



Copper Base Filler Metals

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Copper Base Filler Metals
Common Name: 4007, 4010, 4040, 4046, 4150, 4160, 4200, 4250, 4300, 4320, 4320-C, 4333, 4325, 4940
SDS Number: 16
Revision Date: 5/29/2015
Version: 2
Product Use: Welding
Supplier Details: WELD MOLD COMPANY
750 Rickett Road
Brighton, MI 48116

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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
7439-96-5	0.25-14%	Manganese compounds and fumes (as Mn)
7440-02-0	0-6%	Nickel, metallic and alloys
7439-89-6	1.5-6%	Iron
7440-50-8	59.3-99%	Copper
7429-90-5	7-15%	Aluminum
7440-47-3	0.01-0.7%	Chromium
13775-53-6	7.5-18.1%	Cryolite
1344-43-0	0-1.1%	Manganese oxide (MnO)
598-62-9	0-3.6%	Manganese carbonate
7440-32-6	0-0.7%	Titanium
1344-28-1	0-4.3%	Aluminum oxide (Al2O3)
1309-37-1	0-0.24%	Hematite
1317-65-3	0-3.6%	Calcium carbonate
1302-78-9	0.2-0.7%	Bentonite
14808-60-7	0-1.26%	Silica sand
9004-34-6	0-0.73%	Cellulose
9004-32-4	0-0.35%	Sodium carboxime thylcellulose
7440-44-0	0-1.05%	Carbon
9004-62-0	0-0.43%	Hydroxyethyl cellulose
9005-36-1	0-0.23%	Potassium alginate
68476-25-5	0-0.84%	Feldspar-group minerals
112-60-7	0-0.35%	Tetraethylene glycol
7439-95-4	0-0.25%	Magnesium
1344-09-8	0-6.2%	Sodium silicate
1312-76-1	0-8%	Potassium silicate
7789-75-5	0-1.43%	Calcium fluoride (CaF2)
16389-88-1	0-1.6%	Dolomite (CaMg(CO3)2)
10213-79-3	0-0.18%	Sodium silicate pentahydrate
1633-05-2	0-0.18%	Strontium Carbonate
1309-38-2	0-1.56%	Magnetite (Fe3O4)

EXPOSURE LIMITS

<u>CHEMICAL NAME</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Manganese compounds	5 mg/m3	1 mg/m3
Nickel Metal	1 mg/m3	1.5 mg/m3
Iron	10 mg/m3 TWA (Total Dust)	10 mg/m3 TWA (particles)
Copper	1 mg/m3	1 mg/m3
Aluminum	15 mg/m3	10 mg/m3 NL
Chromium	1 mg/m3	0.5 mg/m3
Cryolite	2.5 mg/m3 TWA	2.5 mg/m3
Magnesium Oxide	15 mg/m3	10 mg/m3 (Fume)
Magnesium Carbonate	15 mg/m3	10 mg/m3
Titanium	10 mg/m3 NL = Not Listed	10 mg/m3
Aluminum Oxide	10 mg/m3	10 mg/m3
Hematite	10 mg/m3 TWA (Total Dust)	10 mg/m3 TWA (particles)

Calcium Carbonate	15 mg/m3	10 mg/m3
Bentonite	5 mg/m3 (Dust)	5 mg/m3
Silica sand	.01 mg/m3	0.05 mg/m3
Cellulose	10 mg/m3	10 mg/m3
Sodium Carboxime thylcellulose	NL	NL
Carbon	NL	NL
Hydroxyethyl cellulose	10 mg/m3	10 mg/m3
Potassium Alginate	15 mg/m3 (TDust), 5 mg/m3 (RDust)	10 mg/m3 (inhalable) 3 mg/m3 (respirable)
Feldspar	5 mg/m3 TWA	5 mg/m3 TWA
Tetraethylene glycol	NL	NL
Magnesium	15 mg/m3	10 mg/m3
Sodium Silicate	NL	NL
Potassium Silicate	NL	NL
Calcium Fluoride	2.5 mg/m3 As F	2.5 mg/m3
Dolomite	NL	NL
Sodium Silicate Pentahydrate	NL	NL
Strontium Carbonate	NL	NL
Magnetite	5 mg/m3 TWA	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 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.

