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MATERIAL SAFETY DATA SHEET

Section 1- PRODUCT IDENTIFICATION

COMPOSITION CdTe	PRODUCT NAME Cadmium Telluride, Cadmium Monotelluride
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Section 2- HAZARDOUS INGREDIENTS

Note: Products under normal conditions do not represent an inhalation, ingestion or contact health hazard.

MATERIAL OR COMPONENT	CAS NUMBER	WT%	EXPOSURE LIMITS	
			OSHA PEL (Mg/M3)	ACGIH TLV(MG/M3)
Cadmium Telluride	1306-25-8	100	200mg/ m³ (as Te)	0.5mg/ m³ (as Cd) 0.1mg/ m³ (as Te)

Section 3- PHYSICAL DATA

MATERIAL IS (AT NORMAL CONDITIONS) <input type="checkbox"/> Liquid <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Gas <input type="checkbox"/> Other	APPEARANCE AND ODOR Black/slightly gray powder or pieces
MELTING POINT (BASE METAL) 1041° C & 1091° C	SPECIFIC GRAVITY 5.85at 15 (6.2 at 15) gm/cc

Section 4- FIRE AND EXPLOSION

Flash Point (Method Used)	Flammable Limits	LEL	UEL
N/A	Non-Flammable	N.A.	N.A.
EXTINGUISHING MEDIA Use dry chemical, CO2- DO NOT USE WATER!			
SPECIAL FIRED FIGHTING PROCEDURES Wear a self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.			
UNUSUAL FIRE AND EXPLOSION HAZARDS Material may emit toxic fumes of Cd & Td if involved in a fire, or on contact with acids or acidic fumes.			

Section 5- REACTIVITY DATA

STABILITY

Unstable

INCOMPATIBILITY (MATERIALS TO AVOID)

Strong acids & strong bases.

CONDITIONS TO AVOID

Heat, air, moisture/water, incompatible materials

HAZARDOUS DECOMPOSITION PRODUCTS

Cadmium, Tellurium, Cadmium Oxide, Tellurium Oxide

Section 6- HEALTH HAZARD GUIDE

MAJOR EXPOSURE HAZARD

Inhalation **Skin** **Skin Absorption** **Eye Contact** **Ingestion**

EFFECTS OF OVEREXPOSURE

INHALATION: A respiratory irritant. Coughing, sneezing, difficulty breathing and pulmonary edema possible. May cause irritation of the mucus membranes of the nose and of the throat.

SKIN: Irritation, inflammation, and redness where possible. May cause dermatitis.

EYE CONTACT: Irritation, inflammation, watering and redness. Risk of serious injury.

OTHER: Cadmium compounds are experimental carcinogens. The oral toxicity of Cd and its compounds is high; however when these materials are ingested, the irritant and emetic action is so violent that little of the Cd is absorbed and fatal poisoning does not as a rule ensue. Cases of human Cd poisoning have been reported from ingestion of food or beverages prepared or stored in Cd-plated containers. The inhalation of fumes or dusts of Cd, primarily affect the respiratory tract; the kidneys may also be affected. Even brief exposure to high concentrations may result in pulmonary edema and death. Usually the edema is not massive, with little pleural effusion. In fatal cases, fatty degeneration of the liver and acute inflammatory changes in the kidneys has been noted. Ingestion of Cd results in a gastro-intestinal type of poisoning resembling food poisoning in its symptoms. Inhalation of dust or fumes may cause dryness of the throat, cough, headache, constriction to the chest, shortness of breath and vomiting. More severe exposure results in marked lung changes, with persistent cough, pain in the chest, severe dyspnea, and prostration, which may terminate fatally. X-ray changes are usually similar to those seen in bronchi-pneumonia. The urine is frequently dark. These symptoms are usually delayed for some hours after exposure and fatal concentrations may be breathed without sufficient discomfort. There is some evidence of teratogenicity. Ingestion of Cd results in sudden nausea, salivation, vomiting, diarrhea and abdominal pain and discomfort. Symptoms begin almost immediately after ingestions. A yellow discoloration of the teeth has been reported. CdO fumes can cause metal fume fever resembling that caused by ZnO fumes. Elemental tellurium has relatively low toxicity. It is converted in the body dimethyl telluride, which imparts a garlic-like odor to breath and sweat. Heavy exposures may in addition result in headache, drowsiness, metallic taste, loss of appetite and nausea. Various tellurium salts may also produce similar symptoms. Large doses can be fatal, as was the case following an accidental administration of sodium telluride.

Section 7- SPILL OR LEAK PROCEDURES

SPILL OR LEAK PROCEDURES

Wear a self-contained breathing apparatus & full protective clothing. Isolate the area where the spill occurred and insure that provide ventilation is available and that water/moisture are kept out of area. Vacuum up the spill using a high efficiency unit & place in a container for proper disposal. Take care not to raise dust.

WASTE DISPOSAL METHODS

Observe all federal, state and local regulations when storing or disposing.

Section 8- SPECIAL PROTECTION

RESPIRATORY

NIOSH approved dust-mist-fume cartridge respirator.

VENTILATION

Always maintain exposure below permissible limits. Maintain exposure below TLV. Mechanical ventilation is not recommended. Handle in a dry, inert controlled atmosphere.

EYE PROTECTION & PROTECTIVE CLOTHING

Wear Safety glasses & neoprene protective gloves. Wear protective clothing to prevent contamination of skin and clothes.

Section 9- SPECIAL PRECAUTIONS

Store a tightly closed container in a cool, dry place. Wash hands and face thoroughly after handling and before eating.

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