

# MATERIAL SAFETY DATA SHEET

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### IDENTIFICATION

**CHEMICAL NAME:** Tantalum(V) diethylamide

**CATALOG NUMBER:** T108

**FORMULA:** Ta[N(C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>]<sub>5</sub>

**FORMULA WEIGHT:** 541.21

**TSCA:** not listed in the TSCA inventory

### HAZARDOUS INGREDIENTS

**HAZARDOUS INGREDIENTS:** %

Title compound

100

**ACGIH(TLV):** 5mg Ta/m<sup>3</sup>

**OSHA/PEL:** 5mg Ta/m<sup>3</sup>

### PHYSICAL DATA

**APPEARANCE AND ODOR:** orange liquid, specific odor.

**MELTING POINT:** No data.

**BOILING POINT:** No data

**VAPOR PRESSURE:** No data

**SPECIFIC GRAVITY:** No data

**SOLUBILITY IN WATER:** Reacts with water

### FIRE HAZARD

**FLASH POINT:** No data

**AUTOIGNITION TEMPERATURE:** No data

**EXTINGUISHING MEDIA:** Use alcohol foam, carbon dioxide or dry chemical extinguishing agents. Water may be used to keep fire exposed containers cool.

**FIRE FIGHTING PROCEDURES:** Use normal fire fighting procedures which include wearing NIOSH/MSHA approved self-contained breathing apparatus, flame, and chemical resistant clothing; hats, boots, and gloves. Leave the area unless fitted with a self-contained breathing apparatus and fire protective clothing..

**UNUSUAL FIRE OR EXPLOSION HAZARDS:** Decomposition product dimethylamine is highly flammable, corrosive and toxic. It may form explosive mixture with air and emits toxic fumes under fire conditions.

**ADDITIONAL INFORMATION:** Dimethylamine causes the violent polymerization of acryaldehyde. It reacts violently with maleic anhydride above 150°C evolving carbon dioxide. It incandescs on contact with fluorine. Dimethylamine is corrosive to aluminum, copper, copper alloys, galvanized metal, magnesium and zinc alloys.

### HEALTH HAZARD

**MODE OF ENTRY:**

**INHALATION:** Yes

**SKIN CONTACT:** Yes

**EYE CONTACT:** Yes

**INGESTION:** Yes  
**CARCINOGENICITY:**  
**NTP:** Not known  
**IARC:** Not known  
**OSHA:** Not known

**EFFECTS OF OVEREXPOSURE:**

**INHALATION:** May cause irritation of the nose and throat.  
**SKIN CONTACT:** May cause irritation  
**EYE CONTACT:** Vapors may irritate the eyes. Splashes may cause severe irritation, possible corneal burns and eye damage.

**INGESTION:** Some tantalum compounds have been suggested of causing skin irritation and mild fibrosis of the lungs.

**EMERGENCY AND FIRST AID PROCEDURES:**

**INHALATION:** Remove the victim to fresh air and seek medical attention if coughing, shortness of breath or irritation persists.

**SKIN CONTACT:** Wash the affected area with soap and water for at least 5 minutes.

**EYE CONTACT:** Immediately flush eyes, including under eyelids, with large amounts of water for at least 15 minutes. Call a physician.

**INGESTION:** Give the victim plenty of water and seek immediate medical attention.

-----**REACTIVITY DATA**-----

**STABILITY:** Moisture-sensitive material.

**CONDITIONS TO AVOID:** Contact with ignition source or heat.

**INCOMPATIBILITY:** Moisture, heat, strong oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** CO, CO<sub>2</sub>, Ta<sub>2</sub>O<sub>5</sub>, diethylamine.

**HAZARDOUS POLYMERIZATION:** None

-----**ENVIRONMENTAL INFORMATION**-----

**SPILL OR LEAKAGE PROCEDURES:** Wearing full protective equipment, eliminate all sources of ignition. Cover spill with dry sand or vermiculite. Sweep up the mixture and dispose of properly.

**WASTE DISPOSAL:** Consult state, local, or federal EPA regulations for proper disposal.

-----**PROTECTION AND PRECAUTIONS**-----

**VENTILATION REQUIREMENTS:** Glove bag or box with dry, inert atmosphere.

**RESPIRATORY PROTECTION:** NIOSH/MSHA approved respirator with an organic vapor cartridge.

**PROTECTIVE GLOVES:** Rubber

**EYE/FACE PROTECTION:** ANSI approved safety goggles

**HANDLING AND STORAGE:** Handle and store the material under an inert atmosphere of nitrogen or argon. Keep away from heat.

**OTHER PRECAUTIONS:** The material will react with air and moisture. Lab coat and apron, flame and chemical resistant coveralls, eyewash capable of sustained flushing, safety drench shower and hygienic facilities for washing.

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DATE PREPARED: November 15, 2000