PRODUCT SAFETY DATA SHEET FOR
ARCAIR AIR CARBON ARC ELECTRODES

1. IDENTIFICATION OF PRODUCT
   Product Name - Arcair Air Carbon Arc Electrodes
   Intended Use - Arc metal removal

2. HAZARDOUS INGREDIENTS
   HAZARDOUS INGREDIENTS % / RANGE CAS NUMBER   OSHA PEL   ACGIH TLV
   Graphite, Synthetic Graphite,    20-90 *   7440-44-0   5mg/M3   3.5mg/M3
   Natural Copper      20-90 *   7782-42-5   15 mppcf   2.5mg/M3
                     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 AIR CARBON ARC ELECTRODES ARE ATTRIBUTABLE TO
   THE FUMES GENERATED WHEN THE ELECTRODES ARE USED AND CONSUMED.
   Quantative analysis detected no trace of cadmium or mercury.

3. PHYSICAL DATA
   PHYSICAL STATE : Solid
   ODOUR AND APPEARANCE : No notable odour, copper coated black rod
   VAPOUR PRESSURE (mm Hg) : Not Applicable
   VAPOUR DENSITY (air=1) : Not Applicable
   EVAPORATION RATE : Not Applicable
   BOILING POINT (F/C) : Not Applicable
   FREEZING POINT (F/C) : Not Applicable
   pH : Not Applicable
   SPECIFIC GRAVITY : Not Applicable
   SOLUBILITY : Not Soluble

4. FIRE AND EXPLOSION DATA
   FLAMMABILITY : Yes ( )   No (X)
   IF YES, MEANS OF EXTINCTION : Not Flammable
   FLASHPOINT (F/C) AND METHOD : Not Applicable
   FLAMMABLE LIMIT : Not Applicable
   LEL : Not Applicable
  UEL : Not Applicable
   UNUSUAL FIRE AND EXPLOSION HAZARDS : None

N.F.P.A. RATING SYSTEM :
0 – INSIGNIFICANT; 1 – SLIGHT; 2 – MODERATE;
3 – HIGH; 4 – EXTREME.
Health = 1 Flammability = 0 Reactivity = 0 Special = None
WHMIS CLASSIFICATION:
CLASS “D” DIVISION 2 SUB-DIVISION “G”
DOT HAZARD CLASS : NOT REQUIRED.
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5. REACTIVITY DATA

CHEMICAL STABILITY : YES (X)  No ( )

IF NO, CONDITIONS TO AVOID : Not Applicable

INCOMPATABILITY WITH OTHER SUBSTANCES : Yes ( )  No (X)

IF YES, WHICH ONES ? : None Known

HAZARDOUS POLYMERIZATION : Will Occur ( )  Will not occur (X)

CONDITIONS TO AVOID : Not Applicable

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, traces of copper fume (ozone, nitrogen oxide from the electric arc and UV rays).

6. HEALTH HAZARD DATA

ROUTE OF ENTRY :

SKIN CONTACT ( )  SKIN ABSORPTION ( )  EYE CONTACT ( )

INHALATION (X)  INGESTION ( )  UV EXPOSURE (X)

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 kerato-conjunctivitis, causing inflammation, blurred vision, headache – “sunburn”.

TOXICITY: CARBON: Intravenous, mouse LD50: 440 Mg/Kg

COPPER (fume) ; Human, Oral LDLo: 12 Oug/kg

REPRODUCTION: CARBON: Subcutaneous, rat TDLo: 167Mg/Kg (8D preg)

COPPER: Oral, rat TDLo: 121Oug/Kg (35w pre)*

CARCINOGENICITY: Not currently listed

SIGNS AND SYMPTOMS OF EXPOSURE:

Breathing difficulty, headache, nausea, dryness or irritation of nose, throat, eyes. Burning sensation of skin or eyes. Unconsciousness.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Respiratory problems, erythmas.

EMERGENCY AND FIRST AID PROCEDURES:

Remove to fresh air. If breathing impaired, assisted respiration may be required. Treat UV exposure similar to severe sunburn. Seek medical attention.

7. PRECAUTIONS FOR SAFE HANDLING AND USE

LEAK AND SPILL PROCEDURE : Sweep or pick up. Be alert to ‘hot ends’.

WASTE DISPOSAL METHOD : Solid landfill if local regulations allow.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in dry area. Electrodes exposed to moisture may explode violently if used. Dry moist rods by baking at 300°F for ten hours.


‘Safety in Welding and Cutting’ by the American Welding Society.

CAUTION: Use in confined areas can result in carbon monoxide poisoning/death. Air supplied respirator is recommended when used indoors.

8. CONTROL MEASURES

RESPIRATORY PROTECTION : Air supplied or fume respirator should be used if ventilation is insufficient.

GLOVES : Welders RESPIRATOR : See above EYE : Face shield or welders helmet with #12 or darker lens

FOOTWEAR: Suitable for metal working CLOTHING: Dark, substantial aprons, etc.

OTHER : See Z49.1

VENTILATION : Local exhaust as required to reduce fumes generated by each specific application below ACGIH TLV.

MECHANICAL : See Ventilation

OTHER : Air sampling to determine corrective measures

WORK/HYGIENIC PRACTICES : Operator trained to avoid electrical shock and UV ray exposure.
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REFERENCES:
‘Registry of Toxic Effects of Chemical Substances’

THIS DATA IS OFFERED IN GOOD FAITH AS TYPICAL VALUES.
THIS IS NEITHER AN EXPRESSED NOR IMPLIED PRODUCT SPECIFICATION.
RECOMMENDED HANDLING PROCEDURES AND HYGIENE ARE BELIEVED TO BE ACCURATE, HOWEVER, THESE
RECOMMENDATIONS SHOULD BE REVIEWED IN THE SPECIFIC CONTEXT OF INTENDED USE AND DETERMINED
APPROPRIATE BY THE USER.