



### Stainless Steel Flux Cored Wires

## 1 PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier:** Stainless Steel Flux Cored Wires  
**Common Name:** 2086, 216, 217, 2442, 305, 307L, 308, 308L, 308LT-1, 309, 309L, 309Mo, 309LMo, 309LT-1, 309LT-3, 310, 310L, 310HC, 312, 316, 316LT-1, 317L, 410, 410NiMo, 420, 430, 502, 505, 875, 880, 884, 888, 904L  
**SDS Number:** 10  
**Revision Date:** 5/29/2015  
**Version:** 2  
**Product Use:** Welding  
**Supplier Details:** WELD MOLD COMPANY  
 750 Rickett Road  
 Brighton, MI 48116

**Emergency:** 810-229-9521  
**Contact:** Kelley Henrikson  
**Phone:** 810-229-9521  
**Fax:** 810-229-9580  
**Email:** khenrikson@weldmold.com  
**Web:** www.weldmold.com

## 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 (SDS) before use.

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

**Route of Entry:** Eyes; Skin; Inhalation  
**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.

ACUTE 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	11-92.9%	Iron
7440-47-3	0-32%	Chromium
7440-02-0	0-25.5%	Nickel, metallic and alloys
7439-98-7	0.5-5%	Molybdenum: soluble and insoluble compounds
7439-95-4	0-0.3%	Magnesium
7440-03-1	0.3-1%	Niobium
7440-21-3	0-10%	Silicon
7439-93-2	0-2%	Lithium metal
7789-75-5	1-18%	Calcium fluoride (CaF <sub>2</sub> )
13463-67-7	0.5-10%	Titanium dioxide
12030-97-6	0-5%	Titanate (TiO <sub>3</sub> <sup>2-</sup> ), dipotassium
1344-28-1	1-4%	Aluminum oxide (Al <sub>2</sub> O <sub>3</sub> )
7631-86-9	1-5%	Silica, amorphous
7681-49-4	0.5-2.5%	Sodium fluoride
11108-67-1	0-7.5%	Ferro boron
12007-01-1	0-7%	Nickel boride (Ni <sub>2</sub> B)
7429-90-5	0-5.5%	Aluminum
7439-96-5	0.5-5%	Manganese
7440-50-8	0-3.5%	Copper
12034-36-5	0-1.5%	Sodium titanium oxide (Na <sub>2</sub> Ti <sub>3</sub> O <sub>7</sub> )

**EXPOSURE LIMITS**

<b><u>CHEMICAL NAME</u></b>	<b><u>OSHA PEL</u></b>	<b><u>ACGIH TLV</u></b>
Iron	10 mg/m <sup>3</sup> TWA (Total Dust)	10 mg/m <sup>3</sup> TWA (particles)
Chromium	1 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>
Nickel Metal	1 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>
Soluble compounds, as Mo	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Magnesium	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Niobium	NL	NL
Silicon	10 mg/m <sup>3</sup> * = Total dust, <=Respirable fraction	10 mg/m <sup>3</sup> Total Dust
Lithium metal	10 mg/m <sup>3</sup> TWA	3 mg/m <sup>3</sup> TWA
Calcium Fluoride	2.5 mg/m <sup>3</sup> As F	2.5 mg/m <sup>3</sup>
Titanium dioxide	10 mg/m <sup>3</sup> NL = Not Listed	10 mg/m <sup>3</sup>
Titanate, dipotassium	2.5 mg/m <sup>3</sup> (Dust) TWA	2.5 mg/m <sup>3</sup> TWA
Aluminum Oxide	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
Silica, amorphous	.01 mg/m <sup>3</sup>	0.05 mg/m <sup>3</sup>
Sodium fluoride	2.5 mg/m <sup>3</sup> as F	2.5 mg/m <sup>3</sup>
Ferro boron	NL	NL

