

STATEMENT OF HAZARDOUS NATURE

Classified as hazardous according to criteria of Worksafe Australia.

COMPANY DETAILS

Company: CIGWELD - Comweld Group Pty Ltd
 Address: 71 Gower Street, Preston,
 Victoria 3072
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IDENTIFICATION

Product Name: Arcair® DC Gouging Carbons
 Other Names: DC Carbon Cutting & Gouging
 Electrode
 Manufacturer's Product Code:
 22033003, 22043003, 22053005,
 22063003, 22082003, 24052003,
 24064003, 24084003, 24104003,
 24124003, 35099003, 35033003
 UN Number: None allocated
 Dangerous Goods Class and Subsidiary Risk:
 None allocated
 Hazchem Code: None allocated
 Poisons Schedule Number: None allocated
 Use: Copper coated carbon electrodes for air
 arc cutting and gouging of steel plate
 and non-oxidising metals using Direct
 Current Electrode Positive (DCEP) and
 Direct Current Electrode Negative
 (DCEN).

Physical Description/Properties

Appearance: Carbon electrode with copper coating
 Melting Point: Not available
 Vapour Pressure: Not applicable
 Specific Gravity: 2.0 (bulk)
 Flashpoint: Not applicable
 Flammability Limits: Not available
 Solubility in Water: Insoluble

Ingredients:

Chemical Name:	CAS Number:	Proportion
Graphite (synthetic)	7782-42-5	>90%
Copper	7440-50-8	<10%

HEALTH HAZARD INFORMATION

Health Effects

Acute:

Swallowed: Does not present an ingestion hazard.
 Eye: Arc rays can injure eyes. Welding fumes and dust may be irritating to eyes.
 Skin: Arc rays can harm skin. Electric shock can kill.
 Inhaled: Fumes and gases can be dangerous to the health of welders and those in the immediate vicinity. Aggravation of pre-existing respiratory or allergic conditions may occur in some workers. Overexposure to welding fumes may result in discomfort such as dizziness, nausea, or dryness or irritation of nose, throat or eyes.

Chronic: Long-term overexposure to welding fumes can lead to siderosis (iron deposits in the lung) and affect pulmonary function.

Note: Fume generated is specific to the material being gouged. Application of product may generate considerable noise. Wear approved hearing protection.

First Aid

Swallowed: Does not present an ingestion hazard.
 Eye: If in eyes, **act immediately**, hold eyes open, flood with water for at least 15 minutes - retract eyelids often. Immediately transport to a hospital or doctor.
 Skin: Wash thoroughly with soap and water. Seek medical attention if irritation persists.
 Inhaled: Remove from exposure and give fresh air. Loosen tight clothing at the neck and waist. Keep patient warm and at rest. Check for clear airway, breathing and presence of pulse. If breathing is weak or has ceased, provide artificial respiration. Immediately transport to a hospital or doctor.

Advice to Doctor: *Treat symptomatically.*

PRECAUTIONS FOR USE

Exposure Standards: Threshold Limit Values (TLV's):
 Graphite (All forms) 10mg/m³ TWA
 Copper Dust & mists (as Cu) 1mg/m³ TWA, fume 0.2mg/m³ TWA

In addition to complying with these individual exposure standards for specific contaminants where current manual welding processes are used, the fume concentration inside the welder's helmet should not exceed 5mg/m³ when collected in accordance with the appropriate Australian Standard (AS3640 - Latest Edition).

The "National Exposure Standards [NOHSC:1003 (1991)]" recommended limit for welding fumes not otherwise classified (NOC) is 5mg/m³. TLV-TWA's should be used as a guide in the control of health hazards and not as fine lines between safe and dangerous concentrations.

Engineering Controls: Ventilation

Use enough ventilation and local exhaust to keep fume below the relevant exposure standards in the worker's breathing zone and the general area. The welder should be trained to keep his head out of the fumes.

Personal Protection: Respiratory Protection

Use a fume respirator or air supplied respirator when welding in a confined space or where local exhaust or ventilation does not keep exposure below the relevant exposure standards. Refer AS/NZS 1715 and AS/NZS 1716.

Eye Protection

Wear a helmet or use a face shield with a filter lens. Use a shade which gives just sufficient arc brightness to allow weld pool control. Provide protective screens and flash goggles if necessary to shield others. Refer AS1336, AS1337 and AS1338.

Hearing Protection

MATERIAL SAFETY DATA SHEET

Product Type: Arcair® DC Gouging Carbons

Wear Approved hearing protection

Clothing

Wear head, hand and body protection which help to prevent injury from UV radiation, sparks and electrical shock. At a minimum, this includes welder's gloves and protective face shield and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing.

Welders should not touch live electrical parts and should insulate themselves from the work and ground.

Flammability: **Non flammable.**

SAFE HANDLING INFORMATION

Storage and Transport: Store in a dry area. Avoid contact with moisture. Avoid storing with acids and oxidising agents.

Spills and Disposal: Prevent waste from contaminating surrounding environment. Discard any product, residue, disposable container or liner in an environmentally acceptable manner, in full compliance with federal, state and local regulations.

Fire/Explosion Hazard: This product is not flammable. However, the welding arc and sparks can ignite combustibles, therefore such materials should be kept away from areas where welding is taking place.

OTHER INFORMATION

Hazardous Decomposition Products:

Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedure and electrodes used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being welded (such as paint, plating or galvanising), the number of welders and the volume of work area, the quality and amount of ventilation, the position of the welder's head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapours from cleaning and degreasing activities).

When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in the ingredients section. Fume and gas decomposition products, and not the ingredients in the electrode, are important. The concentration of a given fume or gas component may decrease or increase by many times the original concentration in the electrode. Also, new compounds not in the electrodes may form. Decomposition products of normal operation include those originating from the volatilisation, reaction, or oxidation of the materials shown in the ingredients section, plus those from the base metal and coating, etc as noted above.

Reasonably expected decomposition products from normal use of these products include a complex of the oxides of the materials listed in the ingredients section as well as carbon monoxide, carbon dioxide, ozone and nitrogen oxides.

One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample inside the welder's helmet if worn or in the worker's breathing zone. Refer AS3853 and also WTIA Technical Note 7.

The information set out here has been compiled from standard reference materials and from CIGWELD's test data for the exclusive purpose of providing information about its own products and CIGWELD believes it is accurate. CIGWELD does not represent that these hazard precautions or procedures are the only ones available. Each user should properly assess the information in the specific context of the intended application. Although care has been taken in compiling this information, CIGWELD will not be liable for any direct, indirect, special or consequential damage (including damage resulting from any negligence by CIGWELD), arising out of or connected with the use of or reliance on this information except for liability imposed by legislation (including the Trade Practices Act) that cannot be excluded. CIGWELD does not make or give any express or implied warranties or representations except for those that are implied by legislation (including the Trade Practices Act) that cannot be excluded.

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