



# SAFETY DATA SHEET

## Section 1: Product and Company Identification

*Product Identifier:* **PowerWeld Gouging Carbons**  
*Product Use:* Arc Air Gouging  
*Item Code:* DC\_; DCF\_; DCJ\_  
*Supplier Name:* PowerWeld Inc.  
*Supplier Address:* 2501 Beech Street  
Valparaiso, IN 46383  
*Supplier Web Address:* www.powerweldinc.com  
*Supplier Phone:* 219-462-8700  
1-800-826-9073  
*Emergency Phone:* CHEMTREC (800) 424-9300  
*Prepared By:* PowerWeld Inc.  
*Preparation Date:* 18 January 2016

## Section 2: Hazard Identification

*Classification:* Not classified  
*Label Elements:* See label  
*Other Hazards:* Product is not hazardous as shipped, but may be hazardous during the gouging process: overexposure to fumes and gases may be detrimental to health; beware of spatter, hot metal and slag as this can burn skin and cause fire; excessive noise is likely; arc rays can injure eyes and burn skin; electric shock can kill; avoid touching live electrical parts.

## Section 3: Composition/Information on Hazardous Ingredients

HAZARDOUS INGREDIENTS	CAS NUMBER	APPROXIMATE CONCENTRATION (%)
Fixed Carbon [graphite] (C)	7440-44-0 [7782-42-5]	>95
Copper (Cu)	7440-50-8	<5

## Section 4: First-aid Measures

*Inhalation:* Inhalation may be the most common cause of overexposure due to the fumes. Large amounts of fumes will cause irritation of the nose, eyes and skin. Move from the area that has any fumes to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and transport to nearest medical facility for additional treatment.

*Ingestion:* Not an expected route of exposure. Rinse mouth completely and drink a cup of water if conscious; obtain medical assistance when needed.

*Eye Contact:* If arc flash or burns occur, obtain medical assistance. Large exposure to welding fumes may cause irritation to the eyes. Immediately flush upper and lower eyelids with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling persists, visit nearest medical facility for additional treatment.

*Skin Contact:*

Large exposure to welding fumes may cause irritation to skin. If burns occur, flush with clean cool water for 15 minutes; obtain medical assistance when needed.

*NOTE: In all severe cases, contact physician immediately. Local telephone operators can provide number of regional poison control centre.*

---

## Section 5: Fire-fighting Measures

---

<i>Flammable:</i>	No
<i>Means of Extinction:</i>	Not applicable
<i>Auto-ignition Temperature:</i>	Not applicable
<i>Hazardous Combustion Products:</i>	Not applicable
<i>Explosion Data Sensitivity to Mechanical Impact:</i>	Not applicable
<i>Explosion Data Sensitivity to Static Discharge:</i>	Not applicable
<i>Special Equipment:</i>	This product as shipped is non-flammable; however, gouging should not take place in the presence of flammable materials, vapours, tanks, pipes, or containers that have held flammable substances unless otherwise certified as safe.
<i>Precautions for Fire Fighters:</i>	Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece. Shield personnel to protect from venting, rupturing or bursting cans. Move containers from fire area if it can be done without risk. Water spray may be useful in cooling equipment and cans exposed to heat and flame.

---

## Section 6: Accidental Release Measures

---

<i>Protective Equipment:</i>	See section 8
<i>Emergency Procedures:</i>	Product as shipped has no hazards.
<i>Leak or Spill Procedure:</i>	Product can be swept and removed, remaining alert to the possibility of hot ends if recently used in the gouging process.

---

## Section 7: Handling and Storage

---

<i>Handling Procedures and Equipment:</i>	No special equipment is required to handle product as shipped. Handle in accordance with good industrial hygiene and safety practices. Do not eat, drink or smoke when using this product. Wash hands thoroughly before breaks and at the end of the workday.
<i>Storage Requirements:</i>	Store in a cool, dry and low humid location as moist electrodes may shatter violently if used (dry moist electrodes by baking at 300°F for 10 hours).
<i>Incompatibilities:</i>	None known

---

## Section 8: Exposure Controls/Personal Protection

---

*Exposure Limits:*

HAZARDS	CAS NUMBER	TLV-TWA
Copper (Cu)	7440-50-8	0.2 mg/m <sup>3</sup> (fume), 1.0 mg/m <sup>3</sup> (dust)
Graphite	7440-44-0	2 mg/m <sup>3</sup> (resp)
Carbon Dioxide (CO <sub>2</sub> )	124-38-9	5000 ppm
Carbon Monoxide (CO)	630-08-0	25 ppm
Nitrogen Dioxide (NO <sub>2</sub> )	10102-44-0	0.2 ppm
Ozone (O <sub>3</sub> )	10028-15-6	-

*Engineering Controls:*

General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits; respiratory protection should be used during the arc gouging process. Arcs and sparks during arc gouging can be source of ignition of combustible materials. Take precautions to prevent fires.

*Personal Protective Equipment:*

**Respiratory:** A properly fitting fume respirator or air supplied respirator should be used where local exhaust and/or ventilation does not keep exposure below threshold limits indicated above.

**Hands:** For use during the arc gouging process, properly fitted and certified gloves (ie./ leather welding gloves) are recommended to prevent injury from sparks and electric shock.

**Eyes:** An approved welding helmet or face shield with a filter lens shade 12-14 or higher is recommended. Other persons around the workspace should also be protected by shaded welding screens and eyewear if necessary.

**Skin:** Approved protection (ie./ welders gloves, apron, sleeves, jacket, etc.) should be worn to prevent injury from sparks and electrical shock.

## Section 9: Physical and Chemical Properties

<i>Physical State:</i>	Solid (stick/bar)
<i>Odor and Appearance:</i>	Odorless copper colored rod with black tips
<i>Odor Threshold (ppm):</i>	Not applicable
<i>pH:</i>	Not applicable
<i>Melting Point:</i>	Not applicable
<i>Freezing Point:</i>	Not applicable
<i>Boiling Point:</i>	Not applicable
<i>Flashpoint:</i>	Not applicable
<i>Upper Flammable Limit (% by volume):</i>	Not applicable
<i>Lower Flammable Limit (% by volume):</i>	Not applicable

## Section 10: Stability and Reactivity

<i>Chemical Stability:</i>	Stable
<i>Possible Hazardous Reactions:</i>	None known
<i>Conditions to Avoid:</i>	None under normal conditions
<i>Materials to Avoid (Incompatibilities):</i>	None known
<i>Conditions of Reactivity:</i>	Not available
<i>Hazardous Decomposition By-Products:</i>	When burning – CO <sub>2</sub> , CO and traces of copper fumes (Ozone, Nitrogen Oxide from electric and UV rays)

## Section 11: Toxicological Information

<i>Skin Contact:</i>	Arc rays can burn skin; skin cancer has been reported.
<i>Skin Absorption:</i>	Not applicable
<i>Eye Contact:</i>	Arc rays can injure eyes.
<i>Inhalation:</i>	Inhalation is the most likely route of exposure; refer to “Effects of Acute Exposure” and “Effects of Chronic Exposure” below.
<i>Ingestion:</i>	Unlikely due to the form of product.

<i>Effects of Acute Exposure:</i>	Radiant energy can produce flash burns of eyes and skin. Electric shock can kill. Over exposure to fumes can cause personal injury. Symptoms can vary according to gouging process. These may include breathing difficulty, headache, nausea, dryness or irritation of nose, throat, eyes, burning sensation of skin or eyes, unconsciousness.
<i>Effects of Chronic Exposure:</i>	Overexposure or prolonged inhalation may cause bronchitis, lung deposits and tissue damage which may be irreversible. Exposure to ultra-violet arc rays can result in keratosis-conjunctivitis causing inflammation, blurred vision, headache, sunburn.
<i>Irritancy of Product:</i>	Not available
<i>Sensitization to Product:</i>	May cause sensitisation by skin contact.
<i>Carcinogenicity:</i>	Welding fumes may be carcinogenic to humans.
<i>Reproductive Effects:</i>	Not available
<i>Toxicological Data:</i>	Not available

## Section 12: Ecological Information

<i>Aquatic and Terrestrial Toxicity:</i>	The welding process can affect the environment if fume is released directly into the atmosphere. Residues from welding consumables could degrade and accumulate into soils and ground water.												
	<u>Acute fish toxicity</u>												
	<table> <tr> <td><i>LC50 Fish 96h</i></td> <td>Manganese: 2.91 mg/l</td> </tr> <tr> <td></td> <td>Aluminum oxide: &gt;100 mg/l Salmo trutta</td> </tr> <tr> <td><i>LC50 Algae 72h</i></td> <td>Manganese: 0.55 mg/l</td> </tr> <tr> <td></td> <td>Aluminum oxide: &gt;100 mg/l Selenastrum capricornatum (green algae)</td> </tr> <tr> <td><i>EC50 Daphnia 48h</i></td> <td>Manganese: 5.2 mg/l</td> </tr> <tr> <td></td> <td>Aluminum oxide: &gt;100 mg/l Daphnia magna (Water flea)</td> </tr> </table>	<i>LC50 Fish 96h</i>	Manganese: 2.91 mg/l		Aluminum oxide: >100 mg/l Salmo trutta	<i>LC50 Algae 72h</i>	Manganese: 0.55 mg/l		Aluminum oxide: >100 mg/l Selenastrum capricornatum (green algae)	<i>EC50 Daphnia 48h</i>	Manganese: 5.2 mg/l		Aluminum oxide: >100 mg/l Daphnia magna (Water flea)
<i>LC50 Fish 96h</i>	Manganese: 2.91 mg/l												
	Aluminum oxide: >100 mg/l Salmo trutta												
<i>LC50 Algae 72h</i>	Manganese: 0.55 mg/l												
	Aluminum oxide: >100 mg/l Selenastrum capricornatum (green algae)												
<i>EC50 Daphnia 48h</i>	Manganese: 5.2 mg/l												
	Aluminum oxide: >100 mg/l Daphnia magna (Water flea)												
<i>Persistence and Degradability:</i>	Not available												
<i>Bioaccumulative Potential:</i>	<u>Bio concentration factor (BCF):</u>												
	<table> <tr> <td>Iron</td> <td>140 000</td> </tr> <tr> <td>Manganese</td> <td>59052</td> </tr> </table>	Iron	140 000	Manganese	59052								
Iron	140 000												
Manganese	59052												
<i>Soil Mobility:</i>	Not available												

## Section 13: Disposal Considerations

*NOTE: Always dispose of waste in accordance with local, provincial and federal regulations.*

<i>Safe Handling:</i>	Gloves can be worn when handling used and discarded materials. Product is not harmful as shipped.
<i>Methods of Disposal:</i>	Avoid dispersal and contact of spilled material and runoff with soil, waterways, drains and sewers. Packaging and tungsten electrode stubs can be disposed of as general waste or recycled. For larger quantities, be sure to dispose in accordance with local, provincial/state and federal regulations.

## Section 14: Transportation Information

As finished product, gouging carbons are not subject to special shipping conditions.

## Section 15: Regulatory Information

<i>Canada WHMIS Classification:</i>	Class D; Division 2, Subdivision A
-------------------------------------	------------------------------------

*Canadian Environmental Protection*

*Act (CEPA):*

*California Proposition 65:*

All constituents of these products are on the Domestic Substance List (DSL). These products contain or produce chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

*United States Toxic Substances*

*Control Act (TSCA):*

All constituents of these products are on the TSCA inventory list or excluded from listing.

---

## **Section 16: Other Information**

---

*Preparation Date:* 18 January 2016

*Date of Last Revision:* 18 January 2016

---

*This SDS format is in accordance with GHS. PowerWeld Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Product use and conditions of use are beyond the control of PowerWeld. Warranty of materials is limited to test results of product performance as detailed in certificates of compliance. Interpretation of test results is the responsibility of end-user. No other warranties, expressed or implied, are made.*