

# Safety Data Sheet: ARC-BRAZE ELECTRODE

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## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** ARC-BRAZE ELECTRODE  
**Recommended use** ARC welding  
**Information on Manufacturer**  
X-ERGON by Partsmaster, Div of NCH Corp.  
P.O. Box 655326  
Dallas, TX 75265-5326

**Product Code** 15741001  
**Chemical nature** Inorganic solid blend  
**Emergency Telephone Number**  
CHEMTREC® 800-424-9300

## 2. HAZARD IDENTIFICATION

**Color** gray

**Physical State** Solid

**Odor** No information available

### GHS

#### Classification

##### Physical Hazards

None

##### Health Hazard

Acute Oral Toxicity  
Acute Dermal Toxicity  
Skin Corrosion/Irritation  
Specific target organ systemic toxicity (repeated exposure)

Category 4  
Category 5  
Category 3  
Category 1

##### Other hazards

None

### Labeling

#### Signal Word

**DANGER**



#### Hazard Statements

H302 - Harmful if swallowed  
H313 - May be harmful in contact with skin  
H316 - Causes mild skin irritation  
H372 - Causes damage to organs through prolonged or repeated exposure

#### Precautionary Statements

P260 - Do not breathe dust or fume  
P270 - Do not eat, drink or smoke when using this product  
P264 - Wash face, hands and any exposed skin thoroughly after handling.  
P312 - Call a physician if unwell.  
P301+ P312 - IF SWALLOWED: Call a physician if unwell  
P330 - Rinse mouth  
P332 + P313 - If skin irritation occurs, get medical attention.  
P273 - Avoid release to the environment  
P501 - Dispose of contents and container to an approved waste disposal plant.

86 % of the mixture consists of ingredient(s) of unknown toxicity

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Copper	7440-50-8	55-65
Sodium aluminum fluoride	15096-52-3	10-20
Tin	7440-31-5	1-10
Potassium kryolith	13775-52-5	1-10
Calcium carbonate	1317-65-3	1-10
Sodium fluoride	7681-49-4	1-11
Sodium silicate	1344-09-8	1-10
Bentonite	1302-78-9	1-10
Nickel	7440-02-0	.1-.5

## 4. FIRST AID MEASURES

<b>General advice</b>	If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
<b>Skin Contact</b>	In case of contact, immediately flush skin with soap and plenty of water. If skin irritation persists, call a physician.
<b>Inhalation</b>	Remove person to fresh air. If signs/symptoms continue, get medical attention.
<b>Ingestion</b>	Rinse mouth.
<b>Notes to physician</b>	Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

<b>Flash Point</b>	The product is not flammable	<b>Method</b>	Not applicable
<b>Upper</b>	No data available	<b>Lower</b>	No data available

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**Specific hazards arising from the chemical**

Arcs and sparks can ignite combustibles and flammable products. See American National Standard Z49.1; Safety in Welding and Cutting published by The American Welding Society . Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes . .

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

<b>NFPA</b>	<b>Health 2</b>	<b>Flammability 0</b>	<b>Instability 0</b>
<b>HMIS</b>	<b>Health 2</b>	<b>Flammability 0</b>	<b>Instability 0</b>

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	Wear appropriate protective clothing. Avoid creating dusty conditions. Transfer solid into a properly labeled container for re-use or disposal. If necessary, wash area with water and pick up wash water for disposal.
<b>Environmental Precautions</b>	Prevent product from contaminating soil or from entering sewage, drainage systems, and bodies of water . Do not flush into surface water or sanitary sewer system.
<b>Methods for Containment</b>	Pick up and arrange disposal without creating dust.
<b>Methods for Cleaning Up</b>	Shovel or vacuum any spilled material into a suitable container. Alloy wastes are normally collected to recover metal value .
<b>Neutralizing Agent</b>	Not applicable.

