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TARACORP INDUSTRIES INC.

1200 16th. Street • Granite City, IL 62040-4495

01-29-04

MATERIAL SAFETY DATA SHEET
This Material Safety Data Sheet complies with the U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and the Hazardous Products Act of the Canada Labour Code.

PRODUCT: TIN/LEAD SOLDER ALLOY (FABRICATIONS/FORMS) CODE: 1001

COMMON NAME OR SYNONYMS: Tin/Lead formulation, Tin/Lead/Bismuth formulation and Tin/Lead/Silver formulation (<1% Silver content) solders or alloys in the following forms: wire, ingot, pig, sheet, cake, rod, tubing, anodes, cast or extruded and ribbon. Includes trade name products: Taremet or Dutch Boy 50/50 or 60/40, Kwik Melt (38% Sn/62% Pb), Dutch Boy 111 (50% Sn/50% Pb), Taremet 2000 (63% Sn/37%Pb), and Fusible Alloy.

NFPA/HMIS HAZARD CODES: HEALTH: 1/1 FIRE: 0/0 REACTIVITY: 0/0 SPECIAL: NA

0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

SECTION I

MANUFACTURERS NAME: Taracorp Industries, Inc.
1200 16th Street
Granite City, IL 62040-4495 USA

INFORMATION PHONE: 618/451-4400
EMERGENCY PHONE (TARACORP): 618-451-4400
PREPARATION DATE: April 1993

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	CAS NO.	US-NIOSH RTECS NO.	US OSHA 8-HR AL	US OSHA 8-HR PEL	ACGIH 8-HR TLV	WT. PERCENT (1)
Lead	7439-92-1	OF7525000	0.03 mg/m3	0.05 mg/m3	0.15 mg/m3	1.5 - 98.5
Tin	7440-31-5	XP7320000	NE	2.0 mg/m3	2.0 mg/m3	1.5 - 98.5

NOTE(S): (1) Product formulation is to customer specification and appears on product packaging and/or packing slip. Trade name product formulation follows the trade name in the "Synonyms Listing" at top of page.

NE = None Established AL = Action Level PEL = Permissible Exposure Limit TLV = Threshold Limit Value

SECTION III - PHYSICAL DATA

APPEARANCE & ODOR (AT NORMAL CONDITIONS): Solid - silver metallic to gray metallic metal - no odor.
SPECIFIC GRAVITY (H20 = 1) : 5.83 - 11.27
MELTING POINT (DEGREES C) : Alloy Specific Dependent - Constituents: Lead - 328 Tin - 232
BOILING POINT (DEGREES C) : Alloy Specific Dependent - Constituents: Lead - 1744 Tin - 2260
SOLUBILITY IN WATER : Insoluble

*** SECTION IV - FIRE & EXPLOSION HAZARD DATA***

FLASH POINT : Non-Flammable
FLAMMABLE LIMITS : Not Applicable
EXTINGUISHING MEDIA : No specific agents recommended
SPECIAL FIRE FIGHTING PROCEDURES: If involved in fire, use full protective clothing and NIOSH/MSHA approved self-contained breathing apparatus operated in a positive-pressure mode.
UNUSUAL FIRE & EXPLOSION HAZARDS: The solid metal form is not a fire hazard. However, dust generated from processing operations may present a moderate fire or explosion hazard.

SECTION V - REACTIVITY DATA

STABILITY : Stable
CONDITIONS TO AVOID : Strong Acids and Oxidizers, Hydrogen Peroxide, Chlorine, Turpentine, Active Metals - Sodium, Potassium. Powdered lead or bismuth fused with ammonium nitrate may cause a violent reaction. NEVER mix molten metal with water - it will explode.
HAZARDOUS DECOMPOSITION PRODUCTS: At temperatures above the melting point metal oxide fumes may be evolved.
HAZARDOUS POLYMERIZATION : Will not occur.

