

WEBCO INDUSTRIES, INC.
P.O. Box 100
Sand Springs, OK 74063

Material Safety Data Sheet

Site: Webco Industries, Inc. Mannford, OK.	Approved MSDS: Date Prepared: 03/04/2010	MSDS No: 1
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Section 1: Product and Company Identification:

Product Name: Stainless Steel Tubing	Chemical Name: N/A	Formula: N/A	CAS Number: N/A
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Product Use: Steel Tubing

Supplier Information:

Supplier Name: Webco Industries, Inc. Sand Springs, OK.	Supplier Phone: 918-241-1000
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Address:

501 Foster Road Mannford, OK. 74044
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Emergency Contact Information:

Webco Industries, In. 918-241-1000

Section 2: Composition Information on Ingredients

Ingredient	CAS No.	% Weight
IRON	7439-89-6	BALANCE
Nickel**	7440-02-0	0-6.5 (Can be as high as 80% in nickel based alloys)
Chromium**	7440-47-3	10-30
Molybdenum	7439-98-7	0-7.0
Copper**	7440-50-8	0-4.0
Manganese**	7439-96-5	0-10
Silicon	7440-21-3	0-6.5
Columbium	7440-03-1	0-1.0
Aluminum	7429-90-5	0-4.0
Cobalt** (Nickel Alloys)	7440-48-4	0-21 (Nickel Alloys)
Vanadium	7440-62-2	0-1.1
Tungsten	7440-33-7	0-2.5
Tantalum	7440-25-7	0-1.0
Titanium	7440-32-6	0-2.4
Vanadium	7440-62-2	0-1.1

Section 3: Hazards Overview

Emergency Overview:

WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO CAUSE CANCER

Potential Health Effects:

Steel products in their usual physical form do not pose a health hazard. Inhalation of metal dust and fume may result from further processing of the material by the user, particularly during welding, burning, grinding, and machining activities and should be evaluated by an industrial hygienist.

Chronic Health Hazards:

Individuals with chronic diseases or disorders should consult a Physician regarding workplace exposure to ingredients.

The National Toxicology Program NTP and International Agency for Research on Cancer (IARC) consider (1) chromium and certain chromium compounds to be known human carcinogens, (2) nickel and certain nickel compounds to be probable human carcinogens. Mineral Oils are suspect carcinoma of the skin, scrotum, larynx, lung and alimentary-tracts.

Medical Conditions Generally Aggravated by Exposure:**Aluminum (Al)**

Long-term excessive inhalation exposure to Al dusts or fumes has been associated with a fibrotic lung condition known as Shaver's disease; however, the evidence of this is not conclusive since affected workers were exposed to other substances (such as silica) as well. Symptoms of this condition may include shortness of breath, cough, and fatigue.

Cobalt (Co)

Cobalt dust may cause an asthma-like disease with symptoms ranging from cough, shortness of breath and dyspnea to decreased pulmonary function, nodular fibrosis, permanent disability and death. Exposure to cobalt may cause weight loss, dermatitis, and respiratory hypersensitivity.

Chromium (Cr)

Chromium metal and its divalent and trivalent compounds are of low toxicity. Adverse reactions on the skin may include dermatitis for a Cr-sensitive individual. Long-term excessive inhalation exposure to ferrochromium alloys may cause lung changes in workers exposed to these alloys. Exposure to Chromium metal does not give rise to pulmonary fibrosis or pneumoconiosis. Chromium metal and trivalent chromium (Cr^{+3}) compounds are not classifiable as human carcinogens. However, welding, torch cutting, brazing or perhaps grinding of the chromium metal in stainless steel products may generate airborne concentrations of hexavalent chromium, (Cr^{+6}), a confirmed human carcinogen. IARC lists hexavalent chromium compounds as Group 1 (sufficient evidence for carcinogenicity in humans). NTP lists certain hexavalent chromium compounds as Group 1 (known to be carcinogenic). The American Conference of Governmental Industrial Hygienists (ACGIH) lists hexavalent chromium compounds as A1.

