B (synthetic)

#### Canada - WHMIS - Ingredient Disclosure List

- Nickel 7440-02-0 25% TO 75% 0.1 %
- Graphite 7782-42-5 25% TO 75% Not Listed

### Environment

#### Canada - CEPA - Priority Substances List

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

## Europe

### Environment

#### EU - Seveso II Directive (96/82/EC) - Qualifying Quantities for Major Accident Notification

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

#### EU - Seveso II Directive (96/82/EC) - Qualifying Quantities for Safety Report Requirements

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

### Other

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

- Nickel 7440-02-0 25% TO 75% Carc.Cat.3; R40 R43 T; R48/23
- Graphite 7782-42-5 25% TO 75% Not Listed

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

- Nickel 7440-02-0 25% TO 75% T R:40-43-48/23 S:(2)-36/37/39-45
- Graphite 7782-42-5 25% TO 75% Not Listed

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

- Nickel 7440-02-0 25% TO 75% S, 7
- Graphite 7782-42-5 25% TO 75% Not Listed

#### EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

- Nickel 7440-02-0 25% TO 75% S:(2)-36/37/39-45
- Graphite 7782-42-5 25% TO 75% Not Listed

## Germany

### Environment

#### Germany - Water Classification (VwVwS) - Annex 1

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% ID Number 801, not considered hazardous to water

### Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes

- Nickel 7440-02-0 25% TO 75% Number 7182, hazard class 2 - hazard to waters (footnote 47)
- Graphite 7782-42-5 25% TO 75% Not Listed

### Germany - Water Classification (VwVwS) - Annex 3

- Nickel 7440-02-0 25% TO 75% ID Number 7616, hazard class 2 - hazard to waters (particle size <0.1 mm)
- Graphite 7782-42-5 25% TO 75% Not Listed

## Hong Kong

### Labor

#### Hong Kong - Dangerous Substances Regulations - Classification

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

## India

### Environment

#### India - Hazardous Chemical Rules - List of Hazardous and Toxic Chemicals

- Nickel 7440-02-0 25% TO 75% (powder)
- Graphite 7782-42-5 25% TO 75% Not Listed

## Mexico

### Other

#### Mexico - Hazard Classifications

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

#### Mexico - Regulated Substances

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

## Russia

### Labor

#### Russia - Limiting Quantities of Hazardous Substances

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

## Taiwan

### Environment

#### Taiwan - Toxic Chemical Substances Control Act - Threshold Regulated Quantities

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

#### Taiwan - Toxic Chemical Substances Control Act - Classification and Control Levels

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

## United States

### Labor

#### U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

**U.S. - OSHA - Specifically Regulated Chemicals**

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

**Environment**

**U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants**

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

**U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities**

- Nickel 7440-02-0 25% TO 75% 100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)
- Graphite 7782-42-5 25% TO 75% Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs**

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs**

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

**U.S. - CERCLA/SARA - Section 313 - Emission Reporting**

- Nickel 7440-02-0 25% TO 75% 0.1 % de minimis concentration
- Graphite 7782-42-5 25% TO 75% Not Listed

**U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing**

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII**

- Nickel 7440-02-0 25% TO 75% Included in waste streams: F006, F039
- Graphite 7782-42-5 25% TO 75% Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring**

- Nickel 7440-02-0 25% TO 75% (total)
- Graphite 7782-42-5 25% TO 75% Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261**

- Nickel 7440-02-0 25% TO 75% hazardous constituent - no waste number
- Graphite 7782-42-5 25% TO 75% Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents**

- Nickel 7440-02-0 25% TO 75% (total)
- Graphite 7782-42-5 25% TO 75% Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards**

- Nickel 7440-02-0 25% TO 75% 3.98 mg/L (wastewater); 11.0 mg/L TCLP (nonwastewater)
- Graphite 7782-42-5 25% TO 75% Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring**

- Nickel 7440-02-0 25% TO 75% (total)
- Graphite 7782-42-5 25% TO 75% Not Listed

## United States - California

### Environment

#### U.S. - California - Proposition 65 - Carcinogens List

- Nickel 7440-02-0 25% TO 75% carcinogen, initial date 10/1/89
- Graphite 7782-42-5 25% TO 75% Not Listed

#### U.S. - California - Proposition 65 - Developmental Toxicity

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

#### U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

#### U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

#### U.S. - California - Proposition 65 - Reproductive Toxicity - Female

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

#### U.S. - California - Proposition 65 - Reproductive Toxicity - Male

- Nickel 7440-02-0 25% TO 75% Not Listed
- Graphite 7782-42-5 25% TO 75% Not Listed

## United States - Pennsylvania

### Labor

#### U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

- Nickel 7440-02-0 25% TO 75%
- Graphite 7782-42-5 25% TO 75% Not Listed

#### U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

- Nickel 7440-02-0 25% TO 75%
- Graphite 7782-42-5 25% TO 75% Not Listed

## United States - Rhode Island

### Labor

#### U.S. - Rhode Island - Hazardous Substance List

- Nickel 7440-02-0 25% TO 75% Toxic; Carcinogen
- Graphite 7782-42-5 25% TO 75% Toxic

## Section 16 - Other Information

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|--|--|
| <b>Preparation Date</b>                  | ▪ 3/8/2011   |
| <b>Last Revision Date</b>                | ▪ 3/8/2011   |
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**Key to abbreviations**

NDA = No Data Available