



### Iron Based Tool & Die Flux Cored and Flux Cored Tig Wire

## 1 PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** Iron Based Tool & Die Flux Cored and Flux Cored Tig Wire  
**Common Name:** 510, 515, 525, 535, 540, 545, 555, 5550, 840, 845, 850, 919, 920, 922, 923, 927, 935, 937, 938, 943, 954, 954N, 958, 959, 964, 966, 967, 9102, 9580, 9650, 9652, 1325, 9325, 9335, 9340, 9345, 9358  
**SDS Number:** 25  
**Revision Date:** 5/13/2015  
**Version:** 1  
**Product Use:** Welding  
**Supplier Details:** WELD MOLD COMPANY  
 750 Rickett Road  
 Brighton, MI 48116

**Emergency:** 810-229-9521  
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## 2 HAZARDS IDENTIFICATION

### Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):

- Health, Skin corrosion/irritation, 1
- Health, Specific target organ toxicity - Single exposure, 3
- Health, Carcinogenicity, 1
- Health, Specific target organ toxicity - Repeated exposure, 2

### GHS Label elements, including precautionary statements

**GHS Signal Word:** **DANGER**

#### GHS Hazard Pictograms:



#### GHS Hazard Statements:

- H314 - Causes severe skin burns and eye damage
- H335 - May cause respiratory irritation
- H350 - May cause cancer
- H373 - May cause damage to organs through prolonged or repeated exposure
- CGA-HG11 - SYMPTOMS MAY BE DELAYED.

#### GHS Precautionary Statements:

- P232 - Protect from moisture.
- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
- P271 - Use only outdoors or in a well-ventilated area.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- CGA-PG27 - Read and follow the Safety Data Sheet (SOS) before use.

### Hazards not otherwise classified (HNOC) or not covered by GHS

**Route of Entry:** Eyes; Skin  
**Target Organs:** Throat; Nose, Respiratory system

**Inhalation:** Short term overexposure to welding fumes may result in discomfort such as: dizziness, nausea, or dryness or irritation of the nose, throat, lungs, and/or eyes.  
**ACCUTE EFFECTS:** Irritating to the nose, throat and respiratory tract.  
**SUBCHRONIC/CHRONIC TOXICITY**  
**CHRONIC:** Chronic overexposure to welding fumes can result in: Chronic respiratory problems, iron build-up in the lungs, bone erosion, reduced pulmonary functions and nervous disorders.

**Skin Contact:** The bright light produced by the arc can burn skin and eyes

**Eye Contact:** Fumes may be moderately irritating to the eyes

**3 COMPOSITION/INFORMATION ON INGREDIENTS**

**Ingredients:**

Cas#	%	Chemical Name
7439-89-6	0-60.47%	Iron
7440-47-3	0.35-28%	Chromium
7440-02-0	0-13%	Nickel, metallic and alloys
7439-98-7	0.2-10%	Molybdenum: soluble and insoluble compounds
7440-62-2	0-2.5%	Vanadium
7439-96-5	0.05-3.25%	Manganese compounds and fumes (as Mn)
7440-21-3	0.05-1.2%	Silicon
1333-86-4	0.08-0.3%	Carbon black
7440-48-4	0-10%	Cobalt, metal, dust and fume (as Co)
13463-67-7	2-15%	Titanium dioxide
7789-75-5	0-5%	Calcium fluoride (CaF2)
1309-48-4	0-15%	Magnesium oxide (MgO)
1309-37-1	0.5-8%	Iron oxide (Fe2O3)
7631-86-9	0.5-5%	Silica, amorphous
7440-32-6	0.05-10%	Titanium
7440-03-1	0-2%	Niobium
7429-90-5	0-1.8%	Aluminum
1317-65-3	0-2%	Calcium carbonate
1506-52-3	0-2%	Cryolite (F)
7440-24-6	0-1%	Strontium carbonate
1344-09-8	0-1%	Sodium silicate
1312-76-1	0-1%	Potassium silicate
7440-33-7	0-5%	Tungsten
68187-64-4	0-10%	Nepheline syenite