Nickel boron	.2 mg/m3 (as Ni)	1 mg/m3 (as Ni)
Aluminum	15 mg/m3	10 mg/m3 NL
Manganese	5 mg/m3	1 mg/m3
Copper	1 mg/m3	1 mg/m3
Sodium Titanate	15 mg/m3	10 mg/m3 (5 mg/m3 resp.)
Zirconium oxide	5 mg/m3	10 mg/m3

#### 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 Protective Equipment:** HMIS PP, D | Face Shield and Eye Protection, Gloves, Apron

##### 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) [11-92.9%] TSCA

RQ(5000LBS), Chromium (7440-47-3) [0-32%] CERCLA, EPCRAWPC, HWRCRA, MASS, NJHS, NRC, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA, TXAIR

RQ(100LBS), Nickel, metallic and alloys (7440-02-0) [0-25.5%] CERCLA, EPCRAWPC, MASS, NJHS, NRC, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA

Molybdenum: soluble and insoluble compounds (7439-98-7) [0.5-5%] MASS, OSHAWAC, PA, TSCA, TXAIR

Niobium (7440-03-1) [0.3-1%] TSCA

Silicon (7440-21-3) [0-10%] MASS, OSHAWAC, PA, TSCA, TXAIR

Lithium metal (7439-93-2) [0-2%] MASS, PA, TSCA

Calcium fluoride (CaF<sub>2</sub>) (7789-75-5) [1-18%] TSCA

Titanium dioxide (13463-67-7) [0.5-10%] MASS, OSHAWAC, PA, TSCA, TXAIR

Titanate (TiO<sub>3</sub><sup>2-</sup>), dipotassium (12030-97-6) [0-5%] TSCA

Aluminum oxide (Al<sub>2</sub>O<sub>3</sub>) (1344-28-1) [1-4%] MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Silica, amorphous (7631-86-9) [1-5%] MASS, NJHS, PA, TSCA

RQ(1000LBS), Sodium fluoride (7681-49-4) [0.5-2.5%] CERCLA, CSWHS, MASS, PA, TSCA

Ferro boron (11108-67-1) [0-7.5%]

Nickel boride (Ni2B) (12007-01-1) [0-7%] TSCA

Aluminum (7429-90-5) [0-5.5%] EPCRAWPC, MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Manganese (7439-96-5) [0.5-5%] MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

RQ(5000LBS), Copper (7440-50-8) [0-3.5%] CERCLA, EPCRAWPC, MASS, NJHS, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA, TXAIR

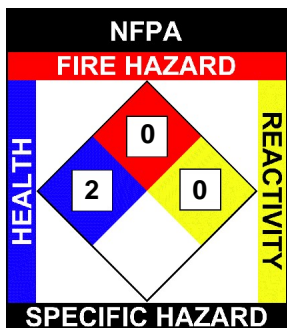
Sodium titanium oxide (Na2Ti3O7) (12034-36-5) [0-1.5%] TSCA

Regulatory CODE Descriptions

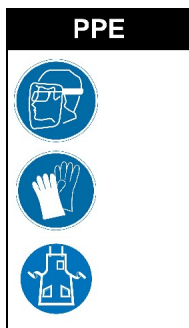
- RQ = Reportable Quantity
- TSCA = Toxic Substances Control Act
- CERCLA = Superfund clean up substance
- EPCRAWPC = EPCRA Water Priority Chemicals
- HWCRA = RCRA Hazardous Wastes
- MASS = MA Massachusetts Hazardous Substances List
- NJHS = NJ Right-to-Know Hazardous Substances
- NRC = Nationally Recognized Carcinogens
- OSHA = 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
- CSWHS = Clean Water Act Hazardous substances

**16 OTHER INFORMATION**

NFPA: Health = 2, Fire = 0, Reactivity = 0, Specific Hazard = n/a  
 HMIS III: Health = 2(Chronic), 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 STATUS: All components of this product are listed on or exempt from the TSCA inventory.

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