TED PELLA, INC.
Microscopy Products for Science and Industry

Material Safety Data Sheet

Product No. 29-51, Antimony Products
Issue Date (06-08-11)
Review Date (05-03-12)

Section 1: Product and Company Identification

Product Name: Antimony, Antimony Products
Synonym: Stibium
Company Name
Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477
Domestic Phone (800) 237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)
International Phone (01) (530) 243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)
Chemtrec Emergency Number 1-800-424-9300 24 hrs a day.

Section 2: Composition / Information on Ingredients

Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)	%	OSHA PEL mg/m3	ACGIH TLV mg/m3	NTP	IARC	OSHA regulated
Antimony (7440-36-0)	0-100	5	5	No	No	No

Section 3: Hazard Identification

Emergency overview
Appearance: Silver grey solid, gray powder. (29-51 is in 1-3 mm random sized pieces)
Immediate effects: To the best of our knowledge the chemical, physical and toxicological properties of antimony have not been thoroughly investigated and recorded.
Antimony and its compounds are irritating to the skin and mucous membranes and are systemic poisons. Effects are reported to include a metallic taste in the mouth, vomiting, colic, loss of appetite and weight, and diarrhea. In addition, dermatitis may result which starts as an inflammation of the hair follicles and can progress through pus formation and sloughing to leave a contracted scar.

Potential health effects
Primary Routes of entry: ND
Signs and Symptoms of Overexposure: See Chronic Exposure.
Eyes: May cause severe eye irritation.
Skin: Dermatitis may result from repeated skin contact with antimony compounds
Ingestion: May cause severe irritation of lining of stomach and intestines.
Inhalation: Inhalation may cause upper respiratory tract irritation and systemic poisoning with symptoms including abdominal pain, nausea, dizziness and dry throat.
Chronic Exposure: Liver and kidney abnormalities or pneumonitis may result from chronic antimony exposure. Some animal studies indicate that inhalation of antimony

trioxide may pose an increased risk of lung cancer. Chronic inhalation of antimony trioxide is reported to produce a reduction in white blood cells and damage to the liver.
Chemical Listed As Carcinogen Or Potential Carcinogen: No
See Toxicological Information (Section11)
Potential environmental effects
See Ecological Information (Section 12)

Section 4: First Aid Measures
If accidental overexposure is suspected
Eye(s) Contact: Flush eyes with lukewarm water, including under eyelids, for at least 15 minutes. Seek medical attention immediately.
Skin Contact: Remove contaminated clothing from affected area, brush material off skin. Wash well with mild soap and water. Seek medical attention if symptoms persist.
Inhalation: Remove to fresh air; keep warm and quiet, give oxygen if breathing is difficult. Seek immediate medical attention.
Ingestion: Give 1-2 glasses of water and induce vomiting. Seek immediate medical attention. Never induce vomiting or give anything by mouth to an unconscious person.
Note to physician
Treatment: ND
Medical Conditions generally Aggravated by Exposure: ND

Section 5: Fire Fighting Measures
Flash Point: NA
Flammable Limits: NE
Auto-ignition point: NE
Fire Extinguishing Media: Sand, dry powder, or CO_2 should be used on surrounding fire. Do not use water on fire where molten metal is present.
Special Fire Fighting Procedures: Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.
Unusual Fire and Explosion Hazards: In solid form, antimony is not readily flammable. If ground to a powder, or if vapors are produced, it presents a moderate fire and explosion hazard. In case of fire antimony oxide fume may be released.
Hazardous combustion products: At temperatures above the melting point, metal oxide fumes may be evolved.
DOT Class: Flammable (Powder form)

Section 6: Accidental Release Measures
Steps to be Taken in Case Material is Released or Spilled: In solid form this material poses no special clean-up problems. If this material is in powder or dust form, wear protective respiratory equipment. Caution should be taken to minimize airborne generation of powder or dust and avoid contamination of air and water. Properly label all materials collected in waste container. Recycle material.
Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

