

### SECTION I: Product and Manufacturer Identification

**Product Name:**  
Steel EMT Fittings  
Catalog Series: 4000; 5000; 6000; and 7000

**Emergency Number:**  
(254) 289-2118

**Manufacturer:**  
EGS Electrical Group  
9377 West Higgins Road  
Rosemont, IL 60018

**Information Number:**  
(254) 968-6071 Ext. 202

**Date Issued:** December 6, 1995

**Revision Date:** June 13, 2008

### SECTION II: Components and Hazard Information

Component	CAS Number	Concentration (% By Weight)	TLV	PEL
Iron	7439-89-6	98	10 mg/m <sup>3</sup> (as iron oxide fume or dust)	10 mg/m <sup>3</sup>
Manganese	7439-96-5	0.25 – 1.5	5 mg/m <sup>3</sup> (as respirable nuisance dust)	5 mg/m <sup>3</sup>
Silicon	7440-21-3	0.0 – 1.0	5 mg/m <sup>3</sup> (as respirable nuisance dust)	5 mg/m <sup>3</sup>
Chrome *	7440-47-3	0.0 – 0.95	0.5 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>
Nickel *	7440-02-0	0.0 – 0.5	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>

\* - Chrome and Nickel are listed in NTP Annual Report on Carcinogens. Steel is not listed by NTP, IARC or OSHA as a carcinogen.

### SECTION III: Physical Data

**Boiling Point:** 3000 °C

**Specific Gravity:** 7.6 – 7.8

**Vapor Pressure:** 1 @ 2220 – 2450 °C

**% Volatile:** 0%

**Vapor Density:** N/A

**Evaporation Rate:** None

**Water Solubility:** 0%

**pH:** N/A

**Melting Point:** 1375 °C

**Appearance:** Metallic Luster

**Odor:** None

### SECTION IV: Fire and Explosion Hazard Data

**Flash Point:** None

**Flammable Limits:** N/A

**LEL:** N/A

**UEL:** N/A

**Extinguishing Media:** N/A

**Special Fire Fighting Procedures:**

Water over molten steel if compatible with combustibles. If this product is reduced to powder and ignites, use sand, dry graphite or other Class D media.

**Unusual Fire or Explosion Hazards:**

Molten steel falling into water may result in an explosion.

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### SECTION V: Health Hazard Information

**Note:**

Under normal conditions, this product meets the definition of an "Article" and no exposures would result. However, if this product were to be ground, cut or welded, for any reason, some exposure may occur. When reviewing the following, it should be noted that the toxic components make up a very small percentage of the product.

**Effects of Overexposure and First Aid:****Inhalation:**

Acute Effects: Pulmonary irritation may cause a condition known as metal fume fever. Remove to fresh air and consult a physician.

Chronic Effects: See Section V(a) for details on chronic effects of components.

**Ingestion:**

Acute Effects: Should not occur under normal conditions. If ingested, may cause gastrointestinal irritation. Seek medical attention, if necessary.

Chronic Effects: See Section V(a) for details on chronic effects of components.

**Eyes:**

Acute Effects: May cause itching and/or burning sensation if welding. Particles may cause irritation. Flush with large amounts of water for 15 minutes, occasionally lifting the upper and lower eye lids, and consult a physician.

Chronic Effects: See Section V(a) for details on chronic effects of components.

**Skin:**

Acute Effects: May cause irritation. If irritation develops, remove contaminated clothing and wash effected area with soap and water for 5 minutes. If irritation persists, consult a physician.

Chronic Effects: See Section V(a) for details on chronic effects of components.

### SECTION V(a): Acute and Chronic Effects of Components

**Chrome:**

The dusts of chromium metal are usually reported to be relatively nontoxic, although there are reports of a nodular type of pulmonary disease with impairment of lung function. Some insoluble chromium compounds are suspected carcinogens. Chromium metal and insoluble salts are said to be involved in fibrosis of the lungs. When the metal is heated to a high temperature, fumes produced may be damaging to the lungs if inhaled. The international Agency for research on Cancer (IARC) has concluded that the evidence for carcinogenicity in humans and animals is inadequate for chromium metal and trivalent chromium compounds, but sufficient for hexavalent chromium compounds.

