



Xylem Company

8126 Mallory Court • Chanhassen, MN 55317 • (952) 368-9040 • Fax (952) 368-9041

MATERIAL SAFETY DATA SHEET MP35N®

UPDATED: JANUARY 2014

SECTION 1: COMPONENT DATA: Approximate concentrations for industrial hygiene purposes

INGREDIENTS	CAS NUMBER	PERCENT	PERMISSABLE EXPOSURE LIMIT (PEL) OSHA	THRESHOLD LIMIT VALUE (TLV) ACGIH
Nickel *	7440-02-2	35 %	1.0 mg/m ³	1.0 mg/m ³
Cobalt *	7440-48-4	35 %	0.1 mg/m ³	0.1 mg/m ³
Chromium *	7440-47-3	20 %	1.0 mg/m ³	0.5 mg/m ³
Molybdenum	7439-98-7	10 %	15.0 mg/m ³	10.0 mg/m ³

* Regulated as a toxic chemical under Section 313, SARA Title III and 40 CFR 372

SECTION 2: PHYSICAL DATA:

Vapor Pressure:	Not Applicable (N/A)
Vapor Density (Air = 1)	N/A
Specific Gravity (H ₂ O=1):	Approx 7.8 to 8.2 (60° F)
Solubility in Water:	Insoluble in Water
Evaporation Rate:	N/A
Freezing Point:	N/A
Boiling Point:	> 5000° F
Appearance:	Silver/Gray/Metallic
Odor:	Odorless
Physical State:	Solid

SECTION 3: FIRE & EXPLOSION HAZARD DATA:

Flash Point (°F) and Method:	None
Fire Point	None

SECTION 4: HAZARD IDENTIFICATION:

MP35N is not considered hazardous in solid rod/bar, wire, tubing, strip and sheet form. However, if subsequent processing involves grinding, melting, welding, cutting, or any process that causes release of dust or fume, hazardous levels of dust or fumes of the constituents of these alloys can be generated.

The following list summarizes the potential health effects of the hazardous elements that may be contained in these alloys. It is the responsibility of the user to assess potential exposure based on processing of the product.



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SECTION 5: EXPOSURE ROUTES:

Inhalation: Primary route of exposure is steel dust or fume, which can cause irritation to the respiratory tract. Chronic exposure may aggravate pre-existing conditions.

Skin and Eye Contact: May cause irritation or skin sensitivity.

Ingestion: Certain constituents may be harmful if swallowed.

SECTION 7: FIRST AID MEASURES:

The likelihood of hazardous consequences through eye or skin contact, inhalation or ingestion is minimal as shipped

Inhalation: Remove person from exposure area. If breathing difficulty occurs, get prompt medical attention.

Skin and Eye Contact: Flush eye with plenty of water for 15 minutes. Seek medical attention if irritation persists. Wash skin with soap and water. If rash develops, seek medical attention.

Ingestion: Seek medical attention.

SECTION 8: EFFECTS OF OVEREXPOSURE:

Acute: Short term overexposure to dust, fumes, and or oxides of certain components of steel alloys may cause irritation of the eyes, nose or throat, or may result in metal fume fever characterized by a metallic or sweet taste, dryness and irritation of the throat, wheezing, discoloration of the tongue and flu-like symptoms,

Chronic: Excessive and prolonged exposure to the dust fumes and/or oxides of certain components of steel alloys may result in chronic interstitial pneumonitis, discoloration of the skin and hair, allergic bronchitis, neoplasms or loss of coordination and balance.