Section 7: Handling and Storage
Precautions to be Taken in Handling and Storage: Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the work place. Keep ignition sources away from finely divided powders. Avoid storage near acids, bases or reducing agents. Do not store together with oxidizing materials.
Other Precautions: Local exhaust ventilation is recommended for dust and/or fume generating operations where airborne exposures may exceed permissible air concentrations. 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.
Work Practices: Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air. Maintain eyewash capable of sustained flushing, safety drench shower and facilities for washing.
Storage temperature: Room temperature
Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection
Engineering Controls
Ventilation required: Local exhaust - melt metal under hood with inert gas cover. Mechanical - use filters to trap oxide smoke generated.
Personal Protection Equipment
Respiratory protection: Where airborne exposures may exceed OSHA/ACGIH permissible air concentrations, the minimum respiratory protection recommended is negative pressure air purifying respirator with cartridges that are NIOSH/MSHA approved against dusts, fumes and mists having a TWA less than 0.05 mg/m^3
Protective gloves: Rubber for chemical treatment; high temperature for melting.
Skin protection: Wear protective clothing.
Eye protection: Safety glasses recommended where the possibility of getting dust particles in eyes exists.
Additional clothing and/or equipment: Full protective clothing is recommended for exposures that exceed permissible air concentrations. All contaminated clothing should be removed before leaving plant premises.
Exposure Guidelines
See Composition/Information on Ingredients (Section2)

Section 9 Physical and Chemical Properties
Appearance and Physical State: Silver grey solid, gray powder.
Odor (threshold): No odor.
Specific Gravity (H_2O=1): 6.684 g/cc @ 25 ºC
Vapor Pressure (mm Hg): 1 mm @ 886
Vapor Density (air=1): NA
Percent Volatile by volume: NA

Evaporation Rate (butyl acetate=1): NA

Boiling Point: 1750 ºC
Freezing point / melting point: 630.5 ºC
pH: NA
Solubility in Water: Insoluble
Molecular Weight: NA

Section 10: Stability and Reactivity
Stability: Stable
Conditions to Avoid: Incompatible materials.
Materials to Avoid (Incompatibility): Strong acids, bases, nascent hydrogen or reducing agents, oxidizing agents.
Hazardous Decomposition Products: At temperatures above the melting point, metal oxide fumes may be evolved. Under reducing conditions (i.e. any strong acid or base plus an active metal) or in the of nascent hydrogen, highly toxic stibine gas presence may be evolved. With nitric acid may emit NOx; with other acids may emit toxic antimony hydride or stibine. Use adequate hood facilities.
Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information
Results of component toxicity test performed: ORAL (LD50): Acute: 7000 mg/kg [Rat].
Human experience: ND
This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

Section 12: Ecological Information
Ecological Information: ND
Chemical Fate Information: ND

Section 13 Disposal Considerations
RCRA 40 CFR 261 Classification: ND
Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information
Solid Metal is not regulated.
This material is only regulated by the DOT if in a powder form with a particle size <100 microns.
US DOT Information: Proper shipping name: Antimony powder
Hazard Class: 6.1
Packaging group: III
UN Number: UN2871
Limitations: Powders only.
IATA: Proper shipping name: Antimony powder
Hazard Class: 6.1
Packing group: III
UN Number: UN2871

Limitations:
Domestic shipments only:
IMO: Proper shipping name: Antimony powder
Class: 6.1
UN Number: UN2871
Packing group: III
Marine Pollutant: No
Canadian TDG: Proper shipping name: Antimony powder

Section 15: Regulatory Information
United States Federal Regulations
MSDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.
SARA: ND
SARA Title III: Section 313: Yes
RCRA: ND
TSCA: Listed
CERCLA: The Reportable Quantity (RQ) is 5000 LBS (2270Kg)
State Regulations
California Proposition 65: No
International Regulations
Canada WHMIS: ND
Europe EINECS Numbers: ND

Section 16: Other Information
Label Information: Toxic
European Risk and Safety Phrases: ND
European symbols needed: ND
Canadian WHMIS Symbols: ND
HMIS® Hazard Rating: Health: **2**; Flammability: **1**; Reactivity: **1**
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)
Abbreviations used in this document
NE= Not established
NA= Not applicable
NIF= No Information Found
ND= No Data

Disclaimer
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