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SECTION VI - HEALTH HAZARD DATA

NOTE: EXPOSURE TO THE SOLID FORM OF THIS PRODUCT PRESENTS FEW HEALTH HAZARDS IN ITSELF. HOWEVER, NORMAL HANDLING OR PROCESSING OF THIS MATERIAL MAY RESULT IN THE GENERATION OF LEAD AND TIN DUSTS AND/OR FUMES, WHICH MAY PRESENT A POTENTIAL HEALTH HAZARD.

ROUTES OF ENTRY : Dust/fume inhalation, dust ingestion.

SYMPTOMS & EFFECT OF OVEREXPOSURE: Chronic (prolonged) overexposure to lead can result in systemic lead poisoning with symptoms of metallic taste, anemia, insomnia, weakness, constipation, abdominal pain, gastrointestinal disorders, joint and muscle pains, and muscular weakness, and may cause damage to the blood-forming, nervous, kidney, & reproductive systems. Damage may include reduced fertility in both men and women, damage to the fetus of exposed pregnant women, anemia, muscular weakness & kidney dysfunction. Chronic overexposure to tin can result in benign pneumoconiosis (Stannosis). This form of pneumoconiosis produces progressive x-ray changes of the lungs as long as exposure exists, but there is no distinctive fibrosis, no evidence of disability and no special complicating factors.

Acute (Severe short-term) overexposure to lead may lead to central nervous system disorders, characterized by drowsiness, seizures, coma & death. It should be recognized that exposures of this magnitude in an industrial environment are extremely unlikely. Acute overexposure to tin can cause irritation of the eyes, skin, mucous membranes and respiratory system.

Bismuth Content Note - Should the alloy specification call for bismuth content - No recognized or reported ill effects in an industrial environment have been traced to Bismuth metal. All reported toxicity data has been determined on soluble (organic) bismuth pharmaceuticals that are no longer used.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE : Pre-existing conditions of the lungs, diseases of the blood and blood-forming organs, kidneys, nervous and possibly reproductive systems.

CARCINOGENICITY : Not listed as a carcinogen by NTP, OSHA, ACGIH; IARC classifies "lead and its compounds" as a Group 2B carcinogen (possibly carcinogenic to humans).

ADDITIONAL INFORMATION : In industrial/commercial processing operations, pre-employment medical evaluations are recommended for large users of this product (required at contaminant exposure levels exceeding the Lead AL - See U.S. OSHA Lead Standard 29 CFR 1910.1025). Attention should be directed to skin, eyes, respiratory tract, blood, kidneys, pulmonary function and neurological health.

Periodic medical examinations should be repeated on an annual basis for those employees exposed to potentially hazardous levels of this product. Please consult the U.S. OSHA Lead Standard (29 CFR 1910.1025) for specific guidance; periodic medical examinations are required under certain circumstances.

U.S. OSHA Biological Limit for Blood Lead Level is a 3 sample/6 month average of 50 mcg per 100g (or higher) of whole blood and/or two (2) consecutive samples of 60 mcg per 100g (or higher). See U.S. OSHA Standard 29 CFR 1910.1025 for further information.

Lead and its compounds has tentatively been classed by the USEPA Carcinogen Assessment Group as a Group B2 Carcinogen (Probable human carcinogen - a combination of sufficient evidence in animals and inadequate data for humans). IARC lists lead and its compounds as a teratogen.

EMERGENCY & FIRST AID PROCEDURES:

- **SKIN** : Normal hygiene and first aid procedures - wash with soap and water.
- **EYES** : Flush well with running water to remove particulate. If irritation persists get medical attention.
- **ACUTE INHALATION:** Remove from exposure. Obtain immediate medical attention. If breathing has stopped, initiate artificial resuscitation.
- **INGESTION** : Give water; induce vomiting only in a conscious non-convulsing individual; obtain immediate medical attention.

SECTION VII - PROTECTION MEASURES

RESPIRATORY PROTECTION : Respiratory protection is required where airborne exposures exceed U.S. OSHA/ACGIH permissible air concentrations. Respirator selection shall be made in accordance with the U.S. Occupational Exposure Standard for Lead, 29 CFR 1910.1025 and the Respiratory Protection Standard 29 CFR 1910.134.

