

KESTER SOLDER DIVISION OF LITTON SYSTEMS, INC. -- SOLDER ALLOYS CONTAINING LEAD --
3439-01-307-6200

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

Product ID:SOLDER ALLOYS CONTAINING LEAD

MSDS Date:12/11/1998

FSC:3439

NIIN:01-307-6200

Status Code:A

MSDS Number: CLJJR

=== Responsible Party ===

Company Name:KESTER SOLDER DIVISION OF LITTON SYSTEMS, INC.

Address:515 E. TOUHY AVENUE

City:DES PLAINES

State:IL

ZIP:

60018

Country:US

Info Phone Num:847-297-1600

Emergency Phone Num:(800)424-9300

Resp. Party Other MSDS Num.:FORM NUMBER: 1F-RD-G-02-0

Preparer's Name:D. BERNIER

Chemtrec Ind/Phone:(800)424-9300

CAGE:75297

=== Contractor Identification ===

Company Name:KESTER SOLDER DIVISION OF LITTON SYSTEMS, INC.

Address:515 E. TOUHY AVENUE

Box:City:DES PLAINES

State:IL

ZIP:60018

Country:US

Phone:847-297-1600

CAGE:75297

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

Ingred Name:LEAD

CAS:7

439-92-1
RTECS #:OF7525000
Fraction by Wt: VARIES
OSHA PEL:0.05 MG/M3
ACGIH TLV:0.15 MG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:TIN
CAS:7440-31-5
RTECS #:XP7320000
Fraction by Wt: VARIES
OSHA PEL:2 MG/M3
ACGIH TLV:2 MG/M3

Ingred Name:SILVER
CAS:7440-22-4
RTECS #:VW3500000
Fraction by Wt: VARIES
OSHA PEL:0.01 MG/M3
ACGIH TLV:0.1 MG/M3
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:BISMUTH
CAS:7440-69-9
RTECS #:EB2600000
Fraction by Wt: VARIES

Ingred Name:ANTIMONY
CAS:7440-36-0
RTECS #
:CC4025000
Fraction by Wt: VARIES
OSHA PEL:0.5 MG/M3
ACGIH TLV:0.5 MG/M3
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:COPPER
CAS:7440-50-8
RTECS #:GL5325000
Fraction by Wt: VARIES
OSHA PEL:1 MG/M3
ACGIH TLV:0.2 MG.M3
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:INDIUM
CAS:7440-74-6
RTECS #:NL1050000
Fraction by Wt: VARIES
ACGIH TLV:0.1 MG/M3

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

LD50 LC50 Mixture:7.0 G/KG ORAL RAT FOR ANTIMONY
Reports of Carci

nogenicity:NTP:UNKNOWN IARC:YES

Health Hazards Acute and Chronic:TARGET ORGANS: INGESTION OF LEAD METAL CAN AFFECT KIDNEYS, GASTROINTESTINAL, REPRODUCTIVE AND NEUROLOGICAL SYSTEMS. ACUTE: INHALATION: OVER EXPOSURE TO LEAD MAY RESULT IN CENTRAL NERVOUS SYSTEM DISORDERS CHARACTERIZED BY DROWSINESS, SEIZURES, COMA AND DEATH. . EXPOSURE OF THIS MAGNITUDE IS UNLIKELY. SKIN: NONE. EYE: NONE. INGESTION: NOT LIKELY TO OCCUR, BUT WOULD HAVE SIMILAR EFFECTS AS INHALATION . CHRO

NIC: REPEATED INHALATION

OR INGESTION OF LEAD CAN RESULT IN SYSTEMIC POISONING.

Explanation of Carcinogenicity:LEAD & ITS COMPOUNDS HAVE BEEN PLACED IN CLASS 2B, PROBABLY CARCINOGENIC TO HUMANS BY EPA. IARC HAS PLACED LEAD & ITS COMPOUNDS IN CLASS 2B, POSSIBLY CARCINOGENIC TO HUMANS.

Effects of Overexposure:INHALATION: OVER EXPOSURE TO LEAD MAY RESULT IN CENTRAL NERVOUS SYSTEM DISORDERS CHARACTERIZED BY DROWSINESS, SEIZURES, COMA AND DEATH.

Medical Cond Aggravated by Exposure

:LEAD DISEASES OF THE BLOOD AND

BLOOD-FORMING ORGANS, KIDNEYS, NERVES AND POSSIBLY REPRODUCTIVE SYSTEMS.

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

First Aid:EYE: FOR BURNS FLUSH IMMEDIATELY WITH COOL WATER. SKIN: FOR BURNS FLUSH IMMEDIATELY WITH COOL WATER. INHALATION: REMOVE PERSON FROM EXPOSURE TO FUMES. INGESTION: IF THOUGHT TO BE OVEREXPOSED, THER PER SON SHOULD HAVE A BLOOD LEAD ANALYSIS DONE.

