



ELECTRONIC SPACE PRODUCTS INTERNATIONAL

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MATERIAL SAFETY DATA SHEET

I PRODUCT IDENTIFICATION

Trade Name:	Tantalum Nitride	Chemical	
Formula:	TaN	CAS #:	12070-06-3

II HAZARDOUS INGREDIENTS

Hazardous Components	%	OSHA/PEL	ACGIH/TLV
Tantalum Nitride	0-100	5 mg/m ³ as Ta	5 mg/m ³ dust as Ta

III PHYSICAL DATA

Boiling Point 760 mm Hg:	5500 °C	Freezing/Melting Point:	38.80 °C
Vapor Density:	No data	Vapor Pressure:	Essentially 0
% Volatiles:	0	Solubility in H₂O:	Insoluble
Appearance and Odor:	Black to grey powder, no odor	Evaporation Rate:	0

IV FIRE AND EXPLOSION HAZARDS DATA

Flash Point (Method Used): N/A
Flammable Limits: Upper: N/A **Lower:** N/A

Autoignition Temperature: No Data

Extinguishing Media: Use water, carbon dioxide, dry chemical extinguishing agents, dry sand, or dry ground dolomite.
Special Fire Fighting Procedures: No special firefighting procedures needed, use normal procedures which include wearing NIOSH/MSHA approved self-contained breathing apparatus, flame and chemical resistant clothing, hats, boots and gloves. If without risk remove material from fire area.

Unusual Fire and Explosion Hazards: May form explosive mixture with gases. May emit toxic fumes when involved in a fire.

V HEALTH HAZARD INFORMATION

Effects of Exposure:

To the best of our knowledge the chemical, physical and toxicological properties of tantalum nitride have not been thoroughly investigated and reported.

Acute Effects:

Inhalation: May cause respiratory irritation.

Ingestion: None known

Skin: May cause skin irritation on contact.

Eye: May cause irritation

Chronic Effects: None known

Other: Details of toxicity are unknown.

Medical Conditions Generally Aggravated by Exposure: None known.

Target Organs: None known.

Most Likely Routes of Entry: Ingestion

Carcinogenicity: NTP: No IARC: No OSHA: No

EMERGENCY AND FIRST AID PROCEDURES:

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

SKIN: Remove contaminated clothing, flood skin with large amounts of water. If irritation persists seek medical attention.

INGESTION: No data available, but one should obtain medical attention.

INHALATION: No specific information available, one should obtain medical attention.

VI REACTIVITY DATA

Stability: Stable

Conditions to Avoid: Extremely resistant to chemical action except at elevated temperatures.

Incompatibility (Material to Avoid): Flammable gases.

Hazardous Decomposition Products: May emit irritating fumes.

Hazardous Polymerization: Will not occur.

VII SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled: Wearing full protective equipment, cover spill with dry sand or vermiculite. Mix well and carefully transfer to a container.

Waste Disposal: In accordance with Local, State and Federal Waste Disposal Regulations.

VIII SPECIAL PROTECTION INFORMATION

Respiratory Protection: High efficiency particle respirator.

Protective Gloves: Rubber.

Ventilation: Laboratory fume hood.

Eye Protection: ANSI approved safety goggles.

Other Protective Gear: Lab coat and apron, flame and chemical resistant coveralls

IX SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storage: Keep container tightly closed. Store in a cool, dry, well-ventilated area. Wash thoroughly after use.

Work 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 and smoking. Do not blow dust off clothing or skin with compressed air. Maintain eyewash capable of sustained flushing, safety drench shower and hygienic facilities for washing.

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. ESPI shall not be held liable for any damage resulting from handling or from contact with the above product.

Issued by: S. Dierks
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