Fumes from welding chromium containing alloys can trigger eczematous eruptions on the palms of the hands of chromium sensitized individuals.

**Iron:**

Inhalation of excessive oxide fumes or dusts can lead to irritation of the respiratory tract. Prolonged inhalation of iron oxide for periods of 6 to 10 years is known to cause siderosis which appears to be a benign pneumoconiosis.

Prolonged eye contact with metal dust could cause rust brown color spots forming around the particles of iron and, if left for several years, permanent damage could result.

**Manganese:**

Excessive inhalation of manganese can produce manganese poisoning and pneumonitis. Chronic exposures can lead to neurological problems such as apathy, drowsiness, weakness, speech disorders and central nervous system involvement such as irritability, paralysis, compulsive behavior and other neurological problems resembling Parkinsonism.

Excessive ingestion of manganese can produce manganese poisoning. Chronic exposures can lead to neurological problems such as apathy, weakness, paralysis and other neurological problems resembling Parkinsonism.

**Nickel:**

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The U.S. National Toxicology Program (NTP) has listed nickel and seven nickel compounds as reasonably anticipated to be a carcinogen based on the production of injection site tumors in experimental animals. The International Agency for Research on Cancer (IARC) concluded that nickel compounds were carcinogenic to humans and 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 tumors in rodents. Repeated intratracheal instillation of nickel powder produced an increased incidence of malignant lung tumors in rats, but did not produce an increased incidence in hamsters when administered at the maximum tolerated dose. However, single intratracheal instillations of nickel powder in hamsters at doses near the LD50 level have produced and increased incidence of fibrosarcomas and mesotheliomas. Inhalation of nickel powder at concentrations 15 times the PEL irritated the respiratory tract in rodents. Nickel is a known sensitizer and may produce allergic reactions. Inhalation of nickel powder produces respiratory irritation and pneumonitis. Several nickel compounds, including nickel oxide, are suspected lung and nasal carcinogens.

Dermatitis due to nickel sensitization may occur in some individuals. This often results in chronic eczema or "nickel itch". Persons with pre-existing skin disorders may be more susceptible to dermatitis from nickel compounds.

Nickel is an irritant to the conjunctiva of the eye.

**Silicon:**

May produce x-ray changes in the lungs without disability.

### SECTION VI: Reactivity Data

**Stability:**

Stable

**Hazardous Decomposition Products:**

None. Will not support combustion.

**Hazardous Polymerization:**

Will not occur.

### SECTION VII: Spill or Leak Procedures

**Steps to be Taken in Case Material is Released or Spilled:**

Sweep or pick up material and reuse or recycle, if possible.

**Waste Disposal Method:**

Dispose of in accordance with all local, state and federal regulations.

### SECTION VIII: Special Protection Information

**Respiratory Protection:**

NIOSH approved dust and/or fume respirator if TLV or PEL is exceeded.

**Ventilation:**

Local exhaust as necessary to maintain concentrations below TLV or PEL if cutting, grinding or welding.

**Protective Gloves:**

Any protective glove appropriate to the work being performed will minimize skin contact.

**Eye Protection:**

Safety glasses and/or goggles appropriate to the work being performed. UV protection if welding.

**Other:**

Long sleeved shirt if prolonged skin contact is likely.

### SECTION IX: Special Precautions

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None

### Section X: SARA Section 313

<b>Manganese:</b>	7439-96-5	1.5% by weight
<b>Chrome:</b>	7440-47-3	0.95% by weight
<b>Nickel:</b>	7440-02-0	0.5% by weight

### Notice

The information and recommendations herein are, to the best of EGS Electrical Group's knowledge and belief, accurate and reliable as of the date issued and are offered for the user's consideration and examination. EGS Electrical Group does not warrant or guarantee their accuracy or reliability and shall not be liable for any loss or damage arising out of the use thereof. It is the user's responsibility to satisfy itself that they are suitable and complete for its particular use.

**Prepared by:** James H. Sommer, P.E.

**Date:** June 13, 2008