Columbium (Nb)

Columbium interferes with calcium as an activator of enzyme systems.

Copper (Cu)

Excessive inhalation exposure to Cu fume may cause irritation of the eyes, nose, and throat and a flu-like illness called metal fume fever. Signs and symptoms of metal fume fever include fever, muscle aches, nausea, chill, dry throat, cough and weakness. Cu fume may also produce a metallic or sweet taste. Long-term excessive exposure to Cu fume may cause discoloration of the skin and hair.

Iron (Fe)

Long-term excessive inhalation exposure to iron oxide fumes or dust has been associated with a benign lung condition known as siderosis. No physical impairment of lung function has been linked to siderosis.

Manganese (Mn)

The dusts and fumes can act as minor irritants to the eyes and respiratory tract. Acute and long-term excessive inhalation exposures to the oxide or salts of Mn may adversely affect the central nervous system (CNS), but symptoms are more likely to occur after at least 1 or 2 years of prolonged or repeated exposures. Early symptoms may include weakness in lower extremities, sleepiness, salivation, nervousness, and apathy. In more advanced stages, severe muscular coordination, impaired speech, spastic walking, mask-like facial expression, and uncontrollable laughter may occur. Excessive inhalation exposure to manganese fumes have also been reported to result in metal fume fever, a flu-like syndrome with symptoms such as dizziness, chills, fever, headache, and nausea. An increased incidence of pneumonia, bronchitis, and inflammation of the lungs has been reported in some worker populations exposed excessively to manganese.

Molybdenum (Mo)

Molybdenum compounds are highly toxic. Some evidence of liver dysfunction with hyperbilirubinemia has been reported in workmen chronically exposed in a Soviet Mo-Cu plant. In addition signs of gout have been found in factory workers and among inhabitants of Mo-rich areas of Armenia. The main features were joint pains in the knees, hands, feet, articular deformities, erythema, and edema of the joint areas.

Nickel (Ni)

Ni fumes and dusts are respiratory irritants and excessive exposure may cause severe inflammation of the lungs. Prolonged and repeated skin contact with nickel and its compounds may cause an allergic dermatitis. The resulting skin rash is often referred to as "nickel itch". Ni and its compounds may also produce eye irritation, particularly on the inner surfaces of the eyelids. Studies have linked nickel and certain nickel compounds to an increased incidence of cancer of the respiratory system.

Silicon (Si)

This is considered to be nuisance particulate by the American Conference of Governmental Industrial Hygienists (ACGIH)

Tantalum (Ta)

The passivity of Tantalum metal for biological tissues has been amply demonstrated by its longtime use in surgical procedures both in animals and man. No significant toxic effects have been associated with tantalum.

Titanium (Ti)

Elemental titanium and titanium dioxide is of a low order of toxicity. Excessive exposure in humans may result in slight changes in the lungs.

Tungsten (W)

Tungsten has been shown to act by antagonizing the action of the essential trace element, Molybdenum. Long industrial experience has indicated no pneumoconiosis to develop among workers exposed solely to tungsten or its insoluble compounds.

Vanadium (V)

Vanadium compounds are poorly absorbed through the gastrointestinal system. Inhalation exposures to vanadium and vanadium compounds result primarily in adverse effects on the respiratory system. Chronic exposure to Vanadium Pentoxide dust and fumes may cause severe irritation of the eyes, skin, upper respiratory tract, emphysema, tracheitis, pulmonary edema, bronchial pneumonia, and systemic poisoning. Signs and symptoms of

overexposure include conjunctivitis, nasopharyngitis, cough, dyspnea, palpitation, lung changes, chronic bronchitis, skin pallor, greenish-black tongue and an allergic skin rash.

Routes of Entry:

Eyes? Yes	Skin? No	Inhalation? Yes	Ingestion? No
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Carcinogenicity:

NTP? Yes	IARC? Yes	OSHA? Yes
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Section 4: First Aid Measures

Eye Contact:

Treat for foreign body in the eye. Call a physician if condition persists.

