

# SAFETY DATA SHEET

## GC 001 Gouging carbon electrodes



Version number: 1  
Replaces SDS: 2009-11-23  
Issued: 2014-03-25

Not for sale in the USA

### Section 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

#### 1.1 Product identifier

**Trade name** GOUGING CARBON ELECTRODES

**Article-no** (Carbon Gouge TRC 8 x 305 mm, Carbon Gouge TRC 5 x 305 mm, Carbon Gouge Joint TRC 9,5 x 355 mm, Carbon Gouge Joint TRC 13,0 X 355 mm, Carbon Gouge Joint TRC 16 x 355 mm, Carbon Gouge TRC 9,5 x 305mm, Carbon Gouge TRC 6,4 x 305 mm, Carbon Gouge TRC 4,0 x 305mm)

<i>Product description</i>	<i>Item Number</i>
Carbon Gouge TRC 8 x 305 mm (Pack of 50)	W054918
Carbon Gouge TRC 5 x 305 mm (Pack of 100)	W054934
Carbon Gouge Joint TRC 9,5 x 355 mm (Pack of 50)	W054933
Carbon Gouge Joint TRC 13,0 X 355 mm (Pack of 50)	W054926
Carbon Gouge Joint TRC 16 x 355 mm (Pack of 50)	W054922
Carbon Gouge TRC 9,5 x 305mm (Pack of 50)	W054919
Carbon Gouge TRC 6,4 x 305 mm (Pack of 50)	W054917
Carbon Gouge TRC 4,0 x 305mm (Pack of 100)	W054915

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### 1.2 Relevant identified uses of the substance or mixture and uses advised against

<b>Article type</b>	CAG Carbon arc Gouging (or other)
<b>Use</b>	Arc Air gouging

### 1.3 Details of the supplier of the safety data sheet

<b>Supplier</b>	Afrox
<b>Street address</b>	23 Webber Street, Selby Johannesburg, 2001 South Africa
<b>Telephone</b>	+27 (0) 11 490 0400
<b>Fax</b>	+27 (0) 860 020201
<b>Email</b>	Customer.service@afrox.linde.com

### 1.4 Emergency telephone number

<b>Available outside office hours</b>	Yes
<b>Emergency phone number</b>	0860 02 02 02

Other

<b>Additional product information</b>	<b>Web site: <a href="http://www.afrox.co.za">www.afrox.co.za</a></b>
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## Section 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1271/2008 [CLP] applicable

### 2.2 Label elements

Not applicable

### 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 parts.

## Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 Substances

This product is a mixture and please refer to Section 3.2

### 3.2 Mixtures

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Component	Chemical Symbol	Amount	CAS Number
Fixed carbon (graphite)	C	>95%	7440-44-0
Copper	Cu	<5%	7440-50-8

### Section 4. FIRST AND MEASURES

#### 4.1 Description of first aid measures

<b>Inhalation</b>	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms occur.
<b>Skin contact</b>	Burns should be treated by a doctor.
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Burns from radiation, see doctor.
<b>Ingestion</b>	Contact a doctor if more than an insignificant amount has been swallowed.

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

<b>Inhalation</b>	Inhalation of vapours may cause irritation of the respiratory system in very susceptible persons.
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#### 4.3 Indication of any immediate medical attention and special treatment needed

Not applicable

### Section 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	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.
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#### 5.2 Special hazards arising from the substance or mixture

Not applicable

#### 5.3 Advice for fire fighters

<b>Special protective equipment for fire fighters</b>	Wear self contained breathing apparatus
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### Section 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.

### Section 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.

### Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1 Control parameters

Fume component	CAS No.	ES-TWA	ES-STEL
Total welding fume (particulate)	-	5	

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Copper			
Fume	7440-50-8	0.2	
Dust		1	
Graphite			
Total inhalable dust	7440-44-0	10	
Respirable dust		4	
Carbon Dioxide	124-38-9	5000ppm	15000ppm
Carbon Monoxide	630-08-0	30ppm	200ppm
Nitrogen dioxide (NO <sub>2</sub> )	10102-44-0	3ppm	5ppm
Ozone (O <sub>3</sub> )	10028-15-6	0.2 ppm	
Nitrogen monoxide (NO)	10102-43-9	25ppm	35ppm

### 8.2 Exposure controls

*Environmental Exposure Controls – Refer to Section 6 of this SDS*

<b>Technical precaution measures</b>	General ventilation and local fume extraction must be adequate to keep fume concentrations within safe limits.
<b>Eye / face protection</b>	Wear eye protection appropriate for welding.
<b>Safety gloves</b>	Skin contact should be avoided to prevent possible allergic reactions.
<b>Other skin protection</b>	Wear body protection which helps to prevent injury from radiation, sparks and electric shock.
<b>Respiratory protection</b>	Use respiratory equipment when welding in a confined space. Wear protective clothing and eye protection appropriate to arc welding.

