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General Information
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Company Information:

NEI Corporation
400 Apgar Drive, Unit E
Somerset, NJ 08873 (USA)
Record No. for Safety Entry: 001
Status: SMJ
MSDS Serial Number: A0007

Contact Information:

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Ingredients/Identity Information
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Proprietary: Yes

Ingredient: Tungsten Carbide, WC
Ingredient Sequence Number: 01
Percent: 86
CAS Number: 12070-12-1
OSHA PEL: No Data
ACGIH TLV: 5 MG/M3

Ingredient: Cobalt, Co
Ingredient Sequence Number: 02
Percent: 10
CAS Number: 7440-48-4
OSHA PEL: 0.10 MG/M3
ACGIH TLV: 0.02 MG/M3

Ingredient: Chromium, Cr
Ingredient Sequence Number: 03
Percent: 4
CAS Number: 7440-47-3
OSHA PEL: 1.0 MG/M3
ACGIH TLV: 0.05 MG/M3

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Physical/Chemical Characteristics
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Appearance and Odor: Dark grey powder, Odorless

Melting Point: WC = 2800°C, Co = 1495°C, Cr = 1900°C

Boiling Point: WC = 6000°C, Co = 2900°C, Cr = 2640°C

Vapor Pressure (MM Hg/70 F): Not determined

Vapor Density (Air=1): Not determined

Molecular Wt.: WC = 196, Co = 59, Cr = 52

Evaporation Rate and Ref: N/A

Solubility in Water: Insoluble

Percent (%) Volatiles by Volume: N/A

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Fire and Explosion Hazard Data
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Flash Point: N/A, Non-flammable

Extinguishing Media: No fire hazard. Material does not burn

Special Fire Fighting Procedure: N/A

Unusual Fire and Expl. Hazards: No risk, under normal conditions

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Reactivity Data
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Stability: Stable

Conditions to Avoid (Stability): N/A

Materials to Avoid: Oxidizing agents and acids. Contact with acids can generate flammable hydrogen gas, ignites on contact with fluorine gas at room temperature.

Hazardous Decomp Products: Ozone and nitric oxide are formed by plasma flame (independent of powder) similar to welding fumes and Hydrogen is formed by strong acids.

Hazardous Polymerization: No

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Health Hazard Data
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Route of Entry: Material can be inhaled, swallowed, or come in contact with skin or eyes.

Carcinogenic: N/A (NTP, IARC, and OSHA)

Signs/Symptoms of Overexposure:

Dust inhalation may cause irritation of the nose and throat. It also has the potential for causing transient or permanent respiratory disease, including occupational asthma and interstitial fibrosis in a small percentage of exposed individuals. It is reported that cobalt dust is the most probable cause of such respiratory diseases. Symptoms include productive cough, wheezing, shortness of breath, chest tightness, and weight loss. Interstitial fibrosis (lung scarring) can lead to an allergic skin rash due to cobalt sensitization. Eye contact can cause irritation. Reports from outside industries suggest that ingestion of significant amounts of cobalt has the potential for causing blood, heart, and other organ disorders.

Emergency/First Aid Procedures -

EYES: If irritation occurs, flush with vast amounts of water. If irritation persists, seek medical help.

SKIN: If irritation or rash occurs, wash affected area with mild soap and water. Prevent further contact.

INHAL: If symptoms of pulmonary involvement develop (coughing, wheezing, shortness of breath, etc.) remove from exposure and seek medical help.

INGEST: If a substantial quantity is swallowed, give person (if conscious) a large amount of water and seek medical help.

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Precautions for Safe Handling and Use
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Steps If Material Released/Spill: Ventilate area of spill. Clean-up using methods which avoid generating dust, such as vacuuming (with appropriate filter to prevent airborne dust levels which exceed the PEL or TLV), wet dust mop, or wet clean-up. If airborne dust is generated, use an appropriate waste disposal method.

Precautions-Handling/Storing: PREVENT & REMOVE DUST. STORE BAGS OF PIGMENT UNDER DRY CONDITIONS.

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Control Measures
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Respiratory Protection: Use appropriate NIOSH-approved respirator if airborne dust concentrations exceeds the PEL or TLV.

Ventilation: Use local exhaust ventilation, adequate to limit personal exposure to levels not exceeding the TLV.

Protective Gloves: Impervious Gloves (FP N).

Eye Protection: Wear safety glasses or face shield in operations that scatter fine particles in the air.

Other Protective Equipment: Workers in flame or spark generating operations should in addition, wear work clothes made of fire-retardant materials.

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Label Data
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Label Required: Yes

Label Status: G

Chronic Hazard: No

Signal Word: CAUTION!

Acute Health Hazard: Slight

Contact Hazard: No

Fire Hazard: None

Reactivity Hazard: None

Special Hazard Precautions -

EYES: Inert particulate dust hazard only.

SKIN: Non-corrosive, irritant, non-sensitizing. May have drying effect on skin.

INHAL: Inert, nuisance particulate dust

INGEST: Harmless. Physiologically inert. Temporary irritation to mucous membranes of nose and mouth may result from excess dust.