

	Zircar Zirconia, Inc. P.O. Box 287 Florida, NY 10921-0287 (845)651-3040 Emergency (845)258-9148 www.zircarzirconia.com	Safety Data Sheet ZYC and ZYZ	Document #:	Rev.:	Date:
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1. Product Identification

Product Types: ZYC and ZYZ
Synonym: Ytria Stabilized Zirconia Fibers with Silica Bond

2. Hazards Identification

Classification of Substance or Mixture
Classification (GHS-US): H315, H319, H335, H350, H372
GHS Label Elements
Hazard Pictograms (GHS-US)



Signal Word (GHS-US): **Danger**
Hazard Statements: H315/319 Causes skin/ eye irritation
 H335 May cause respiratory irritation
 H350 May cause cancer.
 H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements

P201/202 Do not handle until safety precautions and instructions are understood.
 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.
 P308/313/312 If exposed or concerned: Get medical advice/ attention, or call poison center.
 P501 Dispose of contents/ container in accordance with local, regional, national, and international regulations.
Hazards not otherwise classified: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

3. Composition

Component	Synonyms	CAS Number	% by Weight	Classification (GHS-US)
Ytria Stabilized Zirconia	YSZ	308076-80-4	95	H315, H319, H335
Silica (amorphous)	N/A	7631-86-9	5	H350, H372

4. First Aid Measures

Inhalation: 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.
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 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: Insulation

8. Exposure Controls/ Personal Protection

Control Parameters

Zirconium Oxide is not listed here as it is not classified as hazardous.

Silicon Dioxide	OSHA PEL as 8 hr TWA	20 Million particles per ft ³	NIOSH as 8 hr TWA	6 mg/m ³ (respirable fraction)
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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.

OSHA PEL as 8 hr TWA	0.05 mg/m ³	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	Solid, Felt	Auto ignition Temperature	No data available
Color	White	Decomposition Temperature	
Odor	Odorless	Flammability (solid, gas)	
Odor Threshold	No data available	Vapor Pressure	
pH		Relative Vapor Density at 20C	
Evaporation Rate		Relative Density	
Melting/ Freezing Point		Solubility	
Boiling Point		Partition Coefficient: N-Octanol/ Water	
Flash Point		Viscosity	

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: May cause cancer. IARC Group 1, known human carcinogen, OSHA Hazard communication carcinogen list.

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).