


ELECTRONIC SPACE PRODUCTS INTERNATIONAL

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MATERIAL SAFETY DATA SHEET
I PRODUCT IDENTIFICATION

Trade Name: Titanium Silicide	Chemical Family: Metal Silicide
Formula: TiSi ₂	CAS #: 12039-83-7

II HAZARDOUS INGREDIENTS

Hazardous Component	%	OSHA/PEL	ACGIH/TLV
Titanium Silicide	0-100	N/E	N/E

HMIS Ratings: Health: 1 Flammability: 0 Reactivity: 0 **Protective Equipment:** E: glasses, gloves, dust respirator

III PHYSICAL DATA

Boiling Point: N/E or N/A	Melting Point: 1540 °C
Specific Gravity: 4.12 g/cc	Vapor Pressure: N/E
Solubility in H₂O: Insoluble	% Volatiles: N/E or N/A
Appearance and Odor: Grey metallic powder, no odor.	

IV FIRE AND EXPLOSION HAZARDS DATA

Flash Point: N/E or N/A **Autoignition Temperature:** N/A
Flammable Limits: Upper: N/A Lower: 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 & Explosion: When heated to decomposition, titanium silicide may emit toxic fumes. Contact with acids can generate toxic and flammable gases.

V HEALTH HAZARD INFORMATION

Effects of Exposure:

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

Titanium and its compounds are generally considered to be physiologically inert. There are no reported cases in the literature where titanium as such has caused human intoxication. The dusts of most titanium compounds such as titanium oxide may be placed in the nuisance category. (Sax, Dangerous Properties of Industrial Materials)

Acute Effects:

Inhalation: Prolonged inhalation may cause mild irritation to the lungs and respiratory tract.

Ingestion: Relatively non-toxic, poorly absorbed from the alimentary tract.

Skin: May cause abrasive irritation.

Eye: May cause abrasive irritation.

Chronic Effects: No chronic health effects recorded.

Target Organs: No target organs recorded.

Medical Conditions Generally Aggravated by Exposure: None recorded

Carcinogenicity: NTP: No IARC: No OSHA: No

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove to fresh air, keep warm and quiet, give oxygen if breathing is difficult and seek medical attention if symptoms persist.

INGESTION: Give 1-2 glasses of milk or water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person.

SKIN: Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water. Seek medical attention if symptoms persist.

EYES: Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

VI REACTIVITY DATA

Stability: Stable

Conditions to Avoid: None

Incompatibility (Material to Avoid): Acids

Hazardous Decomposition Products: None recorded

Hazardous Polymerization: Will not occur

VII SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled: Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste Disposal Method: Dispose of in accordance with all Federal, State, and Local regulations.

VIII SPECIAL PROTECTION INFORMATION

Respiratory Protection: NIOSH approved dust-mist-vapor respirator.

Ventilation: Use local exhaust to maintain concentration at low exposure levels. General exhaust is recommended.

Protective Gloves: Rubber

Eye Protection: Safety goggles

Other Protective Equipment: Protective gear suitable to prevent contamination.

IX SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storage: Store in cool, dry area. Store in tightly sealed container. 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 or smoking. Do not blow dust off clothing or skin with compressed air. Maintain eyewash capable of sustained flushing, safety drench shower and facilities for washing.

Precautionary Labeling: Wash thoroughly after handling. Keep container closed.

Other Handling and Storage Conditions: Not classified as hazardous by DOT, UN or IMCO.

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.

Prepared by: S. Dierks
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