

	<b>Zircar Zirconia, Inc.</b> <b>P.O. Box 287</b> <b>Florida, NY 10921-0287</b> (845)651-3040 Emergency (845)258-9148 www.zircarzirconia.com	<b>Safety Data Sheet</b> <b>ZR-CEM</b>	<b>Document #:</b>	<b>Rev.:</b>	<b>Date:</b>
			<b>SDS-103</b>	03	9/12/2017

**1. Product Identification**

**Product Types:** ZR-CEM      **Synonym:** Zirconia Cement

**2. Hazards Identification**

**Classification of Substance or Mixture**

**Classification (GHS-US):** H314, H315, H319, H335, H372

**GHS Label Elements**

**Hazard Pictograms (GHS-US)**



**Signal Word (GHS-US):** Danger

**Hazard Statements:**

H314/315 Causes skin burns/ irritation  
 H314/319 Causes serious eye burns/ irritation  
 H335 May cause respiratory irritation  
 H372 Causes damage to organs through prolonged or repeated exposure.

**Precautionary Statements**

P260 Do not breathe dust.  
 P264 Wash hands, forearms, and other exposed areas thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves, protective clothing, and eye protection.  
 P304/340 If inhaled dust may cause irritation or soreness of throat and nose. Remove person to fresh air and keep at rest in a position for comfortable breathing.  
 P308/313 If exposed or concerned: Get medical advice/ attention.  
 P501 Dispose of contents/ container in accordance with local, regional, national, and international regulations.

**Hazards not otherwise classified:** None

**3. Composition**

Component	Synonyms	CAS Number	% by Weight	Classification (GHS-US)
Yttria Stabilized Zirconia Fibers	YSZ	308076-80-4	41	None.
Zirconium Acetate	N/A	7585-20-8	44	H314
Potassium Silicate Solution	Kasil	1312-76-1	15	H315, H319, H335, H372

**4. First Aid Measures**

**Inhalation:** Product is liquid and cannot be inhaled as dust unless dry. Remove to fresh air. Rinse mouth to clear throat and expel liquid. Blow nose to evacuate dust. Consult a physician if irritation persists.

**Eye Contact:** Do not rub eyes. Keep hands or contaminated body parts away from eyes. Remove contact lenses. Flush with water. If irritation persists, consult a physician.

**Skin Contact:** Wash with soap and water. For dryness, a skin cream may be helpful. Do not apply anything to a rash. Consult a physician if irritation persists.

**Ingestion:** Do not induce vomiting without advice of a physician. Seek medical attention.

**5. Fire-Fighting Measures:** Product is not flammable.

**Special Hazards arising from the substance:** None

**Advice for firefighters:** None

**6. Accidental Release Measures:** Clean up with a sponge, mop or damp cloth. When dried, clean up minimizing airborne dust.

**Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Avoid contact with skin, eyes, or clothing. Avoid breathing dust.

**For Non-Emergency Personnel:** Use appropriate personal protection equipment (PPE), gloves, glasses, dust mask (when dried).

**For Emergency Responders:** Equip cleanup crew with proper protection. Ventilate area.

**Environmental Precautions:** None.

**References to Other Sections:** See section 8. Exposure Controls/ Personal Protection. For waste disposal refer to section 13.

**7. Handling and Storage**

**Precautions for Safe Handling**

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

**Machining and Cutting:** These materials may produce nuisance dust when dried, machined or cut.

**Conditions for Safe Storage, Including any Incompatibilities**

**Storage conditions:** These materials are stable and may be stored indefinitely.

**Incompatible Products:** Powerful oxidizers; fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, etc.

**Specific End Use:** Cementing, hardening

**8. Exposure Controls/ Personal Protection**

**Control Parameters**

There is no specific OSHA Permissible Exposure Limit (PEL) or ACGIH Threshold Limit Value (TLV) for Yttria Stabilized Zirconia Fibers, CAS# 308076-80-4. Because Zircar zirconia fibers have diameters of 6-10 microns they are larger than respirable. The control parameters are for the constituent, Zirconium Acetate.

Zirconium Acetate	OSHA PEL as 8 hr TWA	5 mg/m <sup>3</sup>
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After uses above 1000C cristobalite (crystalline silica) may form. Removal of this product may generate dust. The control parameters reference cristobalite, respirable dust.

CAL/ OSHA PEL as 8 hr TWA	0.05 mg/m <sup>3</sup> Respirable	ACGIH TLV	0.025 mg/m <sup>3</sup>
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**Exposure Controls**

**Appropriate Engineering Controls:** Ensure adequate ventilation. Emergency eye wash should be available. Ensure regulations are observed.

**Personal Protective Equipment:** Protective goggles, gloves, protective clothing. Dust formation: dust mask type N95.

**Environmental Exposure Controls:** Do not allow the product to be released into the environment.

**Consumer Exposure Controls:** Do not eat, drink or smoke during use.

**9. Physical and Chemical Properties**

<b>Physical State</b>	Liquid suspension	<b>Auto ignition Temperature</b>	No data available	
<b>Color</b>	White or clear liquid with white settled solids	<b>Decomposition Temperature</b>		
<b>Odor</b>	Slightly Acidic	<b>Flammability (solid, gas)</b>		
<b>Odor Threshold</b>	No data available	<b>Vapor Pressure</b>		
<b>pH</b>	4-6	<b>Relative Vapor Density at 20C</b>		
<b>Evaporation Rate</b>	No data available	<b>Relative Density</b>		
<b>Melting/ Freezing Point</b>	2600C	<b>Solubility</b>		Insoluble after drying
<b>Boiling Point</b>	No data available	<b>Partition Coefficient: N-Octanol/ Water</b>		No data available
<b>Flash Point</b>		<b>Viscosity</b>	20 to 2400 cps	

**10. Stability and Reactivity**

**Reactivity:** Hazardous reactions will not occur under normal conditions.

**Chemical Stability:** Stable under normal conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Incompatible Materials:** Powerful oxidizers: fluorine, chlorine trifluoride, magnesium trioxide, oxygen difluoride, etc.

**Hazardous Decomposition Products:** None.

**11. Toxicological Information:** No Information available      **Epidemiology:** No Information Available      **Distribution:** Zirconia, yttria, and silica are naturally occurring and widely distributed in igneous rock. Deposits in sedimentary rock may be found.      **Chemical Fate Information:** The relative inertness of this material indicates that it may be highly persistent in the environment. No information regarding any negative effects of this persistence has been noted.

**12. Ecological Information:** Ecological data are not available.

**13. Disposal Considerations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

**14. Transportation Information:** Not regulated hazardous substances, no specific regulations apply.

**15. Regulatory Information**

**WHMIS Status:** Ceramic fibers with ≤3µm diameter are Class D2 controlled product based on an IARC 2B Classification. Zircar zirconia fibers are 6-10µm diameter and are not respirable and not controlled.

**California Proposition 65:** Zircar zirconia fibers are 6-10µm diameter and are not respirable and not controlled.

**SARA Section 313 Supplier Notification:** This product does not contain toxic chemicals subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 Section 313 (40 CFR 372).

**16. Other Information:** The information contained herein is based on data considered to be accurate as of the preparation or revision date. It is provided in good faith and in compliance with state and federal regulations. No warranty or representation, express or implied is made as to the accuracy or completeness of this information. Other national, state and/or local regulations may apply.