**7. HANDLING AND STORAGE**

<b>Handling</b>	Do not eat, drink or smoke when using this product. Ensure adequate ventilation.			
<b>Storage</b>	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.			
<b>Storage Temperature</b>	<b>Minimum</b>	No information available	<b>Maximum</b>	No information available
<b>Storage Conditions</b>	<b>Indoor</b>	X	<b>Outdoor</b>	<b>Heated</b> <b>Refrigerated</b>

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH
Copper	TWA: 0.2 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	IDLH: 100 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>
Sodium aluminum fluoride	TWA: 2.5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup>	IDLH: 250 mg/m <sup>3</sup> TWA: 2.5 mg/m <sup>3</sup>
Tin	TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	IDLH: 100 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>
Potassium kryolith	No data available	No data available	No data available
Calcium carbonate	No data available	TWA: 15 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>
Sodium fluoride	TWA: 2.5 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup>	IDLH: 250 mg/m <sup>3</sup> TWA: 2.5 mg/m <sup>3</sup>
Sodium silicate	No data available	No data available	No data available
Bentonite	TWA: 1 mg/m <sup>3</sup>	No data available	No data available
Nickel	TWA: 1.5 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> TWA: 0.015 mg/m <sup>3</sup>

<b>Engineering Measures</b>	Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gases below the TLV's in the worker's breathing zone and in the general area. Train the worker to keep his head out
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	of the fumes .
<b>Personal Protective Equipment</b>	
<b>Eye/Face Protection</b>	Wear a helmet or use face shield with filter lens of appropriate shade number (SEE ANSI/ASCZ49.1) provide protective screen and flash goggles, if necessary, to shield others. As a rule of thumb, start a shade that is too dark to see the weld zone. Then go next lighter shade which gives sufficient view of the weld zone .
<b>Skin Protection</b>	Welder's leather gloves, Wear fire/flame resistant/retardant clothing.
<b>Respiratory Protection</b>	Use a NIOSH/MSHA approved or equivalent fume respirator or air supplied respirator when welding in confined spaces, or where local exhaust or ventilation does not keep exposure below TLV's .
<b>General Hygiene Considerations</b>	Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State</b>	Solid	<b>Viscosity</b>	Not applicable
<b>Color</b>	gray	<b>Odor</b>	No information available
<b>Odor Threshold</b>	Not applicable	<b>Appearance</b>	Textured black paste
<b>pH</b>	Not applicable	<b>Specific Gravity</b>	9
<b>Evaporation Rate</b>	Not applicable	<b>Percent Volatile (Volume)</b>	No information available
<b>VOC Content (%)</b>	No information available	<b>Vapor Pressure</b>	Not applicable
<b>Vapor Density</b>	Not applicable	<b>Solubility</b>	Insoluble
<b>n-Octanol/Water Partition</b>	No data available	<b>Melting Point/Range</b>	1560 - 850 °F / 849 - °C
<b>Decomposition Temperature</b>	No data available	<b>Boiling Point/Range</b>	4703 °F / 2595 °C
<b>Flammability (solid, gas)</b>	No data available		
<b>Flash Point</b>	The product is not flammable	<b>Method</b>	Not applicable
<b>Autoignition Temperature</b>	No information available.		
<b>Upper</b>	No data available		
<b>Lower</b>	No data available		

**10. STABILITY AND REACTIVITY**

<b>Chemical Stability</b>	Stable under normal conditions
<b>Conditions to Avoid</b>	Exposure to air or moisture over prolonged periods
<b>Incompatible Products</b>	Incompatible with oxidizing agents, Strong acids.
<b>Hazardous Decomposition Products</b>	Fumes and gasses produced by welding, brazing and similar processes cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, the procedures and the filler metal being used. Other conditions which also influence the composition and quantity of fumes and gases to which the worker may be exposed include: coatings on the metal being welded, the number of welders and the volume of the work space, the quality and amount of ventilation used, the position of the welder's head in relation to the fume plume, as well as the presence of contaminants in the atmosphere when the filler metal is consumed. The fume and gas decomposition products generated are different in percent and form the product ingredients listed in Section III. The products formed in normal operation include those originating from the volatilization, reaction and oxidation of the filler metal, the metal being welded, the coatings, etc. as noted above. One recommended way to determine the composition and quality of fumes and gases to which workers are exposed is to take an air sample inside the welders helmet if worn or in the workers breathing zone. See ANSI/AWS F1.1 "Method For Sampling Airborne Particles Generated By Welding And Allied Processes" available from the American Welding Society, P.O. Box 35140, Miami, FL 33135
<b>Possibility of Hazardous Reactions</b>	None under normal processing

**11. TOXICOLOGICAL INFORMATION**

**Product Information**

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009):

<b>Oral LD50</b>	81.74
<b>Dermal LD50</b>	153.13
<b>Inhalation LC50</b>	
<b>Gas</b>	No information available
<b>Mist</b>	No information available
<b>Vapor</b>	No information available
<b>Principle Route of Exposure</b>	Inhalation
<b>Primary Routes of Entry</b>	Inhalation

**Acute Effects**

**Eyes**

Causes eye irritation. Welding arc may damage eyes .