**EXPOSURE LIMITS**

<u>CHEMICAL NAME</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Iron	10 mg/m3 TWA (Total Dust)	10 mg/m3 TWA (particles)
Chromium	1 mg/m3	0.5 mg/m3
Nickel Metal	1 mg/m3	1.5 mg/m3
Soluble compounds, as Mo	15 mg/m3	10 mg/m3
Vanadium	0.05 mg/m3 TWA	1 mg/m3 TWA
Manganese compounds	5 mg/m3	1 mg/m3
Silicon	10 mg/m3* = Total dust, <=Respirable fraction	10 mg/m3 Total Dust
Carbon black	NL	NL
Cobalt	.01 mg/m3 TWA	.02 mg/m3 TWA
Titanium dioxide	10 mg/m3 NL = Not Listed	10 mg/m3
Calcium Fluoride	2.5 mg/m3 As F	2.5 mg/m3
Magnesium Oxide	15 mg/m3	10 mg/m3 (Fume)
Iron oxide	10 mg/m3 TWA (Total Dust)	10 mg/m3 TWA (particles)
Silica	10 mg/m3	10 mg/m3

Titanium	10 mg/m3 NL = Not Listed	10 mg/m3
Niobium	NL	NL
Calcium Carbonate	15 mg/m3	10 mg/m3
Cryolite	10 mg/m3 TWA	3 mg/m3 TWA
Strontium Carbonate	NL	NL
Sodium Silicate	NL * NL = Not Listed	NL
Potassium Silicate	15 mg/m3 TWA	5 mg/m3 TWA

#### 4 FIRST AID MEASURES

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention. Non-irritating.

#### 5 FIRE FIGHTING MEASURES

Welding consumables are not flammable, however the welding arc and sparks will ignite other combustible materials. Do not weld in the presence of combustible materials.

#### 6 ACCIDENTAL RELEASE MEASURES

**GENERAL PROCEDURES:** Prevent waste from contaminating the surrounding environment. Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with federal, provincial, and local regulations.

#### 7 HANDLING AND STORAGE

**Storage Requirements:** Store in a dry area.

#### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

##### PERSONAL PROTECTION

**EYES AND FACE:** S39 - Wear eye/face protection

**RESPIRATORY:** Use sufficient ventilation, local exhaust at the arc, or both to keep the fumes and gases below TLV's in the workers breathing zone. In confined spaces use respirable fume respirator or air-supplied respirator.

**PROTECTIVE CLOTHING:** The intensity of the arc and the sparks emitted from it can cause severe burns. All skin should be covered

#### 9 PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** The welding consumable discussed herein is composed of a wire strip or solid wire rod with or without a flux based core or outer coating.

**Hazardous Decomposition:** The composition and quantity of welding fumes generated are dependent upon several variables including the base material, base material contaminants and/or coatings (paint, galvanized, etc.) welding process utilized. Other factors that will effect the quantity of fumes available for inhalation are the number of welding operators in a designated work area, the quality of ventilation, the position of the operator with respect to the fume plume, as well as the presence of contaminants in the atmosphere from other manufacturing operations. Reasonably expected fume constituents of this product would include: complex oxides of iron, manganese, silicon, chromium, nickel, molybdenum, calcium, magnesium, and titanium.  
 COMMENTS: No hazard exists until this product is used in welding.

REPRODUCTIVE TOXIN: Not known  
 MUTAGENICITY: Not known

ENVIRONMENTAL DATA: No data available

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

SPECIAL SHIPPING NOTES: Special shipping considerations for this product are limited to those necessary to prevent damaging the product.

