

**WCI STEEL**

WCI Steel, Inc.  
1040 Pine Avenue, SE  
Warren, Ohio 44483-6528  
Phone: (330) 841-8219

For additional information  
Contact:  
WCI Steel, Inc.  
Safety Department  
Phone: (330) 841-8248

## **Material Safety Data Sheet**

**WCI Steel, Inc.**

1. <b><u>Chemical Product and Company Identification</u></b>
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Product Name .....**Electrical Steel – Including Cold Rolled Motor Lamination**  
Product Code.....**Electrical Steel – Including Cold Rolled Motor Lamination**

Chemical Family.....N/A  
Chemical Name.....N/A  
Formula.....N/A

**Manufacturer:**  
WCI Steel, Inc.  
1040 Pine Avenue, SE  
Warren, Ohio 44483-6528

**Telephone Numbers:**  
Information.....(330) 841-8219  
Emergency (330) 841-8248

## 2. Hazardous Ingredients

Concentrations for ingredients are expressed as % by weight.

Ingredient / CAS #	Electrical Steel – Including Cold Rolled Motor Lamination
Iron 7439-89-6	95-99.5
Carbon 7440-44-0	0.003 maximum
Manganese 7439-96-5	0.50 maximum
Phosphorous 7723-14-0	0.100 maximum
Sulfur 7704-34-9	0.020 maximum
Silicon 7440-21-3	3.50 maximum
Aluminum 7429-90-5	1.00 maximum
Antimony 7440-36-0	0.010 maximum
Tin 7440-31-5	0.10 maximum

### Coatings:

Core Plate C-3 – This insulation consists of an organic, modified, polyester coating providing die lubrication during punching and good interlaminar between laminations.

Core Plate C-3A – Same as C-3 except thinner organic coating to facilitate welding.

Core Plate C-5 – This coating provides high levels of interlaminar resistance and will withstand stress relief annealing. This coating consists of inorganic filler material (mono-aluminum phosphate) and binder.

Core Plate C-5A – Same as C-5 except thinner, inorganic insulation consisting of aluminum phosphate.

Antistick – Phosphoric / Chromic acid coating with Colloidal Silica.

The chemistries are provided for industrial hygiene and environmental purposes and are not intended to represent product specification. This information has been completed from data believed to be reliable. Elements such as arsenic, boron, calcium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, titanium, vanadium, and zirconium may be present in trace amounts. Steel products may be coated with insulating coreplates to meet customer specifications. Information relative to specific coatings may be obtained from WCI Steel, Inc. Steel products as shipped do not present an exposure hazard.

NOTE: Use gloves when handling this product to prevent skin irritation

### 3. Physical Characteristics

<b>Physical Form</b> .....	Solid
<b>Color</b> .....	Brown-Grey
<b>Odor</b> .....	None
<b>Boiling Point</b> .....	Not Applicable
<b>Melting Point</b> .....	2400-2800 F
<b>pH</b> .....	Not Applicable
<b>Solubility in Water</b> .....	Insoluble
<b>Specific Gravity</b> .....	7.5-8.5
<b>Vapor Pressure</b> .....	Not Applicable
<b>Vapor Density</b> .....	Not Applicable

### 4. Fire and Explosion Data

Steel products in the solid state present no fire or explosion hazard, However, the particulate generated may present a dust explosion hazard.

### 5. Reactivity

<b>Stability</b> .....	Stable
<b>Hazardous Polymerization</b> .....	Does not occur
<b>Incompatibilities</b> .....	None
<b>Hazardous Decomposition/Byproducts</b> .....	None

### 6. Accidental Release Measures

**Spill or Leak Procedures**.....Product is a solid material as shipped, no potential for spill or leak.  
**Waste Disposal**.....Follow Federal, state, and local regulations.

### 7. Exposure Controls / Personal Protection

**Protective Equipment**.....The appropriate protective equipment (eye,face,hand) should be worn when burning, welding, brazing, grinding, or machining this product.

**Respiratory Protection**.....Use NIOSH/MSHA approved dust/mist respirators when generating particulates or fumes in accordance with 29CFR 1910.134.

**Ventilation**.....If your operation generates particulates when processing this product, local and general ventilation may be necessary to control employee exposures to within applicable limits.

## 8. Health Hazard Data

### Routes of Entry: Inhalation

### Symptoms of Overexposure:

**Iron (Iron Oxide):** Prolonged or repeated exposure to high concentrations may cause lung changes considered to be a benign pneumoconiosis (siderosis). Inhalation of iron oxide may cause irritation of eyes, nose, and throat, and metal fume fever.

