



AMERICAN TIN & SOLDER

Safety Data Sheet

281 Alloy

Section 1: Chemical Product and Company Identification

Product Name: 281 Alloy

Recommended Use: Soldering, Pouring

CAS# Bismuth (Bi) 7440-69-9

Tin (Sn) 7440-31-5

Chemical Family: Bismuth Based Alloy

Chemical Formula: Bi,Sn

Contact Information:

American Tin & Solder, Inc.

82 Aldrich Street

Providence, RI 02905

Phone: 401-456-0900 1-800-292-3418

Chemtrec(24hr Emergency Telephone), call

1-800-424-9300

For non-emergency assistance call,

401-456-0900

Section 2: Hazards Identification

Potential Acute Health Effects:

Health:

Can cause serious eye irritation

Prevention: Wash exposed skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective eye and face protection.

PHYSICAL APPEARANCE: Gray viscous material

IMMEDIATE CONCERNS: Causes eye irritation. Fumes from the process are irritating to the eyes and respiratory system. Hot metal can cause eye and skin burns. Avoid breathing fumes from the process. Use only with adequate ventilation.

MEDICAL CONDITIONS AGGRAVATED: May aggravate pre-existing eye disorder, skin conditions, liver disorders, kidney disorders, respiratory disorders.

ROUTES OF ENTRY: Potential routes of entry include: eye contact, skin contact, inhalation of metallic fume and decomposition products from heating this material during the process.

3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS#	% BY WEIGHT
Bismuth	7440-69-9	58
Tin	7440-31-5	42

4. FIRST AID MEASURES

EYES: Remove contact lenses. Hold eyelids apart. Immediately flush eyes with plenty of low-pressure water for at least 15 minutes. Get Medical attention if irritation persists.

SKIN: Immediately remove contaminated clothing. Do not attempt to remove any material bonded to the skin. Flush area of skin contact immediately with large amounts of water for at least 15 minutes. If irritation persists after flushing, get medical attention promptly. Launder contaminated clothing before reuse.

INGESTION: If swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

INHALATION: Remove victim to fresh air. If not breathing, trained personnel may give artificial respiration. If breathing is difficult, give oxygen by trained personnel. Seek medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Eye contact may cause: irritation and/or burning sensation.

SKIN: May cause skin irritation. Hot molten metal may cause burns to the skin.

INGESTION: If swallowed, this product may cause gastrointestinal discomfort, nausea, vomiting.

INHALATION: Inhalation of powder, dust or fumes may be irritating to the respiratory system.

NOTES TO PHYSICIAN: Treat symptomatically.

5. FIRE FIGHTING MEASURES

EXTINGUISHING HAZARDS: For fires, use dry chemical, carbon dioxide, foam, water spray. Do not use metal if metal is molten.

EXPLOSION HAZARDS: This material is classed as a non-flammable solid. Not considered a fire hazard.

FIRE FIGHTING PROCEDURES: Move container from fire area. Avoid inhalation of vapors or mists.

FIRE FIGHTING EQUIPMENT: Exposure to decomposition products may be hazard to health. Do not breathe smoke, gases or vapors. Wear goggles for eye protection. Wash away any material that comes in contact with body, clothing or equipment. If fire wear full protective gear. For fires in closed areas firefighters must use self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

LARGE SPILL: Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV.

GENERAL PROCEDURES: Waste disposal method: Scoop up excess material and wash affected area with soap and water thoroughly. Avoid contact with skin and eyes. Collect material into sealed and labeled containers. Dispose in accordance with federal, state and local regulations.

SPECIAL PROTECTIVE EQUIPMENT: Avoid inhaling, do not get spilled material on skin, clothing or in eyes. Wear full protective clothing and remove all contaminated clothing.

7. HANDLING AND STORAGE

HANDLING: Keep away from sources of ignition.

STORAGE: Keep lid tightly close except when removing product. Keep container in a cool, well-ventilated area. Do not store above 25°C (77°F).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Use process enclosure, local exhaust ventilation, or engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

PERSONAL PROTECTION: Safety glasses, avoid skin contact, where hot metallic parts are handled and molten metal may be present, wear heat resistant glove and clothing to protect from burns.

WORK HYGIENIC PRACTICES: Minimize exposure in accordance with good hygiene practice. Good hygienic practices include: eating, drinking, and smoking should not be permitted in work areas. Wash thoroughly after handling and before eating, drinking using the bathroom. Remove contaminated clothing promptly. Launder contaminated clothing before reuse. Avoid contact with eyes, skin and clothing. Avoid breathing dust, vapor or mist.

U.S.TVL	U.S.PEL
TIN 2.0 MG/M3	TIN 2.0 MG/M3
BISMUTH NO DATA	BISMUTH NO DATA

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance: Bar, Ingot

Odor: Odorless

Color: Metallic Silver

Ph: NA

Melting Point: 138°C 281°F

Boiling Point: Unknown

Solubility in Water: Nil

Specific Gravity: 7.38

Vapor pressure: Unknown

Vapor Density: Unknown

10. STABILITY AND REACTIVITY

REACTIVITY: This material is not expected to be reactive at ambient conditions.

Hazardous polymerization: Will not occur.

Stability: Stable under normal conditions of use.

10. STABILITY AND REACTIVITY (CONT)

CONDITIONS TO AVOID: Avoid contact with incompatible materials. Avoid extreme heat. Avoid prolonged exposure to air and moisture.

INCOMPATIBLE MATERIALS: acids, alkalis, oxidizing agents, strong oxidizers, strong acids, strong bases, materials reactive with hydroxyl compounds, potassium, chlorate, bromine trifluoride, bromine pentafluoride, hydrogen cyanide, strong alkalis, halogens, cupric nitrate, peroxides, sulfur, interhalogens, aluminum, ammonium nitrate.

11. TOXICOLOGICAL INFORMATION

SENSITIZATION: This material is not expected to be a skin or respiratory sensitizer.

REPRODUCTIVE EFFECTS: This material was not made with any components identified as a reproductive toxin.

TARGET ORGANS: Affected target organs: eyes, skin, liver, kidneys, respiratory system, mucous membranes.

MUTAGENICITY: This material was not made with components identified as being mutagenic.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: Not available

BOD5 and COD: Not available

DISTRIBUTION: Not available

AQUATIC TOXICITY (ACUTE): Not available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of in accordance with federal, state and local environmental control regulations.

PRODUCT DISPOSAL: Disposal of waste material from the use of this product subject to federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

OTHER SHIPPING INFORMATION: Not restricted for transport

AIR: Not restricted for transport

VESSEL: Not restricted for transport

COMMENTS: This product is classified for transport per US DOT.

15. REGULATORY INFORMATION

HMIS (U.S.A):

HEALTH HAZARD: 0

FIRE HAZARD: 0

REACTIVITY: 0

PERSONAL PROTECTION:

16. OTHER INFORMATION

CREATED: December 3, 2015

LAST UPDATED: December 3, 2015

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