E0234

Oak Ridge National Laboratory
Oak Ridge, Tennessee 37831

IBO-MSDS-00383

MATERIAL SAFETY DATA SHEET

The issuance of this document complies with the U. S. Department of Labor, Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard 29 CFR 1910.1200. Standard must be consulted for specific requirements.

MSDS CURRENT AS OF 2006

Definitions:				
ACGIH	American Conference of Governmental Industrial Hygienists			
NIOSH	National Institute for Occupational Safety and Health			
NE	Not Established	**NISS**	Not In Sources Searched	
NA	Not Applicable	**TLV**	Threshold Limit Value	
TWA	Time Weighted Average	**PEL**	Permissible Exposure Limit	

IDENTITY (As used on label and list): Antimony (-121, -123) Metal

SECTION I. Manufacturer's Identification

Manufacturer's Name:

UT-Battelle
c/o Oak Ridge National Laboratory
Isotope Business Office
P. O. Box 2008
Oak Ridge, Tennessee 37831

Emergency Telephone Number:
Lab Shift Superintendent **(865) 574-6606**
Telephone Number for Assistance:
Isotope Business Office **(865) 574-6984**

Date Prepared: 26-October-1988
Date Reviewed: 24-June-2003

SECTION II. Hazardous Ingredients/Identity Information

Exposure Limits:

OSHA:	TWA 0.5 mg/m^3
ACGIH TLV:	TWA 0.5 mg/m^3 (1989-90)
NIOSH:	TWA 0.5 mg/m^3
Immediately Dangerous to Life and Health:	80 mg/m^3

Chemical Formula:	Sb	CAS Registry Number:	007440-36-0
		RTECS Number:	CC4025000
Health Hazard Rating:	3, high health hazard	DOT Class:	6.1, Poison
Fire Hazard Rating:	1, slightly flammable	DOT Label:	Poison
Reactivity Rating:	0, nonreactive	DOT Number:	UN 2871

SECTION III. Physical/Chemical Characteristics

Physical Description:	Silver-white, lustrous, hard, brittle metal, or dark gray, lustrous powder.		
Molecular Weight (naturally occurring):	121.75		
Melting Point:	630°C	Vapor Pressure:	1 mm Hg @ 1627°C
Boiling Point:	1635°C	Vapor Density:	NISS
Specific Gravity:	6.68 (water=1)	Percent Volatiles:	NISS
Evaporation Rate:	NISS	Solubility:	Insoluble in water

SECTION IV. Fire and Explosion Hazard Data

Flash Point (method):	NISS	Lower Flammability Limit:	NISS
Autoignition Temperature:	NISS	Upper Flammability Limit:	NISS

Extinguishing Media: Dry sand, carbon microspheres, dolomite, Met-L-X or extinguishing agent suitable for surrounding materials.

Firefighting Procedures: Firefighting techniques should concentrate on controlling the spread of the fire to other combustible materials. Wear pressure-demand, self-contained breathing apparatus and full firefighting protective clothing.

Fire and Explosion Hazards: Toxic gases and fumes (stibine, etc.) may be emitted under fire conditions. Moderate fire risk in form of dust when exposed to heat or flame. Spontaneously flammable in fluorine, chlorine, or bromine.

SECTION V. Reactivity Data

Stability: Unstable: ____ Stable: X

Conditions to Avoid: Avoid heating.

Incompatibility (materials to avoid): Ammonium nitrate, bromine, bromine trifluoride, bromoazide, chloric acid, chlorine, chlorine monoxide, chlorine trifluoride, fluorine, iodine, nitric acid, potassium nitrate, sodium peroxide, sulfuric acid and other acids.

Hazardous Decomposition or Byproducts: When heated or on contact with acid, emits toxic fumes of SbH_3 (stibine).

Hazardous Polymerization: May Occur: ____ Will Not Occur: X

SECTION VI. Health Hazard Data

Routes of Entry: Inhalation: X Skin: ____ Ingestion: X

Signs and Symptoms of Exposure:

Acute Inhalation:	Antimony fumes may cause metal fume fever with respiratory disorders, fever, and metallic taste.
Acute Swallowing:	Antimony dust and soluble compounds may cause nausea, vomiting, severe diarrhea, liver, and kidney change.
Acute Skin Contact:	Irritant.
Acute Eye Contact:	Irritant.
Chronic:	Soluble antimony compounds may cause dermatitis, conjunctivitis, nasal septum ulderations, anemia, headache, weight loss, gastrointestinal disturbances. Chronic exposure to antimony dust and fume may cause pneumoconiosis and emphysema.

Health Hazards (Target organs/systems):

Acute:	Liver, kidneys, cardiovascular system, central nervous system, digestive system, endocrine system, eyes, hematopoietic system (blood forming), mucous membrane, respiratory system, skin (cutaneous hazard).
Chronic:	Skin, eyes, blood, respiratory system.

Emergency and First Aid Procedures:

Inhalation:	Remove to fresh air and give artificial respiration if not breathing. Get medical aid.
Swallowing:	Induce vomiting if patient is conscious. Get medical aid.
Skin contact:	Remove contaminated clothing and immediately wash skin with plenty of water. Get medical aid.
Eye contact:	Flush eyes at once with water for at least 15 minutes. Get medical aid.
Physicians' notes:	NISS

Carcinogenicity: NTP No IARC Monographs No OSHA Regulated No

Medical Conditions Generally Aggravated by Exposure: NISS

SECTION VII. Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled: Notify safety personnel of leaks or spills. Remove spills by vacuuming or wet sweeping in order to keep airborne dust at a minimum.

Waste Disposal Method: Collect in an appropriate container for salvage or disposal. Treat unsalvageable waste as a toxic solid in accordance with federal, state, and local regulations.

Precautions to be Taken in Handling and Storing: Store in closed container in a cool, dry, well-ventilated area. Protect container from physical damage.

Other Precautions: Avoid breathing dust. Avoid skin and eye contact. Eyewash stations and washing facilities should be accessible to areas of use.

SECTION VIII. Control Measures

Respiratory Protection (specify type):	Use a NIOSH-approved inorganic dust respirator when dust levels exceed the TLV level.
Ventilation:	
Local Exhaust:	Employ to keep dust below TLV level.
Mechanical (general):	Employ to keep dust below TLV level.
Special:	NISS
Other:	NISS
Protective Gloves:	Compatible chemical resistant gloves.
Eye Protection:	Wear approved chemical safety goggles/glasses.
Other Protective Clothing or Equipment:	Protective clothing may be desirable in specific work situations.
Work/Hygienic Practices:	Use good housekeeping practices to prevent accumulation of dust and follow sound cleaning techniques that will keep airborne dust at a minimum. Wash hands and face thoroughly before eating, drinking, or smoking after handling.

DISCLAIMER