

# MATERIAL SAFETY DATA SHEET

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## Section 1. Chemical Product and Company Identification

Product Code

Product Name

BISMUTH/TIN ALLOY, METSPEC™ 281/338

Manufacturer's Name

MCP Metalspecialties, Inc.

Emergency Telephone Number

203-384-0331

Address (Number, Street, City, State, and ZIP Code)

515 Commerce Drive

Telephone Number For Information

203-384-0331

Date Prepared

3-29-07

Signature of Preparer (optional)

Fairfield, CT 06432-5593

## Section 2. Composition / Information on Ingredients

Component	CAS Registry #	wt. %	Exposure Limits	
			ACGIH TLV	OSHA PEL
Bismuth	7440-69-9	40	N.A.	N.A.
Tin	7440-31-5	60	2.0	2.0

## Section 3. Hazards Identification

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### EMERGENCY OVERVIEW

As shipped this product does not present special health hazards. Conditions and work practices which generate dust or fumes should be avoided or controlled. Dust and fumes may cause health effects.

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### POTENTIAL HEALTH EFFECTS:

**EYE CONTACT:** Direct contact may cause local irritation.

Symptoms are more severe from prolonged overexposure.

**INHALATION: ACUTE:** Excessive inhalation of fumes from many metals can produce an acute reaction known as "Metal Fume Fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms) which come on a few hours after large exposures. Long term effects of metal fume fever have not been noted.

Chronic inhalation of Tin Oxide dust or fume leads to a benign pneumoconiosis without symptoms of interference with pulmonary function.

**SKIN CONTACT:** Direct contact may cause local irritation. Symptoms are more severe from prolonged overexposure.

**INGESTION:** Bismuth, Tin and Indium are not considered toxic.

### CHRONIC EFFECTS / CARCINOGENICITY:

Chronic inhalation of Tin Oxide dust or fume leads to a benign pneumoconiosis without symptoms of interference with pulmonary function.

**TERATOLOGY (BIRTH DEFECT) INFORMATION:** Not Applicable

**REPRODUCTION INFORMATION:** Not Applicable

## Section 4. First Aid Measures

REMOVE FROM EXPOSURE IMMEDIATELY CONTACT PHYSICIAN IN ALL CASES.

**INHALATION:** If symptoms of respiratory distress occur or there is a known exposure to dense fume, place individual at bed rest. Administer oxygen in the event of breathing difficulty.

**EYE CONTACT:** Flush with plenty of water for 15 minutes. Contact Physician immediately.

**SKIN CONTACT:** Flush with plenty of water for 15 minutes. Remove contaminated clothing and launder before re-use.

INGESTION: Induce vomiting in a conscious individual. Contact Physician immediately.

### Section 5. Fire Fighting Measures

#### FLAMMABLE PROPERTIES:

FLASH POINT: Not Applicable

METHOD USED: Not Applicable

#### FLAMMABLE LIMITS

LFL: Not Applicable

UFL: Not Applicable

EXTINGUISHING MEDIA: Carbon dioxide, foam or dry chemical. NEVER USE WATER ON MOLTEN METAL.

FIRE & EXPLOSION HAZARDS: None known.

FIRE FIGHTING INSTRUCTIONS: Never use water on molten metal.

Cover small fires with sand.

FIRE FIGHTING EQUIPMENT: Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing if involved in fire.

### Section 6. Accidental Release Measures

Sweep or scoop up spilled material. For dust, do not clean with compressed air.

Any method of cleanup which minimizes dust is acceptable. Wear approved respiratory protection if the possibility of dust or fume exists. Return spilled material to supplier for reclaim.

### Section 7. Handling and Storage

HANDLING: Use of approved respirators is required for applications where adequate ventilation cannot be provided. Activities which generate dust or fume should be avoided. When melted, the temperature should be kept as low as possible.

PREVENTATIVE HYGIENE IS EXTREMELY IMPORTANT. Do not ingest. Do not breathe dust.

No smoking, eating or nail biting in work area. Wash thoroughly before smoking or eating. Shower and change clothes at end of shift. Do not wear contaminated clothes home. Launder clothing before re-use. Do not use compressed air to remove dust from clothing.

STORAGE: Store away from acids in sealed containers in cool, dry location.

### Section 8. Exposure Controls / Personal Protection

ENGINEERING CONTROLS: Local exhaust ventilation is recommended for dust and/or fume generating operations where airborne exposures may exceed permissible air concentration.

RESPIRATORY PROTECTION: Where airborne exposures may exceed OSHA/ACGIH permissible air concentrations, the minimum respiratory protection recommended is a negative pressure air purifying respirator with cartridges that are NIOSH/MSHA approved against dust, fumes and mists having a TWA less than 0.05 mg/cu.m.

SKIN PROTECTION: Wear full cover clothing and gloves to minimize skin contact.

EYE PROTECTION: Safety glasses recommended where the possibility of getting dust particles in eyes exists

EXPOSURE GUIDELINE (S): Tin 2 mg/cu.m.

Bismuth Not Applicable

### Section 9. Physical and chemical Properties

APPEARANCE: Silver white

PHYSICAL STATE: Solid

BOILING POINT: Bismuth 1630° C

SOLUBILITY IN WATER: Insoluble

EVAPORATION RATE: Not Applicable

SPECIFIC GRAVITY: 8.21

FREEZING POINT: 281° F

VAPOR DENSITY: Not Applicable

MELTING POINT: 338° F

VAPOR PRESSURE: Not Applicable

MOLECULAR WEIGHT: Not Applicable

VISCOSITY: Not Applicable

ODOR: None

% VOLATILE: Not Applicable

pH: Not Applicable

### Section 10. Stability and Reactivity

CHEMICAL STABILITY: Stable

INCOMPATIBILITY: Avoid contact with acids and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxide fumes upon over-heating.

HAZARDOUS POLYMERIZATION: Will not occur.

### Section 11. Toxicological Information

EYE: Not Applicable

SKIN: Not Applicable

ROUTES OF ENTRY: Ingestion. Inhalation

Chronic inhalation of Tin Oxide dust or fume leads to a benign pneumoconiosis without symptoms of interference with pulmonary function.

CHRONIC/CARCINOGENICITY: Bismuth and Tin are not indicated as possible carcinogens.

Chronic inhalation of Tin Oxide dust or fume leads to a benign pneumoconiosis without symptoms of interference with pulmonary function.

TERATOLOGY: Not Applicable

REPRODUCTION: Not Applicable

MUTAGENICITY: Not Applicable

SENSITIZATION: Not Applicable

### Section 12. Ecological Information

ECOTOXICOLOGICAL INFORMATION: Not Applicable

FATE INFORMATION: Not Applicable

### Section 13. Disposal Considerations

Collect used and scrap material for reclaim. Return to supplier for reclaim or reprocessing.

### Section 14. Transport Information (Not meant to be all inclusive)

D.O.T. SHIPPING NAME: White metal, NIOBN

TECHNICAL SHIPPING NAME: Bismuth/Tin Alloy

D.O.T. HAZARD CLASS: Non Hazardous

UN/NA NUMBER: Not Applicable

PRODUCT RQ(LBS): Not Applicable

D.O.T. LABEL: None

D.O.T. Placard: None

FREIGHT CLASS: Class 70

PRODUCT LABEL: Bismuth/Tin Alloy