

E0217

Oak Ridge National Laboratory  
Oak Ridge, Tennessee 37831

IBO-MSDS-02140

**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.

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

MSDS  
CURRENT AS OF  
OCT 21 2006

**IDENTITY** (As used on label and list): Tellurium (-120, -122, -123, -124, -125, -126, -128, -130) Powder

**SECTION I. Manufacturer's Identification**

<u>Manufacturer's Name:</u>	<u>Emergency Telephone Number:</u>
UT-Battelle	Lab Shift Superintendent (865) 574-6606
c/o Oak Ridge National Laboratory	<u>Telephone Number for Assistance:</u>
Isotope Business Office	Isotope Business Office (865) 574-6984
P. O. Box 2008	<u>Date Prepared:</u> 06-March-1987
Oak Ridge, Tennessee 37831	<u>Date Reviewed:</u> 25-July-2003

**SECTION II. Hazardous Ingredients/Identity Information**

<u>Exposure Limits:</u>		
OSHA:		TWA 0.1 mg(Te)/m <sup>3</sup>
ACGIH TLV:		TWA 0.1 mg(Te)/m <sup>3</sup> (1989-90)
NIOSH:		NE
Immediately Dangerous to Life and Health:		NE
<u>Chemical Formula:</u>	Te	<u>CAS Registry Number:</u> 013494-80-9
		<u>RTECS Number:</u> WY2625000
<u>Health Hazard Rating:</u>	4, extreme health hazard	<u>DOT Class:</u> 6.1, Poisonous Materials
<u>Fire Hazard Rating:</u>	1, slightly flammable	<u>DOT Label:</u> Poison
<u>Reactivity Rating:</u>	0, nonreactive	<u>DOT Number:</u> UN 3288

**SECTION III. Physical/Chemical Characteristics**

<u>Physical Description:</u>	Silvery-white metal or dark powder, odorless, burns in air with greenish-blue flame.		
<u>Molecular Weight (naturally occurring):</u>	127.61		
<u>Melting Point:</u>	449.5°C	<u>Vapor Pressure:</u>	1 mm Hg @ 520°C
<u>Boiling Point:</u>	989.8°C @ 760 mm Hg	<u>Vapor Density:</u>	NISS
<u>Specific Gravity:</u>	6.24 (water =1)	<u>Percent Volatiles:</u>	NISS
<u>Evaporation Rate:</u>	NISS	<u>Solubility:</u>	Insoluble in water.

**SECTION IV. Fire and Explosion Hazard Data**

<u>Flash Point (method):</u>	NISS	<u>Lower Flammability Limit:</u>	NISS
<u>Autoignition Temperature:</u>	NISS	<u>Upper Flammability Limit:</u>	NISS
<u>Extinguishing Media:</u>	Dry chemical, soda ash, sand, carbon dioxide, alcohol foam, water spray.		
<u>Firefighting Procedures:</u>	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.		
<u>Fire and Explosion Hazards:</u>	Powder is flammable and may react explosively with high oxidizers.		

**SECTION V. Reactivity Data**

<u>Stability:</u>	Unstable: _____	Stable: <u>  X  </u>
<u>Conditions to Avoid:</u>	Heating and ignition sources.	
<u>Incompatibility (materials to avoid):</u>	Sodium, zinc and selenium, phosphorus and lithium silicide, fluorine, antimony and chlorine trifluoride, chlorine, silver bromate, oxidizers.	
<u>Hazardous Decomposition or Byproducts:</u>	Toxic fumes of tellurium.	
<u>Hazardous Polymerization:</u>	May Occur: _____	Will Not Occur: <u>  X  </u>

**SECTION VI. Health Hazard Data**

<u>Routes of Entry:</u>	Inhalation: <u>  X  </u>	Skin: <u>    </u>	Ingestion: <u>  X  </u>
<u>Signs and Symptoms of Exposure:</u>			
<u>Acute Inhalation:</u>	Fumes or dust can cause malaise, loss of sweat function, nausea, dizziness, epigastric distress, anorexia, garlic odor on breath.		
<u>Acute Swallowing:</u>	Causes nausea, vomiting, drowsiness, garlic odor on breath.		
<u>Acute Skin Contact:</u>	Irritant.		
<u>Acute Eye Contact:</u>	Irritant.		
<u>Chronic:</u>	Inhalation of fumes or dust can cause loss of sweat function, dizziness and anorexia, garlic odor on breath.		
<u>Health Hazards (Target organs/systems):</u>			
<u>Acute:</u>	Cardiovascular system, central nervous system, digestive system, eyes, kidneys (nephrotoxin), liver (hepatotoxin), peripheral nervous system, reproductive system, respiratory system, skin (cutaneous hazard), urinary system, hematopoietic system (blood forming).		
<u>Chronic:</u>	Central nervous system, digestive system.		
<u>Emergency and First Aid Procedures:</u>			
<u>Inhalation:</u>	Remove to fresh air and give artificial respiration if not breathing. Get medical aid.		
<u>Swallowing:</u>	Induce vomiting if patient is conscious. Get medical aid.		
<u>Skin contact:</u>	Remove contaminated clothing and immediately wash skin with plenty of water.		
<u>Eye contact:</u>	Flush eyes at once with water for at least 15 minutes. Get medical aid.		
<u>Physicians' notes:</u>	No known antidote, do not use BAL, it enhances toxicity.		
<u>Carcinogenicity:</u>	NTP	<u>  No  </u>	IARC Monographs
			<u>  No  </u>
			OSHA Regulated
			<u>  No  </u>

Medical Conditions Generally Aggravated by Exposure: NISS

**SECTION VII. Precautions for Safe Handling and Use**

<u>Steps to be Taken in Case Material is Released or Spilled:</u>	Notify safety personnel of leaks or spills. Remove spills by vacuuming or wet sweeping in order to keep airborne dust at a minimum.
<u>Waste Disposal Method:</u>	Collect in an appropriate container for salvage or disposal. Treat unsalvageable waste as a toxic solid in accordance with federal, state, and local regulations.
<u>Precautions to be Taken in Handling and Storing:</u>	Store in closed container in a cool, dry, well-ventilated, low fire-risk area. Protect container from physical damage.
<u>Other Precautions:</u>	Avoid breathing dust. Avoid skin and eye contact. Eyewash stations and washing facilities should be accessible to areas of use.

**SECTION VIII. Control Measures**

<u>Respiratory Protection (specify type):</u>	Use a NIOSH-approved inorganic dust respirator when dust levels exceed the PEL.
<u>Ventilation:</u>	
<u>Local Exhaust:</u>	Employ to keep dust below the TLV levels.
<u>Mechanical (general):</u>	Employ to keep dust below the TLV levels.
<u>Special:</u>	NISS
<u>Other:</u>	NISS
<u>Protective Gloves:</u>	Compatible chemical resistant gloves.
<u>Eye Protection:</u>	Wear approved chemical safety goggles/glasses.
<u>Other Protective Clothing or Equipment:</u>	Wear protective clothing.
<u>Work/Hygienic Practices:</u>	Wash thoroughly after handling.

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