**Skin**

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

**Inhalation**

Welding fumes may result in discomfort such as: dizziness, nausea, or dryness or irritation of nose, throat, or eyes. Fumes can aggravate asthma, bronchial conditions, or allergies. Individuals with allergies or impaired respiratory function may have symptoms worsen by exposure to welding fumes . May cause allergic respiratory reaction.

**Ingestion**

May be harmful if swallowed.

**Chronic Toxicity**

Harmful if inhaled and may cause delayed lung injury. Repetitive exposure to nickel oxides may lead to lung fibrosis or pneumoconiosis. Soreness and itchiness of the nose and changes in skin color and/or appearance may also result. Nickel compounds are on the IARC list as posing a carcinogenic risk to humans. OSHA (29 CFR 1910.120) lists nickel as possible carcinogen . Fume may cause Wilson's disease in some individuals with a rare inherited metabolic disorder characterized by retention of copper in the liver, brain, kidney and corneas. Wilson's disease, if untreated can result in liver failure . Repeated contact may cause allergic reactions in very susceptible persons.

**Target Organ Effects**

Respiratory system, Central nervous system, Kidney, Liver, Lungs, Nasal Cavities, skeletal system, Blood.

**Aggravated Medical Conditions**

Respiratory disorders, Allergies, Skin disorders, Respiratory system, Central nervous system, Kidney disorders, Liver disorders.

Component Information

**Acute Toxicity**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Copper	no data available	no data available	no data available	no data available	no data available
Sodium aluminum fluoride	> 5 g/kg ( Rat )	no data available	no data available	no data available	no data available
Tin	no data available	no data available	no data available	no data available	no data available
Potassium kryolith	no data available	no data available	no data available	no data available	no data available
Calcium carbonate	= 6450 mg/kg ( Rat )	no data available	no data available	no data available	no data available
Sodium fluoride	= 52 mg/kg ( Rat )	= 175 mg/kg ( Rat )	no data available	no data available	no data available
Sodium silicate	= 1153 mg/kg ( Rat )	> 4640 mg/kg ( Rabbit )	no data available	no data available	no data available
Bentonite	> 5000 mg/kg ( Rat )	no data available	no data available	no data available	no data available
Nickel	> 9000 mg/kg ( Rat )	no data available	no data available	no data available	no data available

**Chronic Toxicity**

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Copper	no data available	no data available	no data available	no data available	eyes,kidneys,liver,respiratory system,skin
Sodium aluminum fluoride	no data available	no data available	no data available	no data available	eyes,CNS,respiratory system,skeleton,kidneys,s
Tin	no data available	no data available	no data available	no data available	eyes,respiratory system,skin
Potassium kryolith	no data available	no data available	no data available	no data available	no data available
Calcium carbonate	no data available	no data available	no data available	no data available	eyes, respiratory system, skin
Sodium fluoride	no data available	no data available	no data available	no data available	eyes,CNS,respiratory system,skeleton,kidneys,s
Sodium silicate	no data available	no data available	no data available	no data available	kidneys
Bentonite	no data available	no data available	no data available	no data available	no data available
Nickel	no data available	no data available	no data available	no data available	nasal cavities, lungs, skin (lung and nasal cancer) lungs, skin, nasal cavities (lung and nasal cancer)

**Carcinogenicity**

Component	ACGIH	IARC	NTP	OSHA	Other
Copper	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium aluminum fluoride	not applicable	not applicable	not applicable	not applicable	not applicable
Tin	not applicable	not applicable	not applicable	not applicable	not applicable
Potassium kryolith	not applicable	not applicable	not applicable	not applicable	not applicable
Calcium carbonate	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium fluoride	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium silicate	not applicable	not applicable	not applicable	not applicable	not applicable
Bentonite	not applicable	not applicable	not applicable	not applicable	not applicable
Nickel	not applicable	Group 1 Group 2B	Known Reasonably Anticipated	X	not applicable

12. ECOLOGICAL INFORMATION

Product Information

No information available.

