

Harry E. Orkin

INCORPORATED

Iron and Steel

MAR 19 REC'D

OFFICE AND WAREHOUSE
SLATINGTON - PENNA. 18080

TELEPHONE SLATINGTON 767 3845
ALLENTOWN 435 1363
EASTON 258 0100
AREA CODE 215

M A T E R I A L S A F E T Y D A T A S H E E T

This information is provided in accordance with
19CFR 1920.1200 hazard communication.

ASTM A36 & A36 MODIFIED STRUCTURAL STEEL

Hazardous Ingredients

<u>Component</u>	<u>CAS#</u>	<u>%</u>	<u>OSHA</u> <u>8 Hr. TWA</u>	<u>ACGTH</u> <u>8 Hr. TWA</u>
Iron	1309-37-1	98.00	10mg/m ³	5mg/m ³
Maganese	7439-96-5	.75	5mg/m ³	5mg/m ³
Carbon	7440-44-0	.20	3.5mg/m ³	3.5mg/m ³
Silicon	7440-21-5	.25	(1)	
Copper	7440-50-8	.30	(d) 1mg/m ³	(f) 1mg/m ³
Chromium	7440-47-3	.15	1mg/m ³	1mg/m ³
Nickel	7440- 2-0	.15	1mg/m ³	1mg/m ³
Molybdenum	7439-98-7	.02	15mg/m ³	15mg/m ³

ADDITIONAL PHYSICAL DATA:

Freezing Point	Appearance--Solid Gray Color
Boiling Point	Vapor Pressure--NA
Sublimes	Vapor Density--NA
Evaporation Rate	Solubility In Water--NA
Flash Point	% Volatilies by Volume--NA
Flammable (explosive limits)--NA	
Extinguishing Media--dry powder, dry sand dry dolomite, dry graphite	

Special Firefighting Procedures: in a situation where molten metal may be present during fire fighting, a respirator should be worn to minimize exposure.

Unusual Fire and Explosion Hazards: Molten steel may explode on contact with water.

Health Hazard Data: The acute and chronic effects health hazard data is provided for alloy elements which have the most significant effects as noted in the literature.

TOXICITY AND EFFECTS OF OVER EXPOSURE:

Route of Exposure: Exposure to components limited to cutting, grinding, welding or remelting. Inhalation of dust or fumes or eye or skin contact with dust or fumes from these operations is primary exposure. Ingestion of large amounts of steel unlikely.

Acute Effects: Nickel dust, mists, or fumes are respiratory irritants and may cause pneumonitis. Skin contact may cause allergic skin rash. Chromium dust may cause minor lung changes in workers. Dust may cause eye and skin irritation. Manganese and Copper fumes may cause metal "Fume Fever" with flu like symptoms.

Chronic Effects: NIOSH information states that "Metallic nickel and certain soluble nickel compounds as dust or fume cause sensitization dermatitis and probably produce cancer of the paranasal sinuses and the lung;" these health effects are associated with nickel refining and from plating and polishing. Dusts of chromium metal are usually reported to be relatively nontoxic. However, certain forms of chromium have been found to cause increased respiratory cancer.

Emergency and First Aid Procedures: Eye contact--flush well for 15 minutes then get medical attention. Skin contact--flush with water, wash with soapy water, get medical attention if irritation persists. Inhalation--move to fresh air, get medical attention if discomfort persists. Ingestion--get medical attention immediately.

REACTIVITY DATA:

General Reactivity--Stable
Incompatibility (materials to avoid)--NA
Hazardous Decomposition Products--NA
Hazardous Polymerization--NA

SPILL PROCEDURES/DISPOSAL REQUIREMENTS: NA

SPECIAL PROTECTION INFORMATION:

Ventilation: Local exhaust should be used when dust, mist, or fume is generated which could exceed the OSHA TLV.

Respiratory Protection: Use NIOSH approved respirator should the OSHA TLV's be exceeded.

Protective Gloves: Recommended to avoid cuts.

Eye Protection: Recommended when machining or melting.

Other Protective Equipment: NA

SPECIAL PRECAUTIONS:

Handling and Storage Precautions--NA
Precautionary Labeling--NA

Constituents listed by National Toxicology Program, International Agency for Research on Cancer, or by OSHA as a Carcinogen or possible Carcinogen:

Nickel
Chromium