



MATERIAL SAFETY DATA SHEET

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CHEMICAL NAME: Titanium Dioxide

COMMON/TRADE NAME: Leucoxene, Rutile,
Rutile "94", TiO₂

DATE: November 1, 2000

SUPERSEDES: November 1, 1997

SECTION I — HAZARDOUS INGREDIENTS

Hazardous Components (Specific Chemical Identity)	CAS #	OSHA PEL	ACGIH TLV
Titanium Dioxide	13463-67-7	10mg/M ³ Total Dust	10mg/M ³ TWA
Silicon Dioxide	14808-60-7	0.1mg/M ³ TWA (Respirable Dust)	0.05mg/M ³ TWA (Respirable Dust)
Zirconium Silicate	14940-68-2	5mg/M ³ TWA, 10mg/M ³ STEL (as Zr)	5mg/M ³ TWA, 10mg/M ³ STEL (as Zr)

SECTION II — PHYSICAL/CHEMICAL CHARACTERISTICS

Melting Point	Approx. 3000° F	Specific Gravity (H ₂ O = 1)	4.3 to 5.0
Solubility	(Water) Nil	Other	
Appearance and Odor	Black to brownish red luster. No odor.		

SECTION III — REACTIVITY DATA

Stability:	Unstable	Conditions to Avoid
	Stable	
	X	
Incompatibility (Materials to Avoid)	None known.	
Hazardous Decomposition or Byproducts	None known.	
Hazardous Polymerization:	May Occur	Conditions to Avoid
	Will Not Occur	
	X	

SECTION IV — FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	None.
Extinguishing Media	
Special Fire Fighting Procedures	Not a fire or explosion hazard.
Unusual Fire and Explosion Hazards	

SECTION V — HEALTH HAZARD DATA

Route(s) of Entry

Inhalation.

Health Hazards (Acute and Chronic)

May cause irritation of the respiratory system. Longtime

overexposure may cause silicosis (lung damage) due to silica content. This product contains approximately 1% Crystalline Silica (common sand), small amounts of which may be in respirable form and may cause cancer risk if longtime overexposure exists.

Carcinogenicity Crystalline Silica (common sand) has been listed by the International Agency for Research on Cancer as a human carcinogen. NIOSH has classified Titanium Dioxide as a carcinogen based on an experimental animal study, but U.S. OSHA and the American Conference of Governmental Industrial Hygienists (ACGIH) have found insufficient evidence to list it as such.

Signs and Symptoms of Overexposure

Irritation of the respiratory system.

Emergency and First Aid Procedures

On contact with skin, practice proper hygiene. On contact with eyes, flush eyes thoroughly for 15 minutes. On inhalation of excessive dust, move to fresh air. Seek medical attention if problems persist.

SECTION VI — SPECIAL PROTECTION AND PRECAUTIONS

Ventilation and Engineering Controls

Appropriate ventilation.

Personal Protective Equipment

NIOSH-certified respirator, gloves and ANSI-approved eye protection.

Safe Handling, Use and Storage

Normal handling and storage.

Protective Measures During Repair & Maintenance

Use protective equipment listed above.

Other

SECTION VII — SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material is Released or Spilled

Use normal clean-up procedures.

Waste Disposal Method

Follow federal, state and local regulations.

Other Precautions

Follow all other precautions and data noted herein.

NOTE: The data contained in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The information herein is based on technical data that Chemalloy believes to be reliable. It is intended to be used by persons with technical skill. Prior to use, users shall conduct their own investigation(s) to determine the suitability of the information for their particular purpose, and appropriate warnings and safe handling procedures should be provided to handlers and users. Any use of this data must be determined by the user to be in accordance with federal, state and local laws and regulations. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents. Since conditions of use and suitability are beyond Chemalloy's control, any risks of use and suitability are therefore assumed by the user, and Chemalloy expressly disclaims all warranties, including warranties of merchantability and fitness for a particular purpose, express or implied, in respect to the use or suitability of the material.