



MATERIAL SAFETY DATA SHEET

Forms published by WindowChem (707)864-0845

Section 1. Chemical Product and Company Identification

Product Code

Product Name

METSPEC 158 BISMUTH, LEAD, TIN, CADMIUM ALLOY

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

1/1/2008

Signature of Preparer (optional)

Fairfield, CT 06825-5593

Section 2. Composition / Information on Ingredients

Component	CAS Registry #	wt. %	Exposure Limits	
			ACGIH TLV	OSHA PEL
Bismuth	7440-69-9	50	None	10 $\mu\text{g}/\text{m}^3$ total particulate
Lead	7439-92-1	26.7	0.05 mg/m^3	50 $\mu\text{g}/\text{m}^3$
Tin	7440-31-5	13.3	None	None
Cadmium	7440-43-9	10	10 $\mu\text{g}/\text{m}^3$	5 $\mu\text{g}/\text{m}^3$

Section 3. Hazards Identification

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.

Repeated exposure to a toxic material may produce general deterioration of health by an

accumulation in one or many human organs.

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: Direct contact may cause local irritation.

Symptoms are more severe from prolonged overexposure.

INHALATION: ACUTE: Symptoms not visible until 12 - 36 hours: headache, dizziness, irritability, gastrointestinal disturbances, nausea, vomiting, abdominal spasms, severe chest pain and constriction; cough with hemoptysis; shortness of breath; fever, shivering, profuse sweating, weight loss, prostration, pneumonitis, (inflammation of the lungs), pulmonary edema, fatigue and pains in joints, legs and arms.

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

INGESTION: Symptoms usually occur in 15 - 30 minutes; salivation, nausea, vomiting, abdominal pain, diarrhea, dizziness, unconsciousness. Chronic over-exposure to Lead

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.

FORMTEXT

EXPOSURE GUIDELINE (S): FORMTEXT Lead: OSHA - 0.05 mg/cu.m. ACGIH - 0.15 mg/cu.m.

FORMTEXT Cadmium:

ACGIH - TLV-TWA 0.01 mg/cu.m.

for total dust

FORMTEXT ACGIH -

TLV-TWA 0.002 mg/cu.m. for

respirable dust and

fumes. FORMTEXT

Section 9. Physical

and chemical

Properties **APPEARANCE :**

FORMTEXT Silver white

PHYSICAL STATE :

FORMTEXT

Solid BOILING POINT

: Cd 1409° F **SOLUBILITY**

IN WATER

: Insoluble **EVAPORATI**

ON RATE :

EVAPORATION RATE: Not Applicable

SPECIFIC GRAVITY: 9.6

FREEZING POINT: 158° F

VAPOR DENSITY: Not Applicable

MELTING POINT: 158° 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

Contact of Cadmium with hydrazoic acid (HN₃) may result in explosion.

INCOMPATIBILITY: Contact with oxidizers may cause a violent reaction.

Cadmium will react violently with potassium.

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

Repeated exposure to a toxic material may produce general deterioration of health by an accumulation in one or many human organs.

The following organs are sensitive to acute and chronic overexposure of cadmium: respiratory system, bone structure, kidneys, prostate and blood. Chronic overexposure to cadmium may produce these signs and symptoms: shortness of breath, cough, osteoporosis and proteinuria.

Workers with the following conditions warrant particular attention: Osteoporosis, chronic kidney disease and emphysema.

CHRONIC/CARCINOGENICITY: Cadmium: Carcinogenic effects proven by IARC

TERATOLOGY: Not Applicable

REPRODUCTION: Chronic over-exposure to Lead has been implicated as a causative agent for the impairment of male and female reproductive organs, but there is at present no substantiation of the implication.

MUTAGENICITY: Lead tested positive as a mutagen in the Ames test.

SENSITIZATION: Not Applicable

Section 12. Ecological Information

ECOTOXICOLOGICAL INFORMATION: The LC50 of lead for the daphnia magna is 3.5 mg/L, and 5.1 mg/L for the daphnia pulex.

FATE INFORMATION: Lead is bioaccumulative in most aquatic life and mammals. It is highly mobile as lead dust or fume, yet forms complexes with organic material which limit its mobility.

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: Metspec 158

D.O.T. HAZARD CLASS: Non Hazardous

UN/NA NUMBER: Not Applicable

PRODUCT RQ (LBS): Not Applicable

D.O.T. LABEL: None

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D.O.T. Placard: None
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FREIGHT CLASS: Class 70
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PRODUCT LABEL: Metspec 158
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