Skin Contact:

Not anticipated to pose a significant skin hazard. However, should dermatitis develop, wash affected area with mild soap and warm water. Call a physician if condition persists.

Inhalation:

Remove from excessive exposure levels. Give CPR if breathing has stopped. Get medical attention.

Ingestion:

This product is not considered to be an ingestion hazard.

Section 5: Fire-fighting Measures:

Flash Point: N/A	Auto-Ignition: N/A	LEL: N/A	UEL: N/A
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NFPA Hazard Classification:

Health: N/A	Flammable: N/A	Reactivity: N/A
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HMIS Hazard Classification:

Health: N/A	Flammable: N/A	Reactivity: N/A
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Special Fire Fighting Procedures:

STEEL PRODUCTS IN THE SOLID STATE PRESENT NO FIRE OR EXPLOSION HAZARDS.

Unusual Fire and Explosion Hazards:

TEMPERATURES ABOVE THE MELTING POINT MAY LIBERATE FUMES OF IRON, NICKEL.

Section 6: Accidental Release Measures

N/A

Section 7: Handling and Storage

WEBCO INDUSTRIES, INC. DISCLAIMS ANY RESPONSIBILITY FOR HARM TO PERSONS OR PROPERTY RESULTING FROM CONDITIONS ARISING FROM STORAGE OR HANDLING OF THIS MATERIAL OR ARTICLE BY INDIVIDUALS BEYOND THE CONTROL OF WEBCO INDUSTRIES, INC. OR RESULTING FROM USE OF THE MATERIAL OR ARTICLE IN A MANNER INCONSISTENT WITH ITS NORMAL COMMERCIAL USE.

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Section 8: Exposure Controls/Personal Protection

Ingredient:	PEL-OSHA	TLV-ACGIH
IRON	10MG/M ³ FeO ₂ fume	5 Mg/M ³ FeO ₂ fume
NICKEL**	1 Mg/M ³ metal and insoluble compounds	1.5 Mg/M ³ metal 0.1 Mg/M ³ soluble compounds 0.2 Mg/M ³ insoluble compounds
CHROMIUM**	1 Mg/M ³ metal Al-2.5 µg/m ³ /PEL-5.0 µg/m ³ (as Cr ⁺⁶)	0.5 Mg/M ³ metal and Cr ⁽⁺³⁾ 0.01 mg/m ³ , Cr ⁽⁺⁶⁾ insoluble compounds
MOLYBDENUM	5 Mg/M ³ , soluble Mo compounds 15 Mg/M ³ , insoluble compounds, total dust	5 Mg/M ³ , soluble Mo compounds 10 Mg/M ³ , insoluble compounds
COPPER	1 Mg/M ³ Dust, 0.1 MG/M ³ fume	1 Mg/M ³ Dust, 0.2 Mg/M ³ fume
MANGANESE**	CEILING 5 Mg/M ³	0.2 Mg/M ³ , elemental and inorganic compounds
SILICON	15 Mg/M ³ TOTAL, 5 Mg/M ³ Resp. DUST	10 Mg/M ³ Resp. Dust
COLUMBIUM	5 Mg/M ³ Resp. fraction (not Regulated)	5 Mg/M ³ Resp. fraction (not Regulated)
ALUMINUM	15 Mg/M ³ TOTAL, 5 Mg/M ³ RESP. DUST	10 Mg/M ³
COBALT	0.1 Mg/M ³ metal,dust, and fume	0.02 Mg/M ³ elemental and inorganic compounds
VANADIUM	0.5 Oxide Dust (ceiling)	0.05 Oxide Dust resp. Dust and fume
TUNGSTEN	5 Mg/M ³ Resp. Dust	5 Mg/M ³ Resp. Dust
TANTALUM	5 Mg/M ³ metal and oxide dust	5 Mg/M ³ metal and oxide dust
TITANIUM	15 Mg/M ³ , Titanium Dioxide, total dust	10 Mg/M ³ , Titanium Dioxide, total dust

Health Hazard Information:

**DESIGNATED TOXIC CHEMICALS CONTAINED IN THIS PRODUCT ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT OF 1986 (40CFR372).

