STANFORD ADVANCED MATERIALS

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Stanford Advanced Materials
*We not only sell products, we provide satisfactions.*
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# *Material Safety Data Sheet*

Identity: Cadmium telluride Formula: CdTe

## SECTION I - GENERAL INFORMATION

Manufacturer: Stanford Advanced Materials (SAM)

The information below is believed to be accurate and represents the best information available to SAM. However, SAM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

## SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 240.01

| CAS # | OSHA PEL | ACGIH TLV | % |
|---|---|---|---|
| 1306-25-8 | 5mg(Cd)/m3 | 5mg(Cd).m3 | 0-100 |

## SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 1121.0 ℃
Point: 1091.0 ℃
Evaporation Rate: N/A
Solubility in water: insoluble, Insoluble is acids

Vapor Pressure (vs. air or mmHg): N/A Melting
Specific Gravity (water=1): 5.850 at 15.0 ℃
Flash Point: N/A

*Appearance and odor*: Black to grey powder or pieces, no odor

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

*Method Used*: Non-flammable *Explosive Limits*: LEL: N/A UEL: N/A
*Extinguishing Media:* Use suitable extinguishing agent for surrounding material and type of fire

*Special Fire Fighting Procedures:*

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

*Unusual Fire and Explosion Hazards:*

When heated to decomposition, cadmium telluride may emit toxic fumes of cadmium and tellurium. Oxides will form from prolonged exposure to moist air.

## SECTION V - REACTIVITY DATA

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*Stability*: Stable
*Conditions to Avoid (stability)*: None
*Incompatibility:* Strong oxidizing agents, nitric acid, uric acid

*Hazardous Decomposition or Byproducts:* Airborne cadmium fumes, cadmium and tellurium oxide, tellurium hydride and hydrogen gas.
*Hazardous Polymerization*: Will not occur
*Conditions to avoid (hazardous polymerization)*: None

## SECTION VI - HEALTH HAZARD DATA

*Routes of entry*: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other? No

*Signs and Symptoms of Overexposure:*
*Inhalation:* Dry throat, cough, headache, vomiting, chest pain, irritability, pneumonitis
*Ingestion:* Increased salivation, choking, vomiting, abdominal pain, anemia, renal dysfunction, diarrhea, tenesmus
*Skin*: Redness, itching, burning
*Eye*: Redness, itching, burning, watering, swelling

*Health Hazards (Acute and Chronic):*

*Inhalation:*
Acute: May cause irritation of the upper respiratory system, vertigo, constriction of the throat, metallic taste, dyspnea, flu-like symptoms, pulmonary edema, hypertrophy of bronchial vessels and renal necrosis and/or liver damage
Chronic: May cause irreversible lung damage, damage to olfactory nerve, kidney damage, osteoporosis, weight loss, burning sensation and cramps in stomach, cardiovascular effects, anemia, osteomalacia

*Ingestion:*
Acute: May cause irritation of mouth and throat, increased salivation, dizziness, shock, convulsions
Chronic: Irreversible renal tubular dysfunction, changes in liver, pancreas and adrenal glands

*Skin:*
Acute: May cause irritation
Chronic: Prolonged exposure may result in dermatitis

*Eye:*
Acute: May cause irritation, redness, watering, swelling, and/or pain
Chronic: Prolonged exposure may cause conjunctivitis

*Target Organs*: Respiratory system, kidneys, prostate, prostate, central nervous system, skin and blood

***Carcinogenicity*: NTP? Yes IARC Monographs? Yes OSHA Regulated? Yes**

*Medical Conditions* *Aggravated by Exposure*: kidney or respiratory dysfunction, blood or bone disorders

*Emergency and First Aid Procedures:*
*Inhalation:* Remove victim to fresh air, keep warm and quiet, try to cough up any saliva and give oxygen if breathing is difficult; seek medical attention

*Ingestion:* Seek medical attention immediately. Never induce vomiting or give anything by mouth to an unconscious person

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*Skin:* Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist

*Eye:* Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

## SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

*Steps to be taken in case material is released or spilled:*

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. **Take care not to raise dust.**

*Waste disposal method:* Dispose of in accordance with state, local, and federal regulations.

*Hazard Label Information:*

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

## SECTION VIII - CONTROL MEASURES

*Protective Equipment Summary (Hazard Label Information*):

NIOSH approved respirator, impervious rubber gloves, safety glasses, clothes to prevent contact.

*Ventilation:*

Local Exhaust: To maintain concentration at low exposure levels.
Mechanical (General): NOT Recommended.

*Work/Hygienic/Maintenance 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 or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established