VENTILATION : Good general dilution ventilation, or ventilation, as described in "Industrial Ventilation, A Manual of Recommended Practice", by the American Conference of Governmental Industrial Hygienists, is recommended in order to maintain exposure levels below the permissible exposure limits (PEL's) or threshold limit values (TLV's) specified by U.S. OSHA or other local or state regulations.

PROTECTIVE GLOVES : Recommended for prolonged contact/heat. Required above the Lead PEL.

EYE PROTECTION : Safety glasses or goggles are recommended where the possibility exists of getting dust particles in the eyes. Safety glasses or goggles with faceshield are recommended around molten metal.

OTHER PROTECTIVE EQUIPMENT : Full protective clothing and shoes are required for employee exposure above the Lead PEL. Other safety equipment should be worn as appropriate for the work environment. Keep work clothing separate from street clothes.

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SECTION VII - PROTECTION MEASURES (CONTINUED)

WORK/HYGIENIC PRACTICES : Do not permit eating, drinking, or the use of cosmetics or tobacco products while handling or processing material or in product work areas. Practice good personal hygiene procedures. Wash hands and face thoroughly before eating, drinking, applying cosmetics or using tobacco products. Full protective clothing is to be worn by workers exposed to concentrations of lead dust/fume above the PEL, and showering is required before changing into street clothes. Keep work clothing seperate from street clothes. Work clothes and equipment should remain in designated solder contaminated areas and never taken home or laundered with personal clothing. Avoid inhalation and ingestion of product, and activities which generate dust or fume. Keep melting/soldering temperatures as low as possible to minimize the generation of fume.

SECTION VIII - PRECAUTIONS FOR SAFE HANDLING & USE

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING : Practice good housekeeping procedures to prevent dust accumulations. Keep material dry. Avoid storage near incompatible materials (See Section V). Keep product away from children and their environment, feed products, food products and domestic animals.

OTHER PRECAUTIONS : Special attention is drawn to the requirements of the U.S. OSHA Lead Standard (29 CFR 1910.1025) and Respirator Standard (29 CFR 1910.134) should airborne exposures exceed the U.S. OSHA Action Level (AL) or PEL. Protect product from inadvertent contamination. Inadvertent contaminants to product such as moisture, ice, snow, grease or oil can cause an explosion when charged to a molten metal bath or melting furnace. (Preheating metal will remove moisture from product).

SECTION IX - SPILL OR LEAK PROCEDURES

SPILL OR LEAK PROCEDURES: 1) Material in dust form - minimize exposure. Clean up using dustless methods (e.g. HEPA vacuum). Do not use compressed air. 2) Place in closed labeled containers for recycling or disposal. 3) Keep out of waterways.
Note: Clean-up personnel should wear protective clothing and respiratory protection where dust/fume exposure exists.

OTHER PROCEDURES : For large product users or involving large product quantities, we recommend that the purchaser establish a spill prevention, control and counter measure plan. This plan should include procedures for proper storage as well as clean-up of spills or leaks. The procedures should conform to safe practices and provide for proper recovery and/or disposal. Depending on the quantity spilled, notification to the U.S. National Response Center (800-424-8802) may be required in case of hazardous substances. (See USEPA and USDOT regulations; also various state and local regulations.)

WASTE DISPOSAL METHODS : May have value on a recycled basis. If disposed of, dispose of in a permitted disposal site in accordance with all federal, state and local disposal or discharge regulations. Under the U.S. Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the Product to determine, at the time of disposal, whether the Product falls under the RCRA as a hazardous waste. This is because Product uses, transformations, synthesis, mixtures, etc. may cause the resulting end-product to be classified as hazardous.

