



**MATERIAL SAFETY DATA SHEET**

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CHEMICAL NAME: Zirconium Silicate

COMMON/TRADE NAME: Zircon Sand, Flour, Concentrates

DATE: \_\_\_\_\_

SUPERSEDES: \_\_\_\_\_

**SECTION I — HAZARDOUS INGREDIENTS**

Hazardous Components (Specific Chemical Identity)	CAS #	OSHA PEL	ACGIH TLV
Zirconium Silicate (Zircon)	14940-68-2	5mg/M <sup>3</sup> TWA, 10mg/M <sup>3</sup> STEL (as Zr)	5mg/M <sup>3</sup> TWA, 10mg/M <sup>3</sup> STEL (as Zr)
Silica (SiO <sub>2</sub> )	14808-60-7	0.1mg/M <sup>3</sup> TWA (Respirable Dust)	0.1mg/M <sup>3</sup> TWA (Respirable Dust)

(Recommended Limit of 3mg/M<sup>3</sup> TWA Respirable Dust for Zircon due to minute traces of Uranium, Thorium and Radium).

**SECTION II — PHYSICAL/CHEMICAL CHARACTERISTICS**

Melting Point	4082°F	Specific Gravity (H <sub>2</sub> O = 1)	4.8
Solubility	(Water) Nil	Other	
Appearance and Odor	White to brown. 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. Zirconium Silicate is insoluble and considered inert, although it is possible to form granuloma in the lungs and skin. Contains 0.2% of crystalline silica (common sand), small amounts of which may be in the respirable form and may cause lung damage (silicosis) and cancer risk if longtime overexposure occurs.

Carcinogenicity

Crystalline Silica (common sand) has been listed by the International Agency for Research on Cancer as a human carcinogen.

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 with water 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 &amp; 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 procedure.

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.