

	Zircar Zirconia, Inc. P.O. Box 287 Florida, NY 10921-0287 (845)651-3040 Emergency (845)258-9148 www.zircarzirconia.com	Safety Data Sheet ZR-CEM	Document #:	Rev.:	Date:
				SDS-103	02

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	YSZ	308076-80-4	41	H315, H319, H335
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

Yttria Stabilized Zirconia, CAS# 308076-80-4, OSHA and ACGIH PEL are not available. The control parameters are for the constituent, Yttrium Oxide.

Yttrium Oxide	OSHA PEL as 8 hr TWA	1 mg/m ³	ACGIH TLV	1 mg/m ³
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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 ³ Respirable	ACGIH TLV	0.025 mg/m ³
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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

Physical State	Liquid suspension	Auto ignition Temperature	
Color	White or clear liquid with white settled solids	Decomposition Temperature	
Odor	Slightly Acidic	Flammability (solid, gas)	No data available
Odor Threshold	No data available	Vapor Pressure	
pH	4-6	Relative Vapor Density at 20C	
Evaporation Rate	No data available	Relative Density	
Melting/ Freezing Point	2600C	Solubility	Insoluble after drying
Boiling Point	No data available	Partition Coefficient: N-Octanol/ Water	No data available
Flash Point		Viscosity	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: This is a Class D2 controlled product based on an IARC 2B Classification for ceramic fibers.

California Proposition 65: On July 1, 1990 the state of California added "ceramic fibers (airborne particles of respirable size)" to the list of Proposition 65 chemicals which are "known to cause cancer" by the state. Proposition 65 lists all substances classified by the IARC as a Category 1, 2A or 2B carcinogen.

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.