10 STABILITY AND REACTIVITY

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.

11 TOXICOLOGICAL INFORMATION

REPRODUCTIVE TOXIN: Not known

MUTAGENICITY: Not known

12 ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No data available

13 DISPOSAL CONSIDERATIONS

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

14 TRANSPORT INFORMATION

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

Component (CAS#) [%] - CODES

Manganese compounds and fumes (as Mn) (7439-96-5) [0.25-14%] MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR
 RQ(100LBS), Nickel, metallic and alloys (7440-02-0) [0-6%] CERCLA, EPCRAWPC, MASS, NJHS, NRC, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA

Iron (7439-89-6) [1.5-6%] TSCA

RQ(5000LBS), Copper (7440-50-8) [59.3-99%] CERCLA, EPCRAWPC, MASS, NJHS, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA, TXAIR

Aluminum (7429-90-5) [7-15%] EPCRAWPC, MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

RQ(5000LBS), Chromium (7440-47-3) [0.01-0.7%] CERCLA, EPCRAWPC, HWRCRA, MASS, NJHS, NRC, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA, TXAIR

Cryolite (13775-53-6) [7.5-18.1%] TSCA

Manganese oxide (MnO) (1344-43-0) [0-1.1%] TSCA

Manganese carbonate (598-62-9) [0-3.6%] TSCA

Aluminum oxide (Al₂O₃) (1344-28-1) [0-4.3%] MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Calcium carbonate (1317-65-3) [0-3.6%] MASS, OSHAWAC, PA, TSCA, TXAIR

Silica sand (14808-60-7) [0-1.26%] MASS, NRC, OSHAWAC, PA, TSCA, TXAIR

Carbon (7440-44-0) [0-1.05%] TSCA

Sodium Silicate (1344-09-8) [0-6.2%] TSCA

Potassium Silicate (1312-76-1) [0-8%] TSCA

Calcium fluoride (CaF₂) (7789-75-5) [0-1.43%] TSCA

Dolomite (CaMg(CO₃)₂) (16389-88-1) [0-1.6%] TSCA

Magnetite (Fe₃O₄) (1309-38-2) [0-1.56%] TSCA

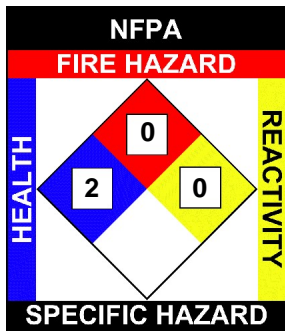
Regulatory CODE Descriptions

RQ = Reportable Quantity
 MASS = MA Massachusetts Hazardous Substances List
 NJHS = NJ Right-to-Know Hazardous Substances
 OSHAWAC = OSHA workplace Air Contaminants
 PA = PA Right-To-Know List of Hazardous Substances
 SARA313 = SARA 313 Title III Toxic Chemicals
 TSCA = Toxic Substances Control Act
 TXAIR = TX Air Contaminants with Health Effects Screening Level
 CERCLA = Superfund clean up substance
 EPCRAWPC = EPCRA water Priority Chemicals
 NRC = Nationally Recognized Carcinogens
 PRIPOL = Clean Water Act Priority Pollutants
 TOXICPOL = Clean Water Act Toxic Pollutants
 HWRCRA = RCRA Hazardous Wastes

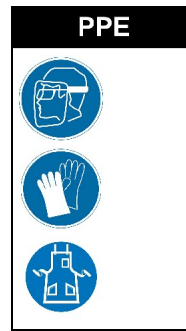
NFPA: Health = 2, Fire = 0, Reactivity = 0, Specific Hazard = n/a

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