



**MATERIAL SAFETY DATA SHEET**

PRODUCT NAME: CERAMIC GLASS (e.g., ZERODUR)

CHEMICAL FAMILY OR PRODUCT TYPE: Zero-Expansion Ceramic Glasses

COMPOSITION

<u>CHEMICAL NAME</u>	<u>%</u>	<u>COMM ON NAME</u>	<u>R E G * Y/N</u>	<u>CAS #</u>	<u>OSHA PERMISSIBLE EXPOSURE LIMIT</u>	<u>ACGIH TLV</u>	<u>CARCINOGEN* Y/N</u>
Silica	35-75		Y	014808607	15mg/m <sup>3</sup>	10mg/m <sup>3</sup>	N
Sodium Oxide	<1		N	012401864	N/A	N/A	N
Zinc Oxide	1-10		Y	001314132	5mg/m <sup>3</sup> (fume)	10mg/m <sup>3</sup> (dust)	N
Aluminum Oxide	20-50		Y	001344281	15mg/m <sup>3</sup>	10mg/m <sup>3</sup>	N
Titanium Oxide	1-10		Y	013463677	15mg/m <sup>3</sup>	10mg/m <sup>3</sup>	N
Zirconium Oxide	1-10		Y	001314234	5mg/m <sup>3</sup>	5mg/m <sup>3</sup>	N
Arsenic Trioxide	<1		Y	001363282	10mg/m <sup>3</sup>	200mg/m <sup>3</sup>	Y
Lithium Oxide	1-10		N	554132	N/A	N/A	N
Magnesium Oxide	1-10		Y	001309484	15mg/m <sup>3</sup>	10mg/m <sup>3</sup>	N
Phosphoric-Pentoxide	1-10		N	1314563	1mg/m <sup>3</sup>	3mg/m <sup>3</sup>	

**SECTION 1 – PHYSICAL/CHEMICAL CHARACTERISTICS**

BOILING POINT: NA  
 MELTING POINT: 600 ° C  
 SPECIFIC GRAVITY (BULK): 2.53  
 VAPOR PRESSURE: NA  
 VAPOR DENSITY: NA

## **SECTION 2 – FIRE AND EXPLOSION HAZARD DATA**

EXTINGUISHING MEDIA:NA

SPECIAL FIRE FIGHTING PROCEDURES: Use extinguishing media that is appropriate for the classification of the surrounding fire. Inorganic glass is non-combustible .

EXPLOSION POTENTIAL: Possibility of flying glass fragments if hot glass comes in contact with water or carbon dioxide extinguishing media.

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## **SECTION 3 – HEALTH HAZARD DATA AND FIRST AID PROCEDURES**

INHALATION: Acute: Upper respiratory tract irritation. Chronic: Possible mild-pneumoconiosis

Remove from exposure, seek medical attention

INGESTION: Boron poisoning can cause depression of circulation, persistent vomiting, diarrhea, and in severe cases shock and coma. Also possible severe irritation.

Seek medical attention

SKIN: Sodium oxide can be irritating to the skin

Wash with soap and water

EYE: Possible irritation

Flush well with running water, get medical attention if irritation persist

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## **SECTION 4 – SPILL, LEAK & DISPOSAL**

Spill, Leak Procedures: No special precautions

Disposal Method: Follow Federal, State and Local Regulations

Use non-dust method: Use a vacuum cleaner and/or a damp disposable cloth or rag to wipe up spill.

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## **SECTION 7 – SPECIAL PROTECTION INFORMATION**

Local Exhaust: Use local exhaust ventilation, hood or equipment to avoid dispersal of fibrous or other glass into the workspace air.

Personal Equip.- Respirator - If dust or particulate are above the OSHA permissible exposure limits use a NIOSH approved

Eye Protection- Industrial safety glasses that meet ANSI Z-81 standard.

Protective Gloves - Recommend gloves for protection from sharp edges