Component (CAS#) [%] - CODES

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 Iron (7439-89-6) [0-60.47%] TSCA

RQ(5000LBS), Chromium (7440-47-3) [0.35-28%] CERCLA, EPCRAWPC, HWRCRA, MASS, NJHS, NRC, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA, TXAIR

RQ(100LBS), Nickel, metallic and alloys (7440-02-0) [0-13%] CERCLA, EPCRAWPC, MASS, NJHS, NRC, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA

Molybdenum: soluble and insoluble compounds (7439-98-7) [0.2-10%] MASS, OSHAWAC, PA, TSCA, TXAIR

Vanadium (7440-62-2) [0-2.5%] EPCRAWPC, MASS, NJHS, PA, SARA313, TSCA

Manganese compounds and fumes (as Mn) (7439-96-5) [0.05-3.25%] MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Silicon (7440-21-3) [0.05-1.2%] MASS, OSHAWAC, PA, TSCA, TXAIR

Cobalt, metal, dust and fume (as Co) (7440-48-4) [0-10%] MASS, NJHS, OSHAWAC, PA, PROP65, SARA313, TSCA, TXAIR

Titanium dioxide (13463-67-7) [2-15%] MASS, OSHAWAC, PA, TSCA, TXAIR

Calcium fluoride (CaF<sub>2</sub>) (7789-75-5) [0-5%] TSCA

Magnesium oxide (MgO) (1309-48-4) [0-15%] MASS, OSHAWAC, PA, TSCA, TXAIR

Iron oxide (Fe<sub>2</sub>O<sub>3</sub>) (1309-37-1) [0.5-8%] MASS, OSHAWAC, PA, TSCA, TXAIR

Silica, amorphous (7631-86-9) [0.5-5%] MASS, NJHS, PA, TSCA

Titanium (7440-32-6) [0.05-10%] TSCA

Niobium (7440-03-1) [0-2%] TSCA

Aluminum (7429-90-5) [0-1.8%] EPCRAWPC, MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Calcium carbonate (1317-65-3) [0-2%] MASS, OSHAWAC, PA, TSCA, TXAIR

Cryolite (F) (1506-52-3) [0-2%]

Strontium carbonate (7440-24-6) [0-1%] TSCA

Sodium Silicate (1344-09-8) [0-1%] TSCA

Potassium Silicate (1312-76-1) [0-1%] TSCA

Tungsten (7440-33-7) [0-5%] MASS, OSHAWAC, PA, TSCA, TXAIR

Nepheline syenite, manganese zirconium brown (68187-64-4) [0-10%] TSCA

#### Regulatory CODE Descriptions

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RQ = Reportable Quantity

TSCA = Toxic Substances Control Act

CERCLA = Superfund clean up substance

EPCRAWPC = EPCRA Water Priority Chemicals

HWCRA = RCRA Hazardous Wastes

MASS = MA Massachusetts Hazardous Substances List

NJHS = NJ Right-to-Know Hazardous Substances

NRC = Nationally Recognized Carcinogens

OSHAWAC = OSHA Workplace Air Contaminants

PA = PA Right-To-Know List of Hazardous Substances

PRIPOL = Clean Water Act Priority Pollutants

SARA313 = SARA 313 Title III Toxic Chemicals

TOXICPOL = Clean Water Act Toxic Pollutants

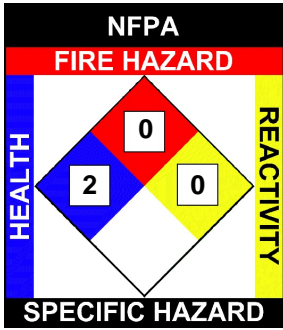
TXAIR = TX Air Contaminants with Health Effects Screening Level

PROP65 = CA Prop 65

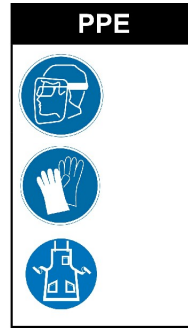
NFPA: Health = 2, Fire = 0, Reactivity = 0, Specific Hazard = n/a

HMIS III: Health = 2, Fire = 0, Physical Hazard = 0

HMIS PPE: D - Face Shield and Eye Protection, Gloves, Apron



HMIS	
HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	D



#### REGULATORY INFORMATION

##### UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

313 REPORTABLE INGREDIENTS: This product contains some or all of the following reportable ingredients; Copper, Chromium, Manganese and Nickel

TSCA (TOXIC SUBSTANCE CONTROL ACT)

"WARNING": This product contains the following chemical(s) known to the state of California to cause cancer: Nickel (metallic) CAS# 7440-02-0