

**ARCAIR AIR CARBON ARC ELECTRODES
MATERIAL SAFETY DATA SHEET**

02/05/00

MSDS PROVIDED BY:

STOODY INDUSTRIAL AND WELDING SUPPLY, INC.

3316 National Ave., San Diego, CA 92113

Phone: (619) 234-6750

MILITARY EMERGENCY RESPONSE NUMBER 1 (800) 851-8061

Material Safety Data Sheet

89-250-885/B

SECTION 1 – PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER: ARCAIR AIR CARBON ARC ELECTRODES

CATALOG NUMBERS: 20-, 22-, 24-, 375- series

PRODUCT USE: Arc metal removal

MANUFACTURERS NAME: TWECO Products, Inc.

STREET ADDRESS: 4200 West Harry St.

CITY: Wichita STATE: Kansas

PREPARED BY: Dennis Wilson

DATE PREPARED: October 31, 1990

EMERGENCY PHONE #: (316) 946-8308

P.O. Box 12250

ZIP CODE: 67277

PHONE NUMBER: (316) 946-8308

DATE REVISED: October 1997

SECTION 2 – HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%/RANGE	CAS NUMBER	OSHA PEL	ACGIH TLV
Graphite, Synthetic	20-90*	7440-44-0	5mg/m3	3.5mg/M3
Graphite, Natural	20-90*	7782-42-5	15 mppcf	2.5mg/M3
Copper	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.

SECTION 313. SUPPLIER INFORMATION

THIS PRODUCT DOES [] DOES NOT [X] CONTAIN TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372.

CAS NUMBER	CHEMICAL NAME	%
7440-50-8	Copper	< 30

THIS INFORMATION MUST BE INCLUDED IN ALL MSDSs THAT ARE COPIED AND DISTRIBUTED FOR THIS PRODUCT.

SECTION 3 – PHYSICAL DATA

PHYSICAL STATE: Solid ODOR AND APPEARANCE: No notable odor, copper coated black rod.
VAPOR PRESSURE (mm Hg): N. App. VAPOR DENSITY (air=1): N. App. EVAPORATION RATE: N. App
BOILING POINT (F/C): N. App. FREEZING POINT (F/C): N. App. SPECIFIC GRAVITY: N. App.
SOLUBILITY: Not Soluble

SECTION 4 – FIRE AND EXPLOSION DATA

FLAMMABILITY: Yes [] No [X] IF YES, MEANS OF EXTINCTION: Not Flammable
FLASHPOINT (F/C) and METHOD: N. App. FLAMMABLE LIMIT: N. App.
LEL: N. App. UEL: N. App. UNUSUAL FIRE AND EXPLOSION HAZARDS: None

N. App.: NON APPLICABLE; N. AV.: NOT AVAILABLE; N. EST.: NOT ESTABLISHED
N.F.P.A. RATING SYSTEM: 0 – INSIGNIFICANT; 1 – SLIGHT; 2 – MODERATE; 3 – HIGH; 4 – EXTREME
Health = 1 Flammability = 0 Reactivity = 0 Special = none

SIWS PROVIDES MSDS AS A COURTESY TO ENSURE ACCURATE AND CURRENT DATA, OBTAIN AND USE ONLY MSDS FROM MANUFACTURER

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89-250-885

Page 2

WHMIS CLASSIFICATION: CLASS "D" DIVISION 2 SUB-DIVISION "G"
DOT HAZARD CLASS: NOT REQUIRED

SECTION 5 – REACTIVITY DATA

CHEMICAL STABILITY: Yes [X] No [] IF NO, CONDITIONS TO AVOID: N. App.
INCOMPATIBILITY WITH OTHER SUBSTANCES: Yes [] No [X] IF YES, WHICH ONES? None known
HAZARDOUS POLYMERIZATION: Will Occur [] Will Not Occur [X]
CONDITIONS TO AVOID: N. App. HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, traces of copper fume (ozone, nitrogen oxide from the electric arc and U.V. rays)

SECTION 6 – HEALTH HAZARD DATA

ROUTE OF ENTRY: SKIN CONTACT [] SKIN ABSORPTION [] EYE CONTACT []
INHALATION [X] INGESTION [] U.V. 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 keratoconjunctivitis, causing inflammation, blurred vision, headache – "sunburn."
TOXICITY: CARBON: Intravenous mouse; LD50: 440 Mg/Kg, COPPER (fume): Human, Oral LDLo: 120ug/Kg
REPRODUCTION: CARBON – Subcutaneous rat; TDLo: 167Mg/Kg (8D preg); COPPER- Oral, Rat; TDLo: 1520ug/Kg (22w pre) TDLo: 1210ug/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, erythemas.
EMERGENCY AND FIRST AID PROCEDURES: Remove to fresh air. If breathing impaired, assisted respiration may be required. Treat U.V. exposure similar to severe sunburn, seek medical attention!

SECTION 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 degrees Fahrenheit for ten hours.
OTHER PRECAUTIONS: Read and understand "American National Standard Z49.1"; subpart Q of OSHA 29 CFR 1910.252; "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.

SECTION 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 U.V. ray exposure.