

TECHALLOY MARYLAND INC -- TECHALLOY COVERED ELECTRODES, 7018 -- 3439-00-465-1919  
===== Product Identification =====

Product ID:TECHALLOY COVERED ELECTRODES, 7018

MSDS Date:09/01/1989

FSC:3439

NIIN:00-465-1919

MSDS Number: BSYKB

=== Responsible Party ===

Company Name:TECHALLOY MARYLAND INC

Address:2310 CHESAPEAKE AVE

City:BALTIMORE

State:MD

ZIP:21222

Country:US

Info Phone Num:301-633-9300; 800-638-

1458

Emergency Phone Num:301-633-9300; 800-638-1458

CAGE:59711

=== Contractor Identification ===

Company Name:TECHALLOY COMPANY, INC.

Address:2310 CHESAPEAKE AVENUE

Box:City:BALTIMORE

State:MD

ZIP:21222

Country:US

Phone:410-633-9300; 800-638-1458

CAGE:59711

===== Composition/Information on Ingredients =====

Ingred Name:IRON

CAS:7439-89-6

RTECS #:NO4565500

Fraction by Wt: 55-70%

OSHA PEL:10 MG/M3

ACGIH TLV:5 MG/M3

Ingred Name:MANGANESE (SARA III)

CAS:7439-96-5

RTECS #:OO9275

000

Fraction by Wt: 0.5-2%

Other REC Limits:1 MG/M3;3 STEL(FUME)

OSHA PEL:5 MG/M3 DUST, C

ACGIH TLV:5 MG/M3 DUST

Ingred Name:SILICON

CAS:7440-21-3

RTECS #:VW0400000

Fraction by Wt: 0.1-1%

Other REC Limits:3 MG/M3 (SIO\*2)

OSHA PEL:10MG/M3 TDUST;5 RESP

ACGIH TLV:10MG/M3 TDUST

Ingred Name:CHROMIUM (SARA III)

CAS:7440-47-3

RTECS #:GB4200000

Fraction by Wt: 0-3.5%

OSHA PEL:1 MG/M3

ACGIH TLV:0.5 MG/M3

EPA Rpt Qty:1 LB

DOT Rpt Qty:1 LB

Ingred Name:MOLYBDENUM

CAS:7439-98-7

RTECS #:QA4680000

Fraction

by Wt: 0-1%

Other REC Limits:15 MG/M3 (MFR)

OSHA PEL:10 MG/M3 TDUST

ACGIH TLV:10 MG/M3

Ingred Name:CALCIUM CARBONATE

CAS:1317-65-3

RTECS #:EV9580000

Fraction by Wt: 5-12%

OSHA PEL:15MG/M3 TDUST;5 RESP

ACGIH TLV:10MG/M3 TDUST

Ingred Name:FLUORSPAR; (CALCIUM FLUORIDE)

CAS:14542-23-5

Fraction by Wt: 3-10%

OSHA PEL:2.5 MG/M3 (AS F)

ACGIH TLV:2.5 MG/M3 (AS F)

Ingred Name:POTASSIUM TITANATE

CAS:12030-97-6

Fraction by Wt: 0-2%

OSHA PEL:N/K

ACGIH TLV:10 MG/M3 (MFR)

Ingred Name:FELDSPAR

CAS:68476-2

5-5  
Fraction by Wt: 0-2%  
OSHA PEL:N/K  
ACGIH TLV:2 MG/M3 (MFR)

Ingred Name:ALUMINUM OXIDE (2:3); (ALPHA-ALUMINA) (ALUMINUM OXIDE)  
(EPA LISTS ONLY FIBROUS FORMS) (SARA III)

CAS:1344-28-1  
RTECS #:BD1200000  
Fraction by Wt: 0-1%  
Other REC Limits:5 MG/M3 (MFR)  
OSHA PEL:10 MG/M3 TDUST  
ACGIH TLV:10 MG/M3 TDUST (AL)

Ingred Name:SILICON DIOXIDE

CAS:7631-86-9  
Fraction by Wt: 0-2%  
OSHA PEL:5 MG/M3 (MFR)  
ACGIH TLV:3 MG/M3 (MFR)

Ingred Name:TITANIUM OXIDE; (TITANIUM DIOXIDE)

CAS:13463-67-7  
RTECS #:X  
R2275000  
Fraction by Wt: 0-3%  
Other REC Limits:15 MG/M3 (MFR)  
OSHA PEL:10 MG/M3 TDUST  
ACGIH TLV:10 MG/M3 TDUST

