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===== Product Identification =====

Product ID:TIN/ANTIMONY (95/5) SOLDER ALLOY, EI-29777

MSDS Date:10/18/1991

FSC:3439

NIIN:01-324-0891

MSDS Number: BZMXS

=== Responsible Party ===

Company Name:ENGELHARD CORP

Address:235 KILVERT ST

City:WARWICK

State:RI

ZIP:02886

Country:US

Info Phone Num:401-739-9550

Emergency Phone Num:800-424-9300(CHEMTREC)

CAGE:ENGEL

=== Contractor Identificat

ion ===

Company Name:ENGELHARD CORP

Address:235 KILVERT ST

Box:City:WARWICK

State:RI

ZIP:02886

Country:US

Phone:401-739-9550

CAGE:86337

Company Name:ENGELHARD CORP

Address:29001 SOLON RD

City:SOLON

State:OH

ZIP:44139

Country:US

Phone:216-292-9200

CAGE:ENGEL

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

Ingred Name:TIN

CAS:7440-31-5

RTECS #:XP7320000

Fraction by Wt: 95%

OSHA PEL:2 MG/M3

ACGIH TLV:2 MG/M3

Ingred Name:ANTIMONY (SARA 313) (CERCLA)

CAS:7440-36-0

RTECS #:CC40

25000
Fraction by Wt: 5%
OSHA PEL:0.5 MG/M3
ACGIH TLV:0.5 MG (SB)/M3
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:SPILL PROC:PLAN SHOULD INCLUDE PROC APPLIC TO PROPER STOR,
CTL & CLEAN-UP OF SPILLS, INCLUDING REUSE/DISP AS (ING 4)
RTECS #:9999999ZZ

Ingred Name:ING 3:APPROP (SEE WASTE DISP METH). NOTE:IN EVENT OF
ACCIDENTAL REL OF MATL, SPILL PROC SHOULD BE FOLLOWED. (ING 5)
RTECS #:9999999ZZ

Ingred Name:ING 4:ADDNLY PROPER EXPOS CTLS & PERS PROT EQUIP SHOULD BE
USED (SEE
CTL MEASURES) & DISP OF MATL SHOULD BE IN (ING 6)
RTECS #:9999999ZZ

Ingred Name:ING 5:ACCORDANCE WITH WASTE DISPOSAL METHOD.
RTECS #:9999999ZZ

Ingred Name:WASTE DISP METH:TYPE OF DISP SELECTED. NOTE:CHEM ADDNS,
PROCESSING/OTHERWISE ALTERING MATL MAY MAKE WASTE (ING 8)
RTECS #:9999999ZZ

Ingred Name:ING 7:MANAGEMENT INFO PRESENTED INCOMPLETE,
INACCURATE/OTHERWISE INAPPROP. AS LOC REGS MAY VARY; ALL WASTE MUST
(ING 9)
RTECS #:9999999ZZ

Ingred Name:ING 8:BE DISPOSED/RECYCLED/RECLAIME
D IN ACCORDANCE WITH
FEDERAL, STATE AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS.
RTECS #:9999999ZZ

Ingred Name:OTHER PROT EQUIP:(SFTY IN WELDING & CUTTING) PUBLISHED BY
AMERICAN WELDING SOCIETY FOR FURTHER INFO OF SELECTION(ING 11)
RTECS #:9999999ZZ

Ingred Name:ING 10:OF PERSONAL PROTECTIVE EQUIPMENT.
RTECS #:9999999ZZ

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

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:YES Inges

tion:YES

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:EYE CONTACT:MAY CAUSE IRRITATION. SKIN CONTACT:MAY CAUSE IRRITATION. INHALATION:HARMFUL. CAN LEAD TO RESPIRATORY TRACT IRRITATION IF EXPOSURE IS PROLONGED OR EXCESSIVE. INGESTION:IS HARMFUL. CAUSES IRRITATION AND MAY CAUSE SYSTEMIC TOXICITY. NOTE:HLTH EFTS ONLY APPLY IF DUST/FUME IS FORMED. CHRONIC: (EFTS OF OVEREXP)

Explanation of Carcinogenicity:NOT RELEVANT

Effects of Overexposure:

re:HLTH HAZS:PRLNGD/RPTD INHAL MAY CAUSE LUNG DMG &/OR CNS DISTURBS. INHAL MAY CAUSE BENIGN PNEUMOCONIOSIS. PRLNGD OVEREXP TO ANTIMONY MAY LEAD TO LIVER, KIDNEY & CNS DMG. NOTE:HAZS OF ALL INGS OF PROD A RE NOT KNOWN, HOWEVER EXPOS IS NOT EXPECTED AS PROD IS IN SOLID FORM. TLV & POTNTL HLTH EFTS STATEMENTS ARE (SUPP DATA)

Medical Cond Aggravated by Exposure:MAY AGGRAVATE EXISTING MED CNDTNS SUCH AS RESP &/OR KIDNEY & LIVER AILMENTS. PERS W/PRE-EXISTING DISEASES OF CNS MAY HAVE INCR SUSCEPTIBILITY TO TOX OF EXCESSIVE EXPOSURE.