SECTION X - UNITED STATES SARA TITLE III INFORMATION

THIS PRODUCT/MIXTURE CONTAINS THE FOLLOWING TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE U.S. SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) OF 1986 AND 40 CFR PART 372. THE PERCENT BY WEIGHT OF EACH TOXIC CHEMICAL AND ITS ASSOCIATED CHEMICAL ABSTRACT SYSTEM (CAS) NUMBER ARE TO BE FOUND IN SECTION II OF THIS MATERIAL SAFETY DATA SHEET.

CHEMICAL NAME	EHS RQ (LBS) (*1)	EH TPQ (LBS) (*2)	SEC. 313 (*3)	313 CATEGORY (*4)	311/312 CATEGORIES (*5)
Lead	Not Applicable	Not Applicable	Yes	Lead	H-1, H-2

FOOTNOTES

*1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SECTION 302.
*2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE, SECTION 302.
*3 = TOXIC CHEMICAL LIST, SECTION 313
*4 = CHEMICAL CATEGORY AS REQUIRED BY SECTION 313 (40 CFR 372.42). SUBJECT TO ANNUAL RELEASE REPORTING REQUIREMENTS.
*5 = HAZARD CATEGORY FOR SARA SECTION 311/312 REPORTING:
HEALTH H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD
H-2 = DELAYED (CHRONIC) HEALTH HAZARD
PHYSICAL P-3 = FIRE HAZARD
P-4 = SUDDEN RELEASE OF PRESSURE HAZARD
P-5 = REACTIVE HAZARD

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SECTION XI - UNITED STATES CERCLA SECTION 103 INFORMATION

THIS MIXTURE CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE RELEASE REPORTING REQUIREMENTS OF SECTION 302.

CHEMICAL NAME	RQ(LBS (*1))	
Lead	1.0	CERCLA STATUTORY RQ

FOOTNOTES

*1 = REPORTABLE QUANTITY (RQ) UNDER CERCLA SECTION 302. SPILLS TO THE ENVIRONMENT EXCEEDING THE REPORTABLE QUANTITY IN ANY 24 HOUR PERIOD MUST BE REPORTED TO THE U.S. NATIONAL RESPONSE CENTER (800-424-8802). NO REPORTING OF RELEASES OF THE HAZARDOUS SUBSTANCE(S) IS REQUIRED IF THE DIAMETER OF THE PIECES OF THE SOLID METAL(S) RELEASED IS EQUAL TO OR EXCEEDS 100 MICROMETERS (0.004 INCHES).

SECTION XII - USDOT TRANSPORTATION INFORMATION (172.10)

DOT SHIPPING NAME: This product is not regulated by the USDOT as shipped
HAZARD CLASS : Not Applicable
UN/ID NO. : Not Applicable
DOT LABEL(S) : Not Applicable

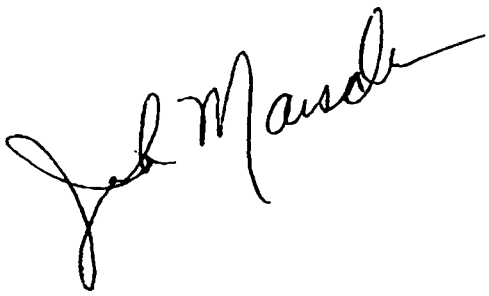
SECTION XIII - ADDITIONAL INFORMATION

UNITED STATES - CLEAN WATER ACT: The use of this solder in making joints or fittings in any private or public potable water supply system is prohibited by the Clean Water Act.

UNITED STATES - STATE HAZARDOUS SUBSTANCE LISTS: Lead and Tin appear on the state hazardous substance lists of MA and NJ. Lead appears on the California Safe Drinking Water and Toxic Enforcement Act of 1986 Chemical List.

CANADA - HPA WHMIS LIST: Lead appears on the Canadian HPA WHMIS Chemical List.

This Material Safety Data Sheet is offered solely for your information, consideration and investigation. Teracorp Industries, Inc. provides no warranties, either express or implied, and assumes no responsibilities for the accuracy or completeness of the data contained in this document. The data in this Material Safety Data Sheet relates only to this product and does not relate to use in combination with any other material or in any process.



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