

Material Safety Data Sheet
89-250-946

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER: ARCAIR AIR CARBON ARC Electrodes, TWECO HEAT SHRINK CARBON
CATALOG NUMBERS: 21-xx3-003, 21-xx3-004, & 20002010
PRODUCT USE: Arc metal removal, metal shrinking (Automotive)
MANUFACTURERS NAME: TWECO Products, Inc. EMERGENCY PHONE #: (940) 566-2000
STREET ADDRESS: 2800 Airport Road
CITY: Denton STATE: Texas ZIP CODE: 76207
PREPARED BY: Terry Fulks PHONE NUMBER: (940) 566-2000
DATE PREPARED: October 30, 1990 DATE REVISED: January 31, 2007

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%/RANGE	CAS NUMBER	OSHA PEL	ACGIH TLV
Graphite, Synthetic	0-100*	7440-44-0	5mg/M3	3.5mg/M3
Graphite, Natural	0-100*	7782-42-5	15 mppcf	2.5mg/M3

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

*BATCH PERCENTAGES VARY GREATLY DEPENDING UPON AVAILABILITY.

SECTION 3 - PHYSICAL DATA

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

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY: Yes No 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
WHMIS CLASSIFICATION: CLASS "D" DIVISION "2" Sub Division "B"
DOT HAZARD CLASS: NOT REQUIRED

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY: Yes No IF NO, CONDITIONS TO AVOID: N.App.
INCOMPATIBILITY WITH OTHER SUBSTANCES: Yes No IF YES, WHICH ONES?
None known HAZARDOUS POLYMERIZATION: Will Occur Will Not Occur
CONDITIONS TO AVOID: N.App. HAZARDOUS DECOMPOSITION PRODUCTS: Carbon
monoxide, carbon dioxide, (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 INGESTION U.V. EXPOSURE

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: Intravenous mouse; LD50:
440 Mg/Kg REPRODUCTION: Subcutaneous, rat; TDLo: 167Mg/Kg (8D preg)
CARCINOGENICITY: Not Currently Listed SIGNS AND SYMPTOMS OF EXPOSURE: Breath-
ing 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,
eurythmas. 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 product is 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 - "Safety in Welding and Cutting"
VENTILATION: Local mechanical exhaust as required to reduce fumes generated
by each specific application below ACGIH TLV. OTHER: Air sampling to
determine corrective measures WORK/HYGIENIC PRACTICES: Operator trained to
avoid electrical shock and U.V. ray exposure.

REFERENCES:

"Chemical Guide To OSHA Hazard Communication Standard" First Edition
"Handbook Of Toxic And Hazardous Chemicals and Carcinogens" Second Edition
"Registry Of Toxic Effects Of Chemical Substances"
"NIOSH Pocket Guide to CHEMICAL HAZARDS" June 1994

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.