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

First Aid:EYE:FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF IRRITATION DEVELOPS, CALL A PHYSICIAN. SKIN:FLUSH WITH PLENTY OF WATER. IF IRRITATION PERSISTS, CALL A PHYSICIAN. INHALATION:IF EXPOSED TO EXCESSIVE LEVELS OF METAL FUMES, REMOVE TO FRESH AIR AND SEEK MEDICAL ATTENTION. INGESTION:PROCEDURES NORMALLY NOT NEEDED. IF LARGE QUANTITIES ARE INGESTED, SEEK MEDICAL ADVICE.

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

Extinguishing Media:USE CARBON DIOXIDE, CHEMICAL FOAM OR DRY CHEMICAL. USE ANY MEANS FOR EXTINGUISHING SURROUNDING FIRE.

Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT .

Unusual Fire/Explosion Hazard:NOT FIRE/EXPLO HAZ IN SOLID FORM. FINELY DIVIDED DUST MAY IGNITE & BURN RAPIDLY WHEN MIXED W/AIR IN PROPER PROPORTIONS. TOX METAL FUMES

MAY BE REL IN (SUP DAT)

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

Spill Release Procedures: CNTN SPILLAGE & SCOOP UP/VACUUM. NOTIFICATION OF NRC (800-424-8802) MAY BE REQ. REFER TO EPA, DOT & APPLIC STATE & LOC REGS FOR CURRENT RESPONSE INFO. IT IS REC THAT EACH USER ESTABLISH SPILL PREVENTION, CTL & COUNTERMEASURE PLAN (SPCC). SUCH(ING 3)

Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

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

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Handling and Storage Precautions: STORE IN A COOL, DRY LOCATION AWAY FROM INCOMPATIBLE MATERIALS. AVOID CONTACT WITH ANY DUSTS, MISTS OR FUMES RESULTING FROM THE USE OF THIS PRODUCT.

Other Precautions: DO NOT EAT, DRINK OR SMOKE IN WORK AREA. USE ONLY WITH ADEQUATE VENTILATION.

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

Respiratory Protection: A NIOSH/MSHA APPROVED RESPIRATOR AS NECESSARY.

Ventilation: GEN; LOC EXHST VENT AS NEC TO CTL ANY AIR CONTAMS TO W/IN

THEIR PELS/TLVS DURING USE OF THIS PROD.

Protective Gloves: IMPERVIOUS GLOVES .

Eye Protection: ANSI APPROVED CHEM WORKERS GOGGS .

Other Protective Equipment: ANSI APPRVD EMER EYEWASH & DELUGE SHOWER . BODY PROT AS NEC TO PVNT SKIN CONT. REFER TO ANSI/ASC Z49.1-88 (ING 10)

Work Hygienic Practices: WASH THOROUGHLY AFTER HANDLING.

Supplemental Safety and Health

BP: >2516F, >1380C. SPEC GRAV: 5.77-5.84 (H*2O=1). EXPLO HAZS: FIRE

SITUATION. EFTS OF OVEREXP: LISTED FOR INGS OF PROD FOR WHICH DATA

IS AVAIL IN SOLID FORM. IF DUST, POWDER/FUME IS GENERATED THEN TLVS & EFTS OF OVEREXP STATEMENTS WILL BE APPLIC.

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

Boiling Pt: B.P. Text: SUPP DATA

Melt/Freeze Pt: M.P/F.P Text: >450F, >232C

Spec Gravity: SUPP DATA

Solubility in Water: INSOLUBLE

Appearance and Odor: SILVER TO GREY METALLIC SOLID. ODORLESS.

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

Stability Indicator/Materials to Avoid: YE

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STRONG OXIDIZERS, ACIDS AND BASES, CHLORINE, TURPENTINE, NASCENT HYDROGEN, REDUCING AGENTS, HALOGENS.

Stability Condition to Avoid:NONE EXPECTED.

Hazardous Decomposition Products:TOXIC METAL OXIDES ARE EMITTED WHEN HEATED ABOVE THE MELTING POINT. AMOUNT OF FUME EVOLVED INCREASES AS TEMP RISES.

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

Waste Disposal Methods:FED, STATE & LOC DISP LAWS & REGS WILL DETERM PROPER WASTE DISP/RECYCLING/RECLAMATION PROC. AL

L WASTE MATLS

SHOULD BE REVIEWED DETERM APPLIC HAZS (TESTING MAY BE NEC). DISP REQS ARE DEPENDENT ON HAZ C LASSIFICATION & WILL VARY BY LOCATION &(ING 7)

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