



# Fastener Industries, Inc.

## Material Safety Data Sheet

Revision: 07/21/94  
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### I. Identification

Manufacturer's Name: Fastener Industries, Inc.  
 Address: One Berea Commons  
 Suite 208 • Berea, Ohio 44017-2534  
 Telephone: (440) 243-0200  
 Date Prepared: January 22, 1986  
 Trade Name(s): Ohio Weld Fasteners  
 Chemical Name: Ferrous and Nonferrous Alloys (Generic)  
 Common Name: Resistance Weld Fasteners

### II. Hazardous Ingredients

The terms "hazardous" and "hazardous materials" as used within this MSDS should be interpreted as defined by, and in accordance with, the OSHA Hazardous Communication Standard (29 CFR Part 1910, 1200) including cited Appendices, Lists, References, etc., all of which are hereby incorporated by reference.

	Material or Component	CAS No.	OSHA Permissible Exposure Limits (mg/m3)	ACGIH Threshold Limit Values (mg/m3)	%WT
<b>Carbon Steel Nonre-Sulphurized</b>	Iron	1309-37-1	10.0	5	>95.
	Carbon	7440-44-0	N/A	N/A	.01/1.10
	Manganese	7439-96-5	5.0 (c )	5.0 ( c ) (Dust)	.25/1.65
				1.0 (Fume)	
	Phosphorous	7723-14-0	0.1	0.1	.04 max.
	Sulfur	7446-09-5	13.0 as SO2	5.0 as SO2	.05 max.
	Vanadium	7440-62-2	0.5 (c ) as V2O2 (Dust)	0.05 (Dust)	.01/.25
			0.1 (c ) as V2O2 (Fume)	0.05 (Fume)	
	Aluminum	7429-90-5	None Established	10	.001/1.10
<b>Stainless Steel 18-8</b>	Iron	1309-37-1	10.0	5	66.5
	Chromium	7440-47-3	1.0	0.5	18
	Nickel	7440-02-0	1.0	1	9
	Copper	7440-50-8	0.1 (Fume)	0.2 (Fume)	3.5
			1.0 (Dust)	1.0 (Dust)	
	Manganese	7439-96-5	5.0 (c )	5.0 (c ) (Dust)	2
				1.0 (Fume)	
	Cobalt	7440-48-4	0.1	0.1	0.75

(c) – Denotes ceiling limit

HMIS Rating			
Health	Flammability	Reactivity	Personal Protection
1	1	0	A



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### III. Physical Data

Boiling Point:	High Boiling Point
Melting Point:	2400° to 2800° F.
Specific Gravity:	7.5 to 8.5 approximately
Vapor Density:	N/A
Vapor Pressure:	N/A
Solubility in H <sub>2</sub> O:	Insoluble
Percent Volatiles By Volume:	N/A
Evaporation:	N/A
Appearance and Odor:	Various Shapes, Solid, Odorless

### IV. Fire and Explosion Data

Flash Point:	N/A
Fire Point:	N/A

### V. Health Hazard Information

Fastener Industries, Inc., does not consider its product in its solid form to be a physical or health hazard. Subsequent operations such as welding, melting, abrading, cutting or processing in any other fashion may produce potentially hazardous fumes or dust which can be inhaled, swallowed, or come in contact with the skin or eyes.

#### Route of Entry

Inhalation  
Eye Contact

Skin Contact:

Ingestion

#### Emergency First Aid

Remove to fresh air. If condition continues, consult physician.

Flush well with running water to remove particulate. Obtain medical attention.

Brush or remove excess dust. Wash skin area well with soap and water. Launder clothing and/or uniforms.

Seek medical attention if large quantities of material have been ingested.

#### Effect of Exposure:

No toxic effects would be expected from exposure to the solid form of ferrous and nonferrous metals. Prolonged repeated exposure to fumes or dust generated during welding, heating, brazing or cutting without proper protection or ventilation may or may not cause adverse health effects associated with the listed constituents in excess of OSHA's permissible exposure limits established in 29 CFR, Subpart 2 (see Section II).

Exposure Limits: Section II lists specific permissible exposure limits.

Special Note: Determine actual exposure by industrial hygiene monitoring.

#### **Possible Signs and Symptoms of Exposure to Welding Fume, Dust, and Gases:**

Short Term Exposure:

Metallic taste, Nausea, Tightness of chest, Fever, Irritation of eyes, nose, throat and skin, Loss of consciousness due to lack of oxygen.



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### Long Term Exposure:

There are no adverse effects from the products in their solid form. Adverse effects may or may not result from long-term exposure to dust, fumes, gases, etc., that occur by way of subsequent operations on the product. We believe there is no reliable scientific studies which show that workers exposed to operations with our products suffer increased incidence of cancer or other disease because of exposure to our product.

## VI. Reactivity Data

Stability: Chemically Stable  
Incompatibility: Reacts with very strong acids  
Hazardous Decomposition Products: Metallic Oxides

## VII. Spill, Leak or Disposal Information

Steps to be taken in case of release or spill: Good housekeeping and discussion.  
Waste Disposal Method: Solid form, evaluate for usability, or sale as scrap for reuse.  
Dust, fumes, etc. Follow Federal, State and Local regulations regarding disposal.

## VIII. Special Protection Information

Ventilation Requirements: Use general or local exhaust ventilation to keep airborne concentrations of dust and fumes below the Threshold Limit Values.  
Personal Protection Equipment:  
Respiratory Protection: If dust, fumes, or misting conditions occur and Threshold Limit Values as indicated in Section II is exceeded, provide NIOSH approved respirators.  
Eye Protection: Recommended approved safety glasses or goggles when working subsequent operations.  
Gloves: As required.  
Other protective clothing or equipment: As required.

## IX. Special Precautions

Use good shop practices to keep dust and fume concentrations at a minimum.

This material is protected with coatings such as oils, rust inhibitors, and other coatings. If these coatings are suspect to be contaminated, special precautions, such as in-house process control and protective equipment appropriate to the nature of the suspected contaminants should be taken to avoid possible exposure when handling.

While the information set forth on this Material Safety Data Sheet is believed to be accurate, as of the effective date, Fastener Industries, Inc., and its divisions and subsidiaries, make no representations regarding the accuracy of the information herein and assume no liability for any loss, damage or injury of any kind which may result from or arise out of the use of this information. Buyer assumes all such risks.