

Material Safety Data Sheets for Carbon Rod

Product Name: Carbon Rod

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1. Product Identification and Use

1.1 Product identifier: DC carbon arc electrodes

Chemical Formula: C

1.2 Product use: Arc metal removal

1.3 Company: Dynaweld Industrial Supplies Pty Ltd

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2. Hazardous Ingredients

Hazardous ingredients	RANGE (%)	CAS NUMBER	OSHA PEL	ACGIH TLV
Graphite, Synthetic	20-90*	7440-44-0	5mg/M3	3.5mg/M3
Graphite, Natural	20-90*	7782-42-5	15mppcf	2.5mg/M3
Copper	10-30	7440-50-8	0.1mg/M3	0.1mg/M3(fume)

Note: Information for Welding Fume 5mg/M3

Health and physical hazards associated with carbon arc electrodes are attributable to the fumes generated when the electrodes are used and consumed.

Qualitative analysis detected no trace of cadmium or mercury

3. Supplier Information

This product does contain toxic chemicals subject to the reporting requirements of the emergency planning and community right-to-know act of 1986 and of 40 CFR 372.

CAS Number	Chemical Name	%
7440-50-8	Copper	<30

This information must be included in all MSDSs that are copied and distributed for this product.

*Batch percentages very greatly depending upon availability.

4. Physical and Chemical properties

Physical state: Solid

Odor: None

Boiling Point/Range: 3000°C Min.

Melting Point/Range: Not available

Solubility in water: None

Carbon: 99.1%.

Ash Content: 0.8%

Water: 0.3%

Electrical Resistance : 16-17 $\mu \Omega .m$

Density: 1.57g/Cm³

Breaking Strength: 37MPa

Thickness of Copper Layer: 0.09mm

5. Measures for fire fighting

Flammability classification: Not classified.

Flash Point/Method: Not known, but very high!

Auto-Ignition Temperature: Not determined.

Flammable Limits: Lower: Not applicable

Upper: Not applicable

Extinguishing Media: Non-burning

Special Conditions to Avoid: None known

Hazardous products of Combustion: None known

Unusual Fire Hazards: None known

Firefighting procedures/instructions:

Treat the surrounding fire; this product is non-burning.

Properties that could increase fire or explosion hazard: None known.

6. Stability and reactivity

Chemical Stability: The product is stable under normal use conditions.

Reactivity: This material is not reactive.

Conditions to Avoid: Heat, sparks, flames, and other ignition sources; avoid heating above 290°C.

Incompatibility (materials to avoid): Strong oxidizers, fluorine, and peroxides.

7. Health hazard data

Potential Health Effects:

Eye: Dust may cause eye irritation

Skin Contact: Dust may cause skin irritation.

Inhalation: Dust is suspected as being possible inhalation hazards.

Ingestion: Not known

Chronic effects: A review of the literature does not show obvious long-term hazard.

Route of entry: U.V. exposure

Effects of acute/ chronic exposure to product: 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, and headache- "sunburn".

Toxicity: carbon: intravenous mouse; LD50: 440mg/kg, copper (fume): Human, Oral LDLo: 120ug/kg

Reproduction: carbon-Subcutaneous rat; TDLo: 167mg/kg (8D preg); Copper-Oral, rat; TDLo: 1520ug/kg (22w pre) TDLo: 1210ug/kg (35w pre)*

Carcinogen city: not currently listed

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, arrhythmias.

8. First-aid measures

Eyes: In case of contact, immediately flush eyes with copious amounts of flowing water for at least 15 minutes, retracting eyelids often.

Get medical attention immediately. Contact lenses should not be worn when working with this product.

Skin: Wash skin thoroughly with mild soap and water. Flush with warm water for 15 minutes.

Inhalation: If large amounts of the dust are inhaled, move the exposed person to fresh air at once. If symptoms persist contact physician.

Respiratory protection: air supplied or fume respirator should be used if ventilation is insufficient

Ingestion: Not known

<p>9. <u>Precautions for safe handling and use</u></p> <p>Leak and spill procedure: Sweep or pick up. Be alert to “ hot ends.”</p> <p>Waste disposal method: Solid landfills if local regulations allow.</p> <p>Precaution to be taken in handling and storing: Store in the containers in which the product is shipped, tightly sealed in dry area.</p> <p>Electrodes exposed to moisture may explode violently if used. Dry moist rods by baking at 300 degrees Fahrenheit for ten hours.</p>
<p>10. <u>Accidental Release Measures</u></p> <p>This product is not subject to "accidental release" in the form of normal use.</p>
<p>11. <u>Exposure restrictions and personal safety Protection</u></p> <p>Personal Protective Equipment (PPE):</p> <p>Eye/Face Protection: ANSI 87.1 approved safety glasses with side shield when sharpening these rods.</p> <p>Skin Protection: No particular protection needed when handling this material on an occasional basis.</p> <p>Respiratory Protection:</p> <p>For the occasional breaking of a rod, which might require "scoring", the surface to get a clean break, protection is not needed. But if some large number of rods was going to be broken in this way, then such an operation should be done in a chemical fume hood with exhaust.</p> <p>Other: None known</p>
<p>12. <u>Disposal considerations</u></p> <p>All recovered material should be packaged, transported and disposed of using good engineering practices. Disposal method must be in compliance with local, state, and federal regulations regarding health, air and water pollution.</p>
<p>13. <u>Transport information</u></p> <p>Proper Shipping Name: Not Regulated.</p> <p>Packing Group: Not Applicable.</p> <p>Labels: Not Regulated.</p> <p>Marine Pollutant: No information.</p>
<p>14. <u>Other information</u></p> <p>The preceding details are based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Existing laws and provisions are to be heeded by the recipient of our product at their own risk.</p>