

## HM Wire International, Inc.

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### Material Safety Data Sheet

### Carbon Steel

#### 1.0 Product and Company Identification

HM Wire International INC  
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Telephone: 330-244-8501  
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**Material Name: CARBON STEEL**

Chemical Family: Steel

Material Use: Production of Steel Products (including mesh, wire and bar products)

Chemical Formula and Molecular Weight: not applicable

Chemical Name, Trade Names and Synonyms: not applicable

#### 2.0 Hazards Materials\*

Element	Maximum*	PEL as fume (mg/m3)
Carbon	1.00	3.5
Manganese	2.20	5.0
Phosphorus	2.25	0.1
Sulphur	0.50	n/a
Lead	n/a	0.05
Silicon	n/a	5.0
Iron	Balance	10.0

**\*NOTE:** concentrations represent a maximum for all grades and must not be interpreted as a specification for a particular grade.

**COATINGS:** Material may be oiled, lime coated, or galvanized.

### 3.0 Physical Data for Steel

**Physical State and Appearance:** Solid material. Silver or grey metallic

**Specific Gravity:** 7.6-7.8.

**Melting Point:** Material melts at 1530 C

**Vapor Pressure and Density:** not applicable

**Evaporation Rate and Boiling Point:** not applicable

**% Volatiles and Odor Threshold:** not applicable

**Solubility in Water and pH:** not applicable

### 4.0 Fire and Explosion Hazard

**Flammability:** not flammable

**Means of Extinction or Special Procedures:** not applicable

**Auto Ignition Temperature and Rate of Burning:** not applicable

**Flash Point and Upper/Lower Explosion Limits:** not applicable

**Sensitivity to Chemical Impact and Static Discharge:** not applicable

**Hazardous Combustion Products:** not applicable

**NOTE:** Thermal degradation of coatings may release irritating hydrocarbons

### 5.0 Reactivity Data

**Chemically Stable:** Yes

**Incompatibility with other Substances:** not applicable

**Reactivity and Conditions:** contact with mineral acids will release hydrogen gas.

**Hazardous Decomposition Products:** Welding or cutting will generate fume.

### 6.0 Toxicological Information

**Routes of Entry:** None for the material in its natural state. Skin or eye contact with the oil coatings on the material.

**Effects of Acute Exposure to Products:** Welding or cutting will generate fumes.

Inhalation overexposure to manganese fume may cause a flu-like condition (e.g. chills, nausea) called metal fume fever. Skin or eye irritation to oil coatings.

**Effects of Chronic Exposure to Products:** Welding or cutting will generate metal fume and dust. Prolonged inhalation overexposure to dust or fume may result in conditions such as Siderosis with few or no symptoms (Siderosis is an accumulation of iron oxide in the lungs).

Skin contact with coating materials may cause skin irritation and/or dermatitis with prolonged contact.

**Sensitization to Product:** no known effects.

**Synergistic Materials:** no known effects.

**Mutagenic, Teratogenic, or Reproductive Effects:** no known effects.

## 7.0 Preventive Measures

**Personal Protective equipment:** Personal protective equipment required is dependent on the process being performed on the material (e.g. burning or cutting). Each operation must be addressed for suitable personal protective equipment.

**Gloves:** recommended for prolonged contact. Barrier creams may be used when handling oily steel.

**Glasses and footwear:** to be worn as required or as appropriate.

**Respirators:** NIOSH approved respiratory protection as appropriate.

**Engineering Controls:** use appropriate ventilation (general or local) when welding, cutting or grinding.

## 8.0 First Aid

**Skin:** wash affected area with soap and water. Seek medical attention if irritation persists.

**Eyes:** Flush eyes with plenty of water while holding eyelids open. Seek medical attention if irritation persists.

**Inhalation:** For overexposure to metal fumes, remove to fresh air. Seek medical attention for adverse symptoms.

**Ingestion:** not applicable

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### **Preparation Information:**

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