===== Fire Fighting Measures =

Flash Point Method:TOC

Flash Point:NA

Autoignition Temp:Autoignition Temp Text:NA

Lower Limits:NA

Upper Limits:NA

Extinguishing Media:WATER, CARBON DIOXIDE, ALCOHOL FOAM, DRY CHEMICAL

Fire Fighting Procedures:WEAR SELF CONTAINED BREATHING APPARATUS IF THIS MATERIAL IS IN THE VICINITY OF A FIRE.

Unusual Fire/Explosion Hazard:FLUX IN CORED SOLDER MAY IGNITE WHEN THE SOLDER MELTS IN A FIRE.

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

Spill Rel

ease Procedures:MELTED SOLDER WILL SOLIDIFY ON COOLING AND CAN BE SCRAPED UP. USE CAUTION TO AVOID BREATHING FUMES IF A GAS TORCH IS USED TO CUT UP LARGE PIECES.

Neutralizing Agent:NONE PROVIDED BY MFR

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

Handling and Storage Precautions:STORE AWAY FROM SOURCES OF SULFUR. WASH HANDS AFTER HANDLING SOLDER CONTAINING LEAD BEFORE EATING/SMOKING. AVOID BREATHING SMOKE/FUMES GENERATED DURING SOLDERING. DO NOT PLACE FLUX CORED SOLDER INTO HOT SOLDER POT AS FLUX MAY IGNITE. USE OF STRONG ACID FLUXES MAY LIBERATE TOXIC LEAD CHLORIDE FUMES.

Other Precautions:CAUTION: EMPTY CONTAINERS MAY CONTAIN PRODUCT RESIDUE. OBSERVE ALL LABEL PRECAUTIONS.

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

Respiratory Protection:WHEN VENTILATION IS NOT SUFFICIENT TO REMOVE FUMES FROM THE BREATHING ZONE, A NIOSH APPROVED RESPIRATOR SHOULD BE WORN.

Ventilation:PROVIDE ADEQUATE EXHAUST VENTILATION (GENERAL AND/OR LOCAL) TO MEET EXPOSURE REQUIREMENTS. LOCAL EXHAUST VENTILATION PREFERRED TO MINIMIZE SMOKE/FUMES.

Protective Gloves:USUALLY NOT REQUIRED

Eye Protection:WHEN SOLDERING, USE GOGGLES OR FACE SHIELD

Other Protective Equipment:NONE

Work Hygienic Practices:WASH HANDS THOROUGHLY AFTER HANDLING SOLDER CONTAINING LEAD BEFORE EATING OR SMOKING.

Supplemental Safety and Health

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

HCC:N1

Boiling Pt:B

.P. Text:NA

Melt/Freeze Pt:M.P/F.P Text:NE

Decomp Temp:Decomp Text:NONE PROVIDED BY MFR

Vapor Pres:NA

Vapor Density:NA

Spec Gravity:>1(WATER=1 @ 25 DEG C)

pH:NA

Viscosity:NONE PROVIDED BY MFR

Evaporation Rate & Reference:NA

Solubility in Water:0

Appearance and Odor:SILVER-GRAY METAL IN BAR, WIRE, RIBBON, OR PREFORMED SHAPES, NO ODOR

Percent Volatiles by Volume:NA

Corrosion Rate:NONE PROVIDED BY MFR

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

Stability Indicator/

Materials to Avoid: YES

STRONG ACIDS, STRONG OXIDIZERS

Stability Condition to Avoid: NONE

Hazardous Decomposition Products: NO LEAD OR ANTIMONY ARE DETECTED IN FUMES FROM SOLDERING BELOW 1000 DEG F (537 DEG C). MELTED SOLDER ABOVE 1000F WILL LIBERATE HIGHLY TOXIC LEAD AND OR ANTIMONY FUMES

===== Toxicological Information =====

Toxicological Information: NOT PROVIDED

===== Ecological Information =====

Ecological: NOT PROVIDED

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

Waste Disposal Methods: SOLDER CAN BE RECLAIMED

===== MSDS Transport Information =====

Transport Information: NOT PROVIDED

===== Regulatory Information =====

SARA Title III Information: LEAD, SILVER, ANTIMONY ARE SUBJECT TO REPORTING REQUIREMENTS OF SECTION 313 OF SARA.

Federal Regulatory Information: NOT PROVIDED

State Regulatory Information: PRODUCT CONTAINS LEAD WHICH IS KNOWN TO

STATE OF CALIFORNIA TO CAUSE CANCER & BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

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 all 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.