**Persistence and Degradability** No information available  
**Bioaccumulation** No information available  
**Mobility** No information available

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Copper	EC50 0.0426 - 0.0535 mg/L Pseudokirchneriella subcapitata 72 h EC50 0.031 - 0.054 mg/L Pseudokirchneriella subcapitata 96 h	LC50 0.0068 - 0.0156 mg/L Pimephales promelas 96 h LC50 < 0.3 mg/L Pimephales promelas 96 h LC50 = 0.2 mg/L Pimephales promelas 96 h LC50 = 0.052 mg/L Oncorhynchus mykiss 96 h LC50 = 1.25 mg/L Lepomis macrochirus 96 h LC50 = 0.3 mg/L Cyprinus carpio 96 h LC50 = 0.8 mg/L Cyprinus carpio 96 h LC50 = 0.112 mg/L Poecilia reticulata 96 h	no data available	EC50= 0.03 mg/L 48 h	N/A
Sodium aluminum fluoride	no data available	no data available	no data available	no data available	N/A
Tin	no data available	no data available	no data available	no data available	N/A
Potassium kryolith	no data available	no data available	no data available	no data available	N/A
Calcium carbonate	no data available	no data available	no data available	no data available	N/A
Sodium fluoride	EC50 = 272 mg/L Pseudokirchneriella subcapitata 96 h EC50 = 850 mg/L Desmodesmus subspicatus 72 h	LC50 > 530 mg/L Lepomis macrochirus 96 h LC50 = 830 mg/L Lepomis macrochirus 96 h LC50 38 - 68 mg/L Oncorhynchus mykiss 96 h LC50 = 180 mg/L Pimephales promelas 96 h	no data available	EC50= 338 mg/L 48 h EC50= 98 mg/L 48 h	N/A
Sodium silicate	no data available	LC50 301 - 478 mg/L Lepomis macrochirus 96 h LC50 = 3185 mg/L Brachydanio rerio 96 h	no data available	EC50= 216 mg/L 96 h	N/A
Bentonite	no data available	LC50 8.0 - 19.0 g/L Salmo gairdneri 96 h LC50 = 19000 mg/L Oncorhynchus mykiss 96 h	no data available	no data available	N/A
Nickel	EC50 = 0.18 mg/L Pseudokirchneriella subcapitata 72 h EC50 0.174 - 0.311 mg/L Pseudokirchneriella subcapitata 96 h	LC50 > 100 mg/L Brachydanio rerio 96 h LC50 = 1.3 mg/L Cyprinus carpio 96 h LC50 = 10.4 mg/L Cyprinus carpio 96 h	no data available	EC50> 100 mg/L 48 h EC50= 1 mg/L 48 h	N/A

**Persistence and Degradability** No information available.  
**Bioaccumulation** No information available.  
**Mobility** No information available.

13. DISPOSAL CONSIDERATIONS

**Product Disposal** Dispose of in accordance with local regulations.  
**Container Disposal** Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

**DOT** Not regulated  
**TDG** Not regulated  
**ICAO** Not regulated  
**IATA** Not regulated  
**IMDG/IMO** Not regulated

15. REGULATORY INFORMATION

**Inventories**

TSCA Complies  
 DSL Does not Comply  
 U.S. Federal Regulations

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Copper	7440-50-8	55-65	1.0
Nickel	7440-02-0	.1-5	0.1

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	No	No	No

**CERCLA**

Component	Hazardous Substances RQs	CERCLA EHS RQs
Copper	5000 lb	Not applicable
Sodium aluminum fluoride	Not applicable	Not applicable
Tin	Not applicable	Not applicable
Potassium kryolith	Not applicable	Not applicable
Calcium carbonate	Not applicable	Not applicable
Sodium fluoride	1000 lb	Not applicable
Sodium silicate	Not applicable	Not applicable
Bentonite	Not applicable	Not applicable
Nickel	100 lb	Not applicable

**U.S. State Regulations**

**California Proposition 65** This product contains the following Proposition 65 chemicals

Component	CAS-No	California Prop. 65
Nickel	7440-02-0	carcinogen

**16. OTHER INFORMATION**

Prepared By Christopher Drogin  
 Supersedes Date 05/21/2012  
 Issuing Date 06/05/2013  
 Reason for Revision No information available.  
 Glossary No information available.  
 List of References. No information available.

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