ACUTE:

<u>Aluminum:</u>	Possible irritation of eyes and mucous membranes.
<u>Boron:</u>	Irritation of nose and throat.
<u>Carbon:</u>	Irritation of eyes and mucous membranes.
<u>Chromium:</u>	Irritation of eyes and mucous membranes, dermatitis, skin ulcers and nasal septum perforation.
<u>Cobalt:</u>	Irritation of eyes and mucous membranes.
<u>Copper:</u>	Irritation of eyes, nose and throat; metal fume fever.
<u>Iron:</u>	Irritation of eyes, nose and throat. Metal fume fever.
<u>Manganese:</u>	Irritation of eyes, nose, and throat. Metallic taste in the mouth. Acute pneumonia and pneumonitis
<u>Molybdenum:</u>	Irritation of eyes and mucous membranes.
<u>Nickel:</u>	Irritation of eyes and mucous membranes, dermatitis, "nickel itch", pulmonary edema, asthma, headache and vomiting.
<u>Tantalum:</u>	Dust may cause slight irritation to eyes, nose and throat.
<u>Titanium:</u>	Considered a physiologically inert dust; however, high concentrations may cause irritation of eyes and mucous membranes.
<u>Tungsten:</u>	No adverse health effects have been reported in humans.
<u>Vanadium:</u>	As vanadium pentoxide dust or fumes, it may cause irritation of eyes, nose and respiratory tract.



SECTION 8: EFFECTS OF OVEREXPOSURE: (Continued)

CHRONIC:

- Aluminum: Possible irritation of eyes and mucous membranes. Reported as a cause of pulmonary fibrosis.
- Boron: Possible irritation of the respiratory tract and nose bleeds.
- Carbon: Irritation of eyes and mucous membranes.
- Chromium: The toxicity and health hazards of chromium are heavily dependent upon its oxidation state. Trivalent and devalent chromium, as in chromium metal and chromium-containing alloys have a low order of toxicity. The hexavalent form (chromates and chromic acids) may cause irritant and allergic contact dermatitis, skin ulcers and nasal irritation varying from rhinitis to perforation of the nasal septum. Reported carcinogen.
- Cobalt: May cause allergic skin rashes and respiratory disease.
- Copper: Skin irritation; discoloration of the skin or the hair and metal fume fever.
- Iron: Inhalation of iron oxide fumes and dust may cause chronic bronchitis, conjunctivitis, choroiditis, retinitis and siderosis of tissues.
- Manganese: Inhalation of fumes and dust can cause central nervous system disturbances, increased upper respiratory disorders and infections, cumulative lung damage, psychiatric disorders, liver cirrhosis and anemia.
- Molybdenum: Human industrial poisoning by molybdenum has yet to be reported.
- Nickel: Nickel dust or fume can cause sensitization dermatitis, "nickel itch", and may cause cancer of the paranasal sinuses and lungs.
- Tantalum: Dust may be slight irritant to eyes, nose and throat.
- Titanium: Considered a physiologically inert dust; however, high concentrations may cause irritation of eyes and mucous membranes.
- Tungsten: No adverse health effects have been reported in humans.
- Vanadium: As vanadium pentoxide dust or fumes, it may cause irritation of eyes, nose and respiratory tract (More severe than acute exposure), chronic Bronchitis and allergic skin rash.

CARCINOGENICITY:

	<u>NTP</u>	<u>IARC Monographs</u>	<u>OSHA Regulated</u>
Chromium:	Yes	Yes	Yes, PEL established
Nickel	Yes	Yes	Yes, PEL established

SECTION 9: REACTIVITY DATA:

- Stability: Chemically stable
- Incompatibility: Reacts with strong acids to generate Hydrogen gas
- Hazardous Decomposition Products: Metallic oxides

SECTION 10: SPILL OR LEAK PROCEDURES:

- Steps to be taken in the event of Release or Spill: Not Applicable
- Waste Disposal Method: Solids: Sale as Scrap
- Dust: Follow Federal, State & Local Regulations



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SECTION 11: SPECIAL PROTECTION INFORMATION:

Ventilation Requirements: Basic ventilation is recommended

Personal Protective Equipment

Respiratory Protection: If fumes, misting or dust condition occurs and TLV as indicated in Section 2 is exceeded, provide NIOSH approved respirators.

Eye Protection: Recommended

Gloves: If appropriate for the job being performed.

SECTION 12: SPECIAL PRECAUTIONS:

Use good housekeeping practices to prevent accumulation of dust and to keep airborne dust concentrations at a minimum.

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