## Section 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

<b>Appearance, colour</b>	Grey
<b>Appearance, physical state</b>	Rod
<b>Auto-ignition temperature</b>	Not applicable
<b>Auto-inflammability</b>	Not auto-flammable
<b>Decomposition temperature</b>	Not applicable
<b>Evaporation rate</b>	Not applicable
<b>Explosive properties</b>	Not explosive
<b>Flammability (solid gas)</b>	Not applicable
<b>Flash point</b>	Not applicable
<b>Form</b>	Fast
<b>Initial boiling point and boiling range</b>	Not applicable

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<b>Melting point / Freezing point</b>	Not applicable
<b>Odour</b>	Odourless
<b>Odour threshold</b>	Not applicable
<b>Oxidising properties</b>	Not applicable
<b>Partition coefficient: n-octanol / water</b>	Not applicable
<b>pH value</b>	Not applicable
<b>Relative density</b>	Not applicable
<b>Solubility</b>	Not applicable
<b>Solubility in water</b>	Insoluble
<b>Upper / lower flammability or explosive limits</b>	Not applicable
<b>Vapour density</b>	Not applicable
<b>Vapour pressure</b>	Not applicable
<b>Viscosity</b>	Not applicable

### 9.2 Other information

Not applicable

Other

<b>Density</b>	2.26g/cm <sup>3</sup>
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## Section 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Not applicable

### 10.2 Chemical stability

Stable at normal conditions.

### 10.3 Possibility of hazardous reactions

Not applicable

### 10.4 Conditions to avoid

None under normal conditions

### 10.5 Incompatible materials

Not applicable

### 10.6 Hazardous decomposition products

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Welding fumes and gases. Additional fume may arise from coatings and contaminants on the base material.

### Section 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 health.

<b>Acute toxicology</b>	Excessive exposures may affect human health, as follows: Aspiration may cause pulmonary oedema and pneumonitis Short-term overexposure can cause dizziness, nausea and irritation of the nose, throat or eyes.
<b>Irritation</b>	Not applicable
<b>Corrosive effects</b>	Not applicable
<b>Sensitisation</b>	May cause sensitisation by skin contact
<b>Mutagenicity</b>	Not applicable
<b>Carcinogenicity</b>	Welding fumes are possibly carcinogenic to humans
<b>Repeated dose toxicity</b>	Not applicable
<b>Reproductive toxicity</b>	Not applicable

### Section 12. ECOLOGICAL INFORMATION

#### 12.1 Toxicity

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

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

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Aluminiumoxide: >100 mg/l Daphnia magna (Water flea)

### 12.2 Persistence and degradability

Not applicable

### 12.3 Bio accumulative potential

Bioconcentration factor (BCF):

Iron: 140000

Manganese: 59052

### 12.4 Mobility in Soil

Not applicable

### 12.5 Results of PBT and vPvB assessment

Not applicable

### 12.6 Other adverse effects

Not applicable

## Section 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Disposal considerations

Dispose of any product, residue or packing material according to national and local regulations. Spent ;fume extraction filters shall be disposed of as dangerous waste.

Other

**Waste code (EWC)** 12 01 13 – welding waste

## Section 14. TRANSPORT INFORMATION

### 14.1 UN number

Not applicable

### 14.2 UN proper shipping name

Not applicable

### 14.3 Transport hazard class(es)

Not applicable

### 14.4 Packing group

Not applicable



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### 14.5 Environmental hazards

Not applicable

### 14.6 Special precautions for user

Not applicable

### 14.7 Transport in bulk according to *Annex II of MARPOL 73/78 and the IBC Code*

Not applicable

### Other

**Dangerous goods** No

## Section 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture.

**EU regulations** *The product does not need to be labelled in accordance with EC directives or respective national laws.*

**National regulations** *EH40/2005 Workplace exposure limits  
The Waste Regulations 2011 No. 988  
Local laws and regulations should be carefully observed.*

### 15.2 Chemical safety assessment

*Not applicable*

## Section 16. OTHER INFORMATION

**References to key literature and data sources** Regulation (EC) No 1907/2006 of the European Parliament and of the Council, (REACH).  
Regulation (EC) No 1272/2008 of the European Parliament and of the Council.  
*EH40/2005 Workplace exposure limits.*  
*The Waste regulations 2011 No.988*  
*KIFS 2005:7*  
*[www.prevent.se](http://www.prevent.se)*  
*C&L Inventory database*

**Phrase meaning** H314 – Causes severe skin burns and eye damage  
H350 – May cause cancer.

### Other

**Manufacturer's notes** *Read this Safety Data Sheet carefully and become aware of hazards implied and the safety*

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