

Safety Data Sheet

OSHA Haz Com Standard 29 CFR 1910.1200 App D.

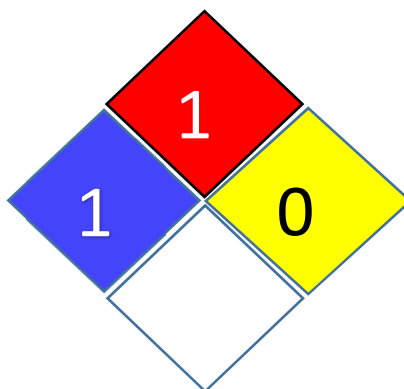
1. Identification

Product	Carbon Steel/ Stainless Steel
Other Names - Steel	AISI 1010, UNSG10100, AISI 1022 - UNSG10220 AISI10B21
Other Names - Stainless Steel	302 HQ, ASTM 493, UNS S30430
Trade Name	Ohio Weld Fasteners
Recommended Use	Weld fasteners
Manufacturer/Supplier	Fastener Industries, Inc. One Berea Commons Suite 209 ■ Berea, Ohio 44017-2534
Telephone No.	(440)243-0200

2. Hazard Identification

Hazard Class	Ferrous / Nonferrous Steel
Hazard Statement	Fastener Industries does not consider its product in its solid form, to the end user, 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. No toxic effects would be expected from exposure to the solid form of ferrous metals. Prolonged repeated exposure to fumes or dust generated from welding, heating, brazing, or cutting without proper protection 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 3)

HMIS Rating			
Health	Flammability	Reactivity	Personal Protection
1	1	0	A



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3 Composition/Information on ingredients

Carbon Steel Nonre-sulpherized	Material or Component	CAS Number	OSHA Permissible Limits (mg/m ³)	ACGIH Threshold Limit Values (mg/m ³)	% WT/
	Iron	1309-37-1	10.0	5.0	>95.
	Carbon	7440-44-0	N/A	N/A	.01/1.10
	Manganese	7439-96-5	5.0 (c)	5.0 (c)(Dust) 1.0(Fume)	.25/1.65
	Phosphorus	7723-14-0	0.1	0.1	.04max.
	Sulfur	7446-06-5	13.0 as SO ₂	5.0 as SO ₂	.05max
	Vanadium	7440-62-2	0.5 (c) as V ₂ O ₂ (Dust) 0.1 (c) as V ₂ O ₂ (Fume)	0.05(Dust) 0.05(Fume)	.01/.25
	Boron	7440-42-8	<0.10	10 mg/m ³	
	Aluminum	7429-90-5	None Established	10.0	.001/.10

Stainless Steel 18-8	Material or Component	CAS Number	OSHA Permissible Limits (mg/m ³)	ACGIH Threshold Limit Values (mg/m ³)	% WT
	Iron	1309-37-1	10.0	5.0	66.5
	Chromium	7440-47-3	1.0	0.5	18.0
	Nickel	7440-02-0	1.0	1.0	9.0
	Copper	7440-50-8	0.1(Fume) 1.0(Dust)	0.2(Fume) 1.0(Dust)	3.5
	Manganese	7439-96-5	5.0 (c)	5.0(c)(Dust) 1.0(Fume)	2.0
	Cobalt	7440-48-4	0.1	0.1	0.75

(c) - Denotes ceiling limit

4 First-aid measures

Inhalation	Remove to fresh air. If condition continues, consult physician
Eye Contact	Flush well with running water to remove particulate. Obtain medical attention.
Skin Contact	Brush off or remove excess dust. Wash skin area well with soap and water. Launder clothing and/or uniforms.
Ingestion	Seek medical attention if large quantities of material have been ingested.

5 Fire fighting measures

Flash point	N/A
Fire point	N/A

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6 Accidental release measures

Steps to be taken in case of release or spill: Good housekeeping and discussion.

Waste Disposal Method	Solid form, evaluate of useability, or sale as scrap for reuse
Dust, fumes, etc.	Follow Federal, State, and Local regulations regarding disposal.

7 Handling and storage

Handling	Gloves as required
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8 Exposure controls/personal protection

OSHA exposable limits	See section 3
Personal protective equipment	
Respiratory Protection	If dust, fumes, or misting conditions occur and threshold limit values as indicated in part 3 is exceeded, provide NIOSH approved respirators.

9 Physical and chemical properties

Appearance	Various shapes, solids.
Odor	Odorless
Odor Threshold	N/A
pH	N/A
Melting point	2400° to 2800° F
Initial boiling point and boiling range	N/A
Flash point	N/A
Evaporation rate	N/A
Flammability	N/A
Upper/lower flammability	N/A
Vapor Pressure	N/A
Vapor density	N/A
Relative density	.284 lb/in ³
Solubility	N/A
Partition coefficient	N/A
Auto ignition temperature	N/A
Decomposition temperature	N/A
Viscosity	N/A

10 Stability and Reactivity

Reactivity	Reacts with very strong acids - Temperature above melting point may release fumes containing oxides of iron and alloys
Chemical stability	Chemically stable
Possible hazardous reactions	Metallic oxides
Conditions to avoid	N/A
Incompatibly materials	N/A

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Hazardous decomposition materials Metal Fumes

11 Toxology Information

Likely routes of exposure	Secondary machining, welding, which raise material to melting. Note: Steel in its solid form does not present an ingestion or inhalation health hazard. Only secondary operations produce conditions which may or may not present health hazards.
Symptoms	High concentration of inhaled oxides can produce flu like symptoms lasting from 12 to 48 hours and include metallic taste, throat irritation, muscle weakness, fever and chills
Chronic	Repeated overexposure to Nickel and Chromium can cause contact dermatitis and inflamaton of upper respiratory tract and both Nickel and Chromium have been linked to upper respiratory cancer
Toxicity limits	see chart in section 3 for exposure limits

Special Precautions

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

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

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

12-14 Non-mandatory (Exempted) per 1910.1200 App D USDOL**16 Preparation and Revisions**

Creation date:	11-16-2014	DTM
Revisions	3-2016	DTM
Reviewed	3-2016	DTM
Revisions	4-2017	DTM

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