Respiratory Protection:

When engineering controls are not feasible or sufficient to lower PEL, use of a NIOSH/MSHA approved dust and fume respirator should be used to avoid excessive inhalation of particulate, should particulate levels be above the stated Permissible Exposure Limit (PEL).

Ventilation:

Ventilation should be sufficient to maintain exposure below the applicable limits.

Protective equipment:

Protective Gloves: Should be worn as required for welding, burning or handling operations.

Eye Protection: Safety glasses or goggles as needed for welding, burning, grinding or machine operations.
Other Clothing and Equipment: Flame/heat protective garments required for safe burning, welding, or grinding.
Personal Sampling Procedure: N/A
Special Precautions: N/A

Section 9: Physical and Chemical Properties

Appearance and Odor: GRAY TO SILVER / NO ODOR Boiling Point: N/A Melting Point: 2500 - 2800°F Solubility in Water (% by weight): N/A Evaporation Rate: N/A Specific Gravity (H2O = 1): 7 - 9 PH: N/A % Volatiles by Volume (at 20°C): N/A
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Section 10: Stability and Reactivity

Stability: Stable	Avoid: Stable under normal conditions of use, storage & transport
Incompatibility: N/A	
Hazardous Decomposition of By-Products: N/A	
Polymerization: Will not occur	Avoid: Will react with strong acid to liberate hydrogen.

Section 11: Toxicological Information

Chemical Name	% Wt.	LD50	LC50

Other Studies: N/A

Section 12: Ecological Information

Exotoxicity: N/A

Environmental Fate: N/A

Section 13: Disposal Considerations

SPILLS AND DISPOSAL PROCEDURES: Spills: Not applicable to steel in the solid state
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Waste Disposal Method:

Metals may be reclaimed. Dispose of in a landfill in accordance with all local, state, and federal regulations.

Section 14: Transport Information

International
United States
Canada
European Community

Section 15: Regulatory Information

US Federal Regulations

TSCA

SARA 311 and 312 Hazard Categories:

Immediate (Acute) Health Hazard:	No
Delayed (Chronic) Health Hazard:	No
Fire Hazard:	No
Reactivity:	No
Sudden Release of Pressure:	No

Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III

SECTION 311/312 HAZARD CATEGORIES: Immediate Health Effect, Delayed Health Effect

This product contains the following EPCRA Section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right – To – Know Act of 1986 (40 CFR 372):

SECTION 313 REPORTABLE INGREDIENTS:

Chemical Name	CAS Number	Concentration (% by weight)	Reportable
Aluminum	7429-90-5	0.0-4.0	Yes – Greater than 1%
Chromium	7440-47-3	10-30.0	Yes – Greater than 1.0%
Cobalt	7440-48-4	0-21.0(Nickel based alloys)	Yes- Greater than 0.1%
Copper	7440-50-8	0.0 – 4.0	No – Less than 1%
Manganese	7439-96-5	0.0 – 10.0	Yes – Greater than 1%
Nickel	7440-02-0	0.0 – 6.5 (Can be as high as 80% in some nickel based alloys)	Yes – Greater than 0.1%
Vanadium	7440-62-2	0.0 – 1.1	No – Less than 1%

Ozone Depleting Substances: N/A

Volatile Organic Compounds (VOC): N/AN/A

US State Regulation: N/A

Canadian Regulation: N/A

European Regulation: N/A

Other Regulation: N/A
MITI:

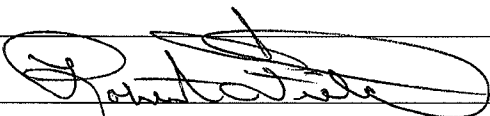
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Revision:	Sec/Para Changed	Change Made:	Date:
3	N/A	Updated for EPCRA Section 313 review & date	03/01/2010

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