**Carbon:** Primarily a nuisance dust. May cause mild irritation to the eyes and mucous membranes.

**Manganese:** Exposure may cause irritation of the eyes, nose, and throat, metallic taste in mouth, and metal fume fever. Advanced exposure symptoms may include weakness, sleepiness, nervousness, lack of coordination, uncontrollable laughter, mental confusion, speech disturbances, and aggressiveness. Manganese exposure may cause bronchitis, pneumonitis and central nervous system disturbances.

**Silicon:** Primarily a nuisance dust. May cause mild irritation to the eyes and mucous membranes.

**Aluminum:** Generally considered to be a nuisance particulate. May cause irritation to the upper respiratory tract, skin and eyes. Inhalation of five particles may cause a pulmonary fibrosis known as Shaver's disease. Symptoms may include dyspnea, cough and fatigue. May be implicated in Alzheimer's disease.

**Antimony:** Exposure may cause inflammation of the skin and respiratory tract. Various nervous system effects including sleeplessness, fatigue, dizziness, irritability, muscular and neuralgic pains have been reported. Signs and symptoms may also include metallic taste, intestinal upsets, diarrhea, vomiting, and abdominal cramps. High fume exposure may adversely effect the heart and circulatory systems. Pneumoconiosis and obstructive lung disease may occur.

**Tin:** Mild irritant to the skin and mucous membranes. Inhalation of the tin dust and fumes: benign pneumoconiosis (stannosis).

**Carcinogenicity:** Nickel, and chromium and some of their compounds are listed as carcinogens or potential carcinogens.

**Medical Conditions Aggravated by Exposure:** Current respiratory conditions can be aggravated by exposure.

### Exposure limits:

Name	Exposure Limits	
	OSHA PEL / STEL	ACGIH TLV / STEL
Iron	10 mg/m <sup>3</sup>	5 mg.m <sup>3</sup>
Carbon	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Manganese	0.2 mg/m <sup>3</sup>	5 mg/m <sup>3</sup> ceiling
Phosphorous	0.1 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>
Sulfur	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Silicon	15 mg/m <sup>3</sup> total particulate 5 mg/m <sup>3</sup> respirable particulate	10 mg/m <sup>3</sup>
Antimony	0.5 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>
Aluminum	15 mg/m <sup>3</sup> Total fraction 5 mg/m <sup>3</sup> respirable fraction	10 mg/m <sup>3</sup>
Tin	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>

OSHA – U.S. Department of Labor Occupational Safety and Health Administration  
 ACGIH – American Conference of Governmental Industrial Hygienists  
 PEL – OSHA Permissible Exposure Limit (8-hour Time Weighted Average)  
 STEL – OSHA and ACGIH Short term Exposure limit (15 minute exposure)  
 TLV – ACGIH Threshold Limit Value (8-hour Time Weighted Average)  
 Ceiling Limit – OSHA and ACGIH instantaneous exposure limit  
 NE – No Exposure Limit Established

**9. First Aid Measures**

**Eyes:**...Flush eyes thoroughly with clean, lukewarm water for 15 minutes. Seek medical attention.

**Skin:**...Wash affected area with soap and water.

**Inhalation:**...Remove to fresh air. Restore/support breathing as necessary. Seek medical attention.

**Notes to Physician:** Respiratory disorders may be aggravated by exposure to metallic and/or organic/inorganic coating dusts or fumes. If steel contains lead consult OSHA Lead Standard 1910.1025.

**10. SPECIAL PRECAUTIONS**

None

**11. S.A.R.A. Information**

Manganese and Antimony compounds in this product are subject to the reporting requirements of section 313 of the Title III of the S.A.R.A. Act of 1986 and CFR 40 372.

**12. Ecological Information**

No ecological concerns identified.

**14. Disposal Considerations**

Dispose of waste in accordance with federal, state, provincial, and local regulations. Material can be disposed of in a regular manner.

**14. Transportation Information**

No special transportation classifications.

## 15. Regulatory Information

### **WHIMMS Classification (Canada):**

Not classified, labeling required summarizing handling requirements.

### **OSHA Status:**

This product may contain compounds whose exposures are regulated under the Department of Labor Occupational Health and Safety Administrations code of federal regulations concerning general industry activities and construction activities.

### **US EPA Status:**

This product is not listed on TSCA 8(b) inventory.

This product is not listed on the TSCA export notification 12(b) list.

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\* MSDS prepared October 2002