

Graphtek LLC - Zirconia MSDS

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Product: Zirconia 95%

(1) Identification

Ceramic shapes and parts manufactured from Zirconium Oxide.

(2) Hazardous Ingredients/Identity Information

Hazardous Components	Zirconium Oxide ZrO ₂
CAS #	1314-23-4
OSHA PEL	5mg/m ³
ACGIH	5mg/m ³

Exposure limits for Zirconia ZrO₂ are for zirconium metal. Risk from the oxide will be lower. As a solid refractory shape, there no consequential health hazards. Care should be taken to avoid breathing dust during machining and disposal of material.

(3) Physical and Chemical Data

Boiling Point	NA
Melting Point	2500°C
Vapor Pressure	NA
Solubility in Water	None
Specific Gravity (H ₂ O=1)	5.80
Evaporation Rate	NA
Appearance and Odor	Off white-gray. No odor.

(4) Fire and Explosion Hazard Data

Flash Point	NA
Flammable Limits	NA
LEL	NA
UEL	NA
Extinguishing Media	NA
Extinguishing Media to Avoid	None
Special Fire Fighting Procedures	NA

Unusual Fire and Explosion Potential	None
(5) Reactivity Data	
Stability	Stable
Conditions to Avoid	None
Incompatibility (Materials to Avoid)	None
Hazardous Decomposition or By Products	None
Hazardous Polymerization	Will not occur
(6) Health Hazard Data	
Routes of Entry	Inhalation
Health Hazards (Acute and Chronic)	This material is a solid article and has no health hazard unless dust is created by dry cutting. Acute exposure will have only nuisance dust effects.
Signs and Symptoms of Exposure	Dust may cause irritation of the respiratory system, skin and eyes.
Medical Conditions Aggravated