



# MATERIAL SAFETY DATA SHEETS

Complies with Regulation (EC) No. 1907/2006, ISO 11014-1 and ANSI Z400.1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Unibraze Gouging Carbons  
**Application:** Arc Air Gouging  
**Classification:** N/A  
**Supplier:** UNIBRAZE 1050 Penner Crest Houston TX USA 77055  
**Telephone No.:** 1-713-869-6000, 1-800-364-6900  
**Emergency No.:** 1-713-869-6000, 1-800-364-6900  
**Web site:** [www.unibraze.com](http://www.unibraze.com)

## 2. HAZARDS IDENTIFICATION

- 2.1 *Classification of the substance or mixture* Classification according to applicable national Regulations.  
2.2 *Label elements* Refer to label.  
2.3 *Other hazards*

When the product is used in the gouging process the most important hazards are:  
Overexposure to fumes and gases from gouging can be dangerous to health.  
Watch out for splatter, hot metal and slag. It may cause skin burn and cause fire.  
Excessive noise.

Arc rays can injure eyes and burn skin. Electric shock can kill. Avoid touching live electrical part

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 *Substances*

This product is a mixture and please refer to Section 3.2

### 3.2 *Mixtures*

Component	Percent	CAS#
Fixed Carbon (graphite) <b>C</b>	>95%	7440-44-0 (7782-42-5)
Copper <b>Cu</b>	<5%	7440-50-8

LD50 LC50

N/Av N/Av

9 g/kg (mouse,oral) N/Av

This product may also contain 0.1 to 1.0 % of Crystalline silica, quartz CAS#14808-60-7.

## 4. FIRST AID MEASURES

### 4.1 *Description of first aid measures*

- Inhalation:** If breathing has stopped, perform artificial respiration and obtain medical assistance immediately! If breathing is difficult, provide fresh air and call physician.
- Eye contact:** For radiation burns due to arc flash, see physician. To remove dusts or fumes flush with water for at least fifteen minutes. If irritation persists, obtain medical assistance.
- Skin contact:** For skin burns from arc radiation, promptly flush with cold water. Get medical attention for burns or irritations that persist. To remove dust or particles wash with mild soap and water.
- Electric shock:** Disconnect and turn off the power. Use a nonconductive material to pull victim away from contact with live parts or wires. If not breathing, begin artificial respiration, preferably mouth-to-mouth. If no detectable pulse, begin Cardio Pulmonary Resuscitation (CPR). Immediately call a physician.
- General:** Move to fresh air and call for medical aid.

### 4.2 *Most important symptoms and effects, both acute and delayed*

**Inhalation:** Inhalation of vapors may cause irritation of the respiratory system in very susceptible persons.

### 4.3 *Indication of any immediate medical attention and special treatment needed* Not available

## 5. FIRE FIGHTING MEASURES

- 5.1 Extinguishing media** Carbon dioxide (CO<sub>2</sub>), powder or diffuse jet of water. In case of major fire: Extinguish fire with diffuse jet of water or foam.
- 5.2 Special hazards arising from the substance or mixture:** Not available
- 5.3 Advice for fire fighters** No specific measures required for these electrodes prior to gouging. Gouging should not be carried out in the presence of flammable materials, vapors, tanks, cisterns and pipes and other containers which have held flammable substances unless these have been checked and certified safe. During a fire, irritating/toxic smoke and fumes may be generated. Do not enter fire area without proper protection. 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.

## 6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures**  
General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits. Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to arc welding. Skin contact should be avoided to prevent possible allergic reactions.
- 6.2 Environmental precautions**  
Try to prevent the material from entering drains or water courses.
- 6.3 Methods and material for containment and cleaning up:** Not applicable
- 6.4 Reference to other sections**  
For Personal protection see section 8. For Disposal see section 13. For Environmental precautions see section 12. For Precautions for safe handling see 7.1.

## 7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling**  
Preventive handling precautions Ensure adequate ventilation for the welder and others. Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to arc welding. Remove all flammable materials and liquids before welding  
General hygiene Wash hands before breaks and immediately after handling the product.
- 7.2 Conditions for safe storage, including any incompatibilities**  
Store welding consumables inside a room without humidity. Do not store welding consumables directly on the ground or beside walls. Store away from chemical substances like acids which could cause chemical reactions.
- 7.3 Specific end use(s)** Welding process.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

### 8.1 Control parameters

Fume component	CAS#	TLV-TWA	TLV-STEL
Total welding fume (particulate)	-	-	-
Copper Fume Dust	7440-50-8	0.2 mg/m <sup>3</sup> 1mg/m <sup>3</sup>	N/Av
Graphite Total inhalable dust Respirable dust	7440-44-0	2 mg/m <sup>3</sup> (Respirable fraction)	N/Av
Carbon Dioxide	124-38-9	5000ppm	30000ppm
Carbon Monoxide	630-08-0	25ppm	N/Av
Nitrogen dioxide (NO <sub>2</sub> )	10102-44-0	0.2ppm	N/Av
Ozone (O <sub>3</sub> )	10028-15-6	-	N/Av
Nitrogen monoxide (NO)	10102-43-9	25ppm	N/Av

### 8.2 Exposure controls

- Avoid exposure to welding fumes, radiation, spatter, electric shock, heated materials and dust.
- Engineering measures:** Ensure sufficient ventilation, local exhaust, or both, to keep welding fumes and gases from breathing zone and general area. Keep working place and protective clothing clean and dry. Train welders to avoid contact with live electrical parts and insulate conductive parts. Check condition of protective clothing and equipment on a regular basis.
- Personal protective equipment:** Use respirator or air supplied respirator when welding or brazing in a confined space, or where local exhaust or ventilation is not sufficient to keep exposure values within safe limits. Use special care when welding painted or coated steels since hazardous substances from the coating may be emitted. Wear hand, head, eyes, ear and body protection like welders gloves, helmet or face shield with filter lens, safety boots, apron, arm and shoulder protection. Keep protective clothing clean and dry.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance, color	Grey
Appearance, physical state	Rod
Auto-ignition Temperature	N/A
Auto-flammability	N/A
Decomposition Temperature	N/A
Evaporation Rate	N/A
Explosive Properties	N/A
Flammability (solid gas)	N/A
Flash point	N/A
Form	Fast
Initial boiling point and boiling range	N/A
Melting point / Freezing point	N/A
Odor	N/A
Odor threshold	N/A
Oxidizing properties	N/A
Partition coefficient: n-octanol/water	N/A
pH value	N/A
Relative density	N/A
Solubility	N/A
Solubility in water	Insoluble
Upper / lower flammability or explosive limits	N/A
Vapor density	N/A
Vapor pressure	N/A
Viscosity	N/A

9.2 Other information N/A

## 10. STABILITY AND REACTIVITY

10.1 Reactivity Not available

### 10.2 Chemical Stability

Stable under the recommended storage and handling conditions prescribed. Hazardous polymerization will not occur. Incompatible materials and conditions to avoid are usually related to welding.

10.3 Possibility of hazardous reactions Not available

10.4 Conditions to avoid None

10.5 Incompatible materials Not available

### 10.6 Hazardous decomposition materials

Welding fumes and gases. Additional fume may arise from coatings and contaminants on the base material. Hazardous combustion products - Carbon oxides and other irritating/toxic fumes and smoke.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Conditions to avoid None in the form supplied

When welding, fumes and gases generated can be dangerous to your health.

Acute toxicity: Short term overexposure to welding fumes may result in symptoms like metal fume fever, dizziness, nausea, dryness or irritation of the nose, throat or eyes.

Long term overexposure may affect human health, as follows: Aspiration may cause pulmonary edema and pneumonitis.

Irritation Not available

Corrosive Effects Not available

Sensitization May cause skin irritation

Mutagenicity Not available

Carcinogenicity Welding fumes are possibly carcinogenic to humans

Repeated dose toxicity Not available

Reproductive toxicity Not available

Synergistic materials Not available

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

The welding process can affect the environment if fume is released directly in the atmosphere. Residues from welding consumables could degrade and accumulate in soils and ground water.

Acute fish toxicity	LC50 Fish 96h: Manganese: 2,91 mg/l Aluminiumoxide: >100 mg/l Salmo trutta
Acute algae toxicity	IC50 Algae 72h: Manganese: 0,55 mg/l Aluminiumoxide: >100 mg/l Selenastrum capricornatum (green algae)
Acute algae toxicity	EC50 Daphnia 48h: Manganese: 5,2 mg/l Aluminiumoxide: >100 mg/l Daphnia magna (Water flea)

### 12.2 Persistence and degradability

Not available

### 12.3 Bio accumulative potential

Bioconcentration factor (BCG) Iron: 140000 Manganese: 59052

### 12.4 Mobility in soil

Not available

### 12.5 Results of PBT & PvB assessment

Not available

### 12.6 Other adverse effects

Not available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with federal and local regulations. Use recycling procedures if available.

USA RCRA: These products are not considered hazardous waste if discarded.

Residues from welding consumables and processes could degrade and accumulate in soils and groundwater.

## 14. TRANSPORT INFORMATION

No international regulations or restrictions are applicable.

## 15. REGULATORY INFORMATION

Read and understand the manufacturer's instructions, your employer's safety practices and the health and safety instructions on the label. Observe any federal and local regulations. Take precautions when welding and protect yourself and others.

**WARNING:** Welding fumes and gases are hazardous to your health and may damage lungs and other organs. Use adequate ventilation. **ELECTRIC SHOCK** can kill. **ARC RAYS** and **SPARKS** can injure eyes and burn skin. Wear correct hand, head, eye and body protection.

**Canada:** WHMIS classification: Class D; Division 2, Subdivision A

Canadian Environmental Protection Act (CEPA): All constituents of these products are on the Domestic Substance List (DSL).

**USA:** Under the OSHA Hazard Communication Standard, these products are considered hazardous.

These products contain or produce a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code § 25249.5 et seq.)

United States EPA Toxic Substance Control Act: All constituents of these products are on the TSCA inventory list or are excluded from listing.

### CERCLA/SARA Title III

Reportable Quantities (RQs) and/or Threshold Planning Quantities (TPQs):

Ingredient name	RQ (lb)	TPQ (lb)
No ingredients listed in this section.	--	--

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center and to your Local Emergency Planning Committee.

### Section 311 Hazard Class

As shipped: Immediate In use: Immediate, delayed

### EPCRA/SARA Title III 313 Toxic Chemicals

The following components are listed as SARA 313 "Toxic Chemicals" and potential subject to annual SARA 313 reporting. See Section 3 for weight percent.

Ingredient name	Disclosure threshold
No ingredients listed in this section.	--

## 16. OTHER INFORMATION

- USA: Contact UNIBRAZE at [www.unibraze.com](http://www.unibraze.com) or 1-800-364-6900 if you have questions about this MSDS.  
American National Standard Z49.1 "Safety in Welding and Cutting", ANSI/AWS F1.5 "Methods for Sampling and Analyzing Gases from Welding and Allied Processes", ANSI/AWS F1.1 "Method for Sampling Airborne Particles Generated by Welding and Allied Processes", AWSF3.2M/F3.2 "Ventilation Guide for Weld Fume", American Welding Society, 550 North LeJeune Road, Miami, Florida, 33135. Safety and Health Fact Sheets available from AWS at [www.aws.org](http://www.aws.org).  
OSHA Publication 2206 (29 C.F.R. 1910), U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954.  
American Conference of Governmental Hygienists (ACGIH), Threshold Limit Values and Biological Exposure Indices, 6500 Glenway Ave., Cincinnati, Ohio 45211, USA.  
NFPA 51B "Standard for Fire Prevention during Welding, Cutting and Other Hot Work" published by the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169.
- UK: WMA Publication 236 and 237, "Hazards from Welding Fume", "The arc welder at work, some general aspects of health and safety".
- Germany: Unfallverhütungsvorschrift BGV D1, "Schweißen, Schneiden und verwandte Verfahren".
- Canada: CSA Standard CAN/CSA-W117.2-01 "Safety in Welding, Cutting and Allied Processes".  
These products have been classified according to the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

### LIABILITY-DISCLAIMER:

*Unibraze does not assume liability whatsoever for the accuracy or completeness of the information contained in this MSDS. The information contained is accurate to the best of our knowledge. The final suitability of any material is the responsibility of the user.*

*Materials may present unknown hazards and are intended for use by qualified individuals experienced and trained in welding safety.*