Ingred Name:POTASSIUM SILICATE

CAS:1312-76-1  
Fraction by Wt: 0-3%  
OSHA PEL:N/K  
ACGIH TLV:5 MG/M3 (MFR)

Ingred Name:SODIUM SILICATE

CAS:1344-09-8  
Fraction by Wt: 0-5%  
OSHA PEL:N/K  
ACGIH TLV:5 MG/M3 (MFR)

Ingred Name:SODIUM FLUOALUMINATE; (CRYOLITE)

CAS:15096-52-3  
RTECS #:WA9625000  
Fraction by Wt: 0-2%  
OSHA PEL:2.5 MG/M3(AS F)(MFR)  
ACGIH TLV:2.5 MG/M3(AS F)(MFR)

Ingred Name:MAGNESIU

M (II) CARBONATE (1:1); (MAGNESITE)

CAS:546-93-0

RTECS #:OM2470000

Fraction by Wt: 0-2%

OSHA PEL:15MG/M3 TDUST;5 RESP

ACGIH TLV:10MG/M3 TDUST

Ingred Name:POTASSIUM HYDROXIDE (SARA III)

CAS:1310-58-3

RTECS #:TT2100000

Fraction by Wt: 0-0.5%

OSHA PEL:2 MG/M3, C

ACGIH TLV:2 MG/M3, C

EPA Rpt Qty:1000 LBS

DOT Rpt Qty:1000 LBS

Ingred Name:SUPDAT:NITROGEN OXIDES MAY BE FORMED BY RADIATION FROM THE  
ARC. CONTACT NEHC FOR FURTHER INFO .

RTECS #:9999999ZZ

Ingred Name:OTHER PREC:WELDING & CUTTING, &

WELDING HANDBOOK", VOL 1,

CH 9, "SAFE PRACTS IN WELDING & CUTTING", AVAIL FROM (ING 20)

RTECS #:9999999ZZ

Ingred Name:ING 19:AMERICAN WELDING SOCIETY, INC, 550 W. LE JEUNE RD,

P.O. BOX 351040, MIAMI, FL 33135, TEL (800)443-9353.

RTECS #:9999999ZZ

Ingred Name:EYE PROT:LENS. PROVIDE PROT SCREENS & FLASH GOGGS, IF NEC,

TO SHIELD OTHERS. AS RULE OF THUMB START W/SHADE THAT(ING 22)

RTECS #:9999999ZZ

Ingred Name:ING 21:IS TOO DARK TO SEE WELDING ZONE. THEN GO TO NEXT  
LIGHTER SHADE

WHICH GIVES SUFFICIENT VIEW OF WELD ZONE.

RTECS #:9999999ZZ

Ingred Name:OTHER PROT EQUIP:INCLS WELDER'S GLOVES & PROT FACE SHLD, &

MAY INCL ARM PROTECTORS, APRONS, HATS, SHOULDER PROT,(ING 24)

RTECS #:9999999ZZ

Ingred Name:ING 23:AS WELL AS DARK SUBSTANTIAL CLOTHING.

RTECS #:9999999ZZ

===== Hazards Identification =====

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO

Reports of Carcinogenicity:NTP:Y

ES IARC:YES OSHA:NO

Health Hazards Acute and Chronic:ELEC ARC-WELDING MAY CREATE ONE/MORE OF FOLLOWING HLTH HAZS:FUMES & GASES CAN BE DANGEROUS TO YOUR HLTH. ARC RAYS CAN INJURE EYES & BURN SKIN. ELEC SHOCK CAN KILL. ACUTE:SHORT-TERM OVEREXP TO WELDING FUMES MAY RSLT IN DISCOMFORT SUCH AS DIZZ, NAUS OR DRYNESS/IRRIT OF NOSE, THROAT/EYES, TIGHTNESS IN (EFTS OF OVEREXP)

Explanation of Carcinogenicity:CHROMIUM:IARC MONOGRAPHS, VOL 49, PG 49, 1990:GRP 1. NTP 7TH ANNUAL RPT ON CARCINS, 1992:KNOWN TO BE CARCINOGENIC.

Effects of Overexposure:HLTH HAZ:CHEST, FEVER & ALLERGIC RXNS. CHRONIC:LONG-TERM OVEREXP TO WELDING FUMES MAY LEAD TO SIDEROSIS (IRON DEPOSIT IN LUNGS) & IS BELIEVED BY SOME INVESTIGATORS TO AFFECT PULMONARY FUNCTION.

Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

=====  
===== First Aid Measures =====

First Aid:REMOVE TO FRESH AIR, OBTAIN MEDICAL ATTENTION. EMPLOY FIRST AID TECHNIQUES RECOMMENDED BY THE AMERICAN RED CROSS. INGEST:CALL MD IMMEDIATELY . INHAL:REMOVE TO FRESH AIR. SUPPORT BREATHING (GIVE O\*2/ARTF RESP) . EYES:IMMEDIATELY FLUSH W/POTABLE WATER FOR A MINIMUM OF 15 MINUTES, SEEK ASSISTANCE FROM MD . SKIN:FLUSH W/COPIOUS AMOUNTS OF WATER. CALL MD .

=====  
===== Fire Fighting Measures =====

Extinguishing Media:MEDIA SUITABLE FOR SURROUNDING FIRE . Fire Fighting Procedures:USE NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT . Unusual Fire/Explosion Hazard:SPARKS CAN IGNITE COMBUSTIBLES & FLAMMABLES. REFER TO ANSI Z29.1 FOR THE USE OF WELDING & ALLIED PROCEDURES.

=====  
===== Accidental Release Measures =====

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

=====  
===== Handling and Storage =====

Handling and Storage Precautions:READ & UNDERSTAND MFR'S INSTRUCTIONS & PREC LBL ON PROD. TRAIN WELDER TO KEEP HIS HEAD OUT OF FUMES. USE

EXHST SYS TO CLEAR WELDING FUMES.

Other Precautions: TRAIN WELDER NOT TO TOUCH LIVE ELEC PARTS & TO INSULATE HIMSELF FROM WORK & GROUND. MAKE SURE THAT INHALED AIR DOES NOT CNTN CONSTITUENTS ABOVE PELS. OTHER PRECS FOR ADDNL SAFETY INFO ON WELDING & CUT TING, SEE ANSI Z49.1, "SAFETY IN(ING 19)

=====  
===== Exposure Controls/Personal Protection =====

Respiratory Protection: USE NIOSH/MSHA APPROVED RESPIRABLE FUME RESPIRATOR OR AIR SUPPLIED RESPIRATOR WHEN WELDING I N CONFINED

SPACE OR WHERE LOCAL EXHAUST OR VENTILATION DOES NOT KEEP EXPOSURE BELOW RECOMMENDED EXPOSURE LIM IT.

Ventilation: USE ENOUGH VENT, LOCAL EXHAUST AT ARC, OR BOTH, TO KEEP FUMES & GASES FROM WORKER'S BREATHING ZONE & GENERAL AREA.

Protective Gloves: WELDER'S GLOVES.

Eye Protection: WEAR HELMET/FACE SHLD W/FILTER (ING 21)

Other Protective Equipment: WEAR HAND, HEAD & BODY PROT WHICH HELP TO PVNT INJURY FROM RADIA, SPKS & ELEC SHOCK. SEE ANSI Z49.1. AT MIN THIS(ING 23)

Wo rk Hygienic Practices: NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health

HAZ DECOMP PROD: OXIDES OF MANGANESE, SILICON, CHROMIUM, MOLYBDENUM ALONG W/FLUORIDES. COMPOSITION & QUALITY OF WELDING FUMES & GASES DEPEND ON METAL BEING WELDED, PROCESS, ELECTRODES, COATINGS ON META L BEING WELDED, WORK AREA CONDITIONS, ETC. GASEOUS PRODS MAY INCLUDE CARBON MONOXIDE & CARBON DIOXIDE. OZONE & (ING 18)

=====  
===== Physical/Chemical Properties =====

Appeara nce and Odor: NONE SPECIFIED BY MANUFACTURER.

=====  
===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid: YES  
NONE

Stability Condition to Avoid: NONE, UNLESS OTHERWISE SPECIFIED.

Hazardous Decomposition Products: REASONABLY EXPECTED FUME CONSTITUENTS OF THESE PRODS COULD INCL PRIMARILY OXIDES OF IRON; SECONDARILY COMPLEX (SUPDAT)

=====  
===== Disposal Considerations =====

Waste Disposal Methods: PREVENT WASTE FROM CO

## NTAMINATING SURROUNDING

ENVIRONMENT. DISCARD ANY PRODUCT RESIDUE IN DISPOSABLE CONTAINER OR LINER IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, IN FULL COMPLIANCE W/FEDERAL, STATE & LOCAL REGULATIONS.

Disclaimer (provided with this information by the compiling agencies):

This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims a

liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.