



**I – Identification of the Substance and of the Company**

<p><b>SUPPLIER:</b> RMO, Inc. 650 W. Colfax Ave. Denver, CO 80204 303-592-8200</p> <p>Emergency Information Chemtrec: 800-424-9300 Chemtrec International: 202-483-7616</p>	<p><b>Trade Name and Synonyms –</b> Carbon Tip Welding Electrodes</p> <p><b>Description:</b> Carbon Tip Welding Electrodes</p>
<p><b>Product Grade / Name:</b> CARBON ARC ELECTRODES</p>	

**II – Composition / Information on Ingredients**

**\*IMPORTANT:** This section covers materials from which this product is manufactured.

Ingredients	% Range	CAS Number	OSHA PEL	ACGIH TLV
Copper (Copper Fume)	30	7440-50-8	0.1 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>
Carbon & Graphite	40	7782-42-5	3.5 mg/m <sup>3</sup>	3.5 mg/m <sup>3</sup>
Alkali Halides	6			Note 1
Alkali Silicates	4			Note 2
Rare Earth Oxides	20			Note 3

**Note 1:** Principally from the group of chlorides, fluorides, bromides and iodides of sodium, potassium and lithium.

**Note 2:** Principally from the group of complex silicon oxides compounds of sodium and potassium.

**Note 3:** Principally from the group of complex oxides of lanthanum, cerium, praseodymium, and neodymium.

Traces of thorium and uranium of less than 0.25% can be associated with those compounds.

**III – Hazards Identification**

Health and physical hazards associated with carbon electrodes are attributable to the fumes generated when the electrodes are used and consumed. Fumes and gases can be dangerous to your health. Arc rays can injure eyes and burn skin. Electric shock can kill.

<b>CAS Number:</b>	<b>Chemical Name:</b>	<b>%:</b>
7440-50-8	Copper	30

**Effect of Acute / Chronic Exposure:**

**Fume:** Bronchitis, lung deposits and tissue damage which may be irreversible.

**Exposure to ultra-violet arc rays:** Can result in keratoconjunctivitis, causing inflammation, blurred vision, headache, sunburn.

**Carcinogenicity:** Not known.

**Signs and Symptoms of Exposure:** Breathing difficulty, headache, nausea, dryness or irritation of nose, throat, and eyes. Burning sensation of skin or eyes. Unconsciousness.

**Medical Conditions Generally Aggravated by Exposure:** Respiratory problems, erythmas.

#### IV – First Aid Measures

Eyes	Irrigate to remove particles.
Electrical Shock & Burns	Deactivate power. Administer CPR as indicated. Cover burns with sterile dressing. Call physician.
Radiant Energy	Can produce "flash" burns of eyes and skin. See a physician.
Inhalation / Gas, Fumes, Dust	Overexposure can cause personal injury. Remove to fresh air. If breathing impaired, assisted respiration may be required.
Noise	Overexposure can damage hearing. Wear hearing protection.

Threshold Limit Value: See Section II – Welding fume (total psecticule NOC) TWA=5mg/m3.

#### V – Fire Fighting Measures

**Extinguishing Media:** Will not burn, use water to cool.

#### VI – Accidental Release Measures

Sweep or pick up by mechanical means.

**Waste disposal method:** Normal environmentally acceptable, industrial waste disposal. Land fill, burial, etc.

#### VII – Handling and Storage

Store in a dry area. Electrodes exposed to moisture may explode violently if used. Employees should be trained to keep their heads away from fumes. Monitor air to ensure acceptable exposures. Avoid electric shock by maintaining a dry work area. Welding arc can ignite combustibles and flammables in surrounding areas (keep work area clean and dry).

**Special Precautions (see note):** Precautions to be taken in handling and storing: Arcs and sparks during arc gouging use could be the source of ignition of combustible materials. Prevent fires.

**Other Precautions:** Arc fumes – The compositions and quantity are dependent alloy, electrode, number of operators, arc fumes, ventilation present ant the relationship of operators head with respect to the fume plume, all affect the level of contaminates. When ventilation is questionable (see OSHA 19 CFR 1910.252 and ANSI A49.1 and E 11 – 76).

#### VIII – Exposure Controls / Personal Protection

**Ventilation:** Exhaust ventilation recommended. See OSHA 29CFR1910-252 ANSI A 49.1 Special Ventilation – IN confined areas local exhausts essential.

**Respiratory Protection:** Depending on use, condition and location. Use adequate ventilation or personal respiratory protection.

**Gloves:** Welding gloves recommended.

**Eye Protection:** Safety spectacles or goggles.

**Protective Equipment:** See ANSI A49.1 – Welding helmet, flames retardant clothing recommended – See A 5.3.

**Clothing:** Dark, substantial coverage – aprons, etc. suitable footwear for metal working.

**Work / Hygiene Practices:** Operator trained to avoid electric shock and UV ray exposure.

#### **IX – Physical and Chemical Properties**

**Appearance:** Bare and copper coated rods, all sizes and shapes.

**Odor:** No notable odor

**Vapor Pressure:** N/A

**Vapor Density:** N/A

**Evaporation Rate:** N/A

**Boiling Point:** N/A

**Freezing Point:** N/A

**pH:** N/A

**Specific Gravity:** N/A

**Solubility:** Not soluble

#### **X – Stability and Reactivity**

**Stability:**

Unstable ( ) Stable (X)

**Conditions to Avoid:** None currently known.

**Incompatibility:**

**Material to Avoid:** None.

**Hazardous Decomposition Products:** Under normal use ozone, copper oxide, carbon monoxide and oxides of material in Section II.

**Hazardous Polymerization:**

May Occur ( ) Will Not Occur (X)

**Conditions to Avoid:** None currently known.

#### **XI – Toxicological Information**

**Toxic Carbon:** Not known.

**Reproduction:** Not known.

**Carcinogenicity:** Not known.

#### **XII – Ecological Information**

No ecological effects are known.

#### **XIII – Disposal Considerations**

In accordance with Federal, State and Local Regulations.

#### **XIV – Transportation Information**

**Technical Shipping Name:** Not regulated

**Freight Class Bulk:** N/A

**Freight Class Package:** N/A

**Product Label:** N/A

**Hazard Class or Division:** Non-Hazardous

**Hazard Class Division Number:** Not Hazardous by DOT Regulations

#### **XV – Regulatory Information**

**SARA Title III Reporting Requirements:** Section 313 covers annual emission reporting on specific chemicals which are manufactured, processed or used at certain U.S. Industrial facilities. The mixture contains the following reportable constituents:

Copper. The specific chemical makeup and concentration by weight are provided in Section II.

**XVI – Other Information**

**Note:** While the information and recommendations set forth on this data sheet are believed to be accurate as received from our suppliers, RMO, Inc. makes no warranty with respect thereto and disclaims all liability from reliance thereon.