



**MATERIAL SAFETY DATA SHEET**  
COMPLIES WITH 29 CFR 1910.1200.  
OSHA HAZARD COMMUNICATION RULE

**DATE OF LAST REVISION: 06-20-96**

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## CHEMICAL IDENTITY

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LABEL IDENTITY	<b>ZIRCONIUM SILICATE</b>
FORMULA	<b>ZrSiO<sub>4</sub></b>
CHEMICAL FAMILY	<b>INORGANIC SILICATE</b>
CAS REGISTRY NUMBER	<b>10101-52-7</b>
HAZARDOUS INGREDIENTS	<b>ZIRCONIUM SILICATE</b>
%: <b>100</b>	TLV: <b>5mg Zr/m<sup>3</sup></b> PEL: <b>5mg Zr/m<sup>3</sup></b>

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## PHYSICAL AND CHEMICAL PROPERTIES

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COLOR, FORM AND ODOR	<b>White powder</b>
BOILING POINT	<b>ND</b>
VAPOR DENSITY (AIR=1)	<b>NA</b>
VAPOR PRESSURE @ 20°	<b>ND</b>
% VOLATILE BY VOLUME (%)	<b>ND</b>
REACTION WITH WATER	<b>ND</b>
EVAPORATION RATE (H <sub>2</sub> O=1)	<b>NA</b>
SOLUBILITY IN WATER	<b>Insoluble</b>
FREEZING POINT	<b>2550°C</b>
SPECIFIC GRAVITY	<b>4.56</b>

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## FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT	<b>ND</b>
AUTOIGNITION TEMPERATURE (°C)	<b>ND</b>
FLAMMABLE LIMITS IN AIR	<b>ND</b>
EXTINGUISHING MEDIA	<b>Use water, carbon dioxide, dry chemical extinguishing agents, dry sand, or dry ground dolomite.</b>
SPECIAL FIRE FIGHTING PROCEDURES	<b>No special fire fighting 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.</b>
UNUSUAL FIRE & EXPLOSION HAZARDS	<b>None</b>



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### HEALTH HAZARD INFORMATION

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THRESHOLD LIMIT VALUE: Zr: **5mg/m<sup>3</sup>**; SiO<sub>2</sub>: **3mg/m<sup>3</sup>**

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: **no data**

EFFECTS OF OVEREXPOSURE (acute and chronic):  
**No data available. Should be handled as potentially toxic.**

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CARCINOGENICITY: **nd** NTP: **nd** IARC MONOGRAPHS: **nd** OSHA REGULATE: **nd**

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#### EMERGENCY FIRST AID PROCEDURES:

INGESTION/INHALATION: **remove from exposure and seek prompt, competent medical attention.**

EYES: **flush with copious amounts of water for at least 15 minutes.**

SKIN: **remove any contaminated clothing, flood skin with large volumes of water for 15 minutes.**

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### REACTIVITY DATA

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STABILITY	<b>Stable</b>
CONDITIONS CONTRIBUTING TO UNSTABILITY	<b>ND</b>
INCOMPATIBILITY (MATERIALS TO AVOID)	<b>ND</b>
HAZARDOUS DECOMPOSITION PRODUCTS	<b>ND</b>
HAZARDOUS POLYMERIZATION	<b>Will Not Occur</b>
CONDITIONS TO AVOID	<b>NA</b>



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### SAFE HANDLING AND USE

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

**Wearing full protective clothing and respiratory protection, eliminate all sources of ignition. Cover spill with dry sand or dry vermiculite, mix well and carefully transfer to a well marked container. Close container tightly. Submit retain for disposal.**

WASTE DISPOSAL METHOD:

**Dispose of in accordance with local, state and federal regulations for Zirconium Silicate.**

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### SPECIAL PROTECTIVE INFORMATION

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RESPIRATORY PROTECTION	<b>NIOSH/MSHA approve dust mask for ordinary use, self-contained breathing apparatus for emergency use</b>
LOCAL EXHAUST	<b>Adequate</b>
MECHANICAL (general)	<b>Adequate</b>
PROTECTIVE GLOVES	<b>Rubber</b>
EYE PROTECTION	<b>OSHA approved safety goggles</b>
OTHER PROTECTIVE EQUIPMENT	<b>Lab coat and apron, flame and chemical resistant coveralls, eyewash capable of sustained flushing, safety drench shower and hygienic facilities for washing.</b>

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### SPECIAL PRECAUTIONS

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PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:

**Keep container tightly closed. Store in cool, dry, well-ventilated area. Wash thoroughly after use. Handle in glove box or bag under dry inert atmosphere.**

TRANSPORTATION REQUIREMENTS	DOT CLASS:	<b>ND</b>
	UN NUMBER:	<b>ND</b>
	IMCO CLASS:	<b>ND</b>
	OTHER:	

PRECAUTIONARY LABELING **NONE**

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THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR CONTROL, **ANGSTROM SCIENCES** MAKE NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR THE RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

**NA= NOT APPLICABLE**

**ND= NO DATA FOUND**

**NR=NOT RECORDED**