



Nickel Base, Nickel Alloy Electrodes

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Nickel Base, Nickel Alloy Electrodes
Common Name: 4000, 4000A, 4000AC, 4000B, 4000BC, 4112, 4112C, 4132, 4132C, 4135C, 4182C, 4187, 4190, 4190C, 4141, 4411, ENiCrMo-10
SDS Number: 15
Revision Date: 5/7/2015
Version: 1
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
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	0.25-9%	Manganese compounds and fumes (as Mn)
7440-47-3	13-30.5%	Chromium
7440-02-0	29-92%	Nickel, metallic and alloys
7439-98-7	0.5-9%	Molybdenum: soluble and insoluble compounds
7440-03-1	1-4%	Niobium
7439-89-6	0.4-12%	Iron
7440-50-8	0.5-30%	Copper
7440-32-6	0.2-4%	Titanium
7429-90-5	0.2-1%	Aluminum
1317-65-3	4-14%	Calcium carbonate
13463-67-7	3-14%	Titanium dioxide
15096-52-3	3-20%	Sodiumaluminum flouride (as F)
1302-78-9	0.5-2.5%	Bentonite
9004-32-4	0.5-4%	Cellulose, carboxymethyl ether, sodium salt
1312-76-1	2-10%	Silicic acid, potassium salt
1344-09-8	0.5-10%	Silicic acid, sodium salt

EXPOSURE LIMITS

<u>CHEMICAL NAME</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Manganese compounds	5 mg/m3	1 mg/m3
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
Copper	1 mg/m3	1 mg/m3
Aluminum	15 mg/m3	10 mg/m3
Calcium Carbonate (limestone)	15 mg/m3	2 mg/m3
Titanium dioxide	10 mg/m3 NL = Not Listed	10 mg/m3
Sodium Silicate	NL	NL

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) [0.25-9%] MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

RQ(5000LBS), Chromium (7440-47-3) [13-30.5%] CERCLA, EPCRAWPC, HWRCRA, MASS, NJHS, NRC, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA, TXAIR

RQ(100LBS), Nickel, metallic and alloys (7440-02-0) [29-92%] CERCLA, EPCRAWPC, MASS, NJHS, NRC, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA

Molybdenum: soluble and insoluble compounds (7439-98-7) [0.5-9%] MASS, OSHAWAC, PA, TSCA, TXAIR

Niobium (7440-03-1) [1-4%] TSCA

Iron (7439-89-6) [0.4-12%] TSCA

RQ(5000LBS), Copper (7440-50-8) [0.5-30%] CERCLA, EPCRAWPC, MASS, NJHS, OSHAWAC, PA, PRIPOL, SARA313, TOXICPOL, TSCA, TXAIR

Titanium (7440-32-6) [0.2-4%] TSCA

Aluminum (7429-90-5) [0.2-1%] EPCRAWPC, MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Calcium carbonate (1317-65-3) [4-14%] MASS, OSHAWAC, PA, TSCA, TXAIR

Titanium dioxide (13463-67-7) [3-14%] MASS, OSHAWAC, PA, TSCA, TXAIR

Sodiumaluminum flouride (as F) (15096-52-3) [3-20%] TSCA

Bentonite (1302-78-9) [0.5-2.5%] TSCA

Cellulose, carboxymethyl ether, sodium salt (9004-32-4) [0.5-4%] TSCA

Silicic acid, potassium salt (1312-76-1) [2-10%] TSCA

Silicic acid, sodium salt (1344-09-8) [0.5-10%] TSCA

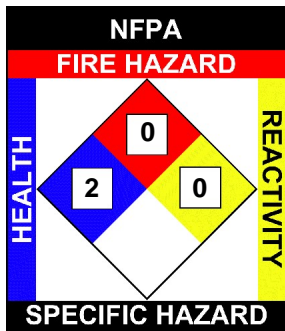
Regulatory CODE Descriptions

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
 HWRCRA = RCRA Hazardous Wastes
 NRC = Nationally Recognized Carcinogens
 PRIPOL = Clean Water Act Priority Pollutants
 TOXICPOL = Clean Water Act Toxic Pollutants

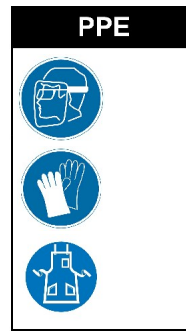
NFPA: Health = 2, Fire = 0, Reactivity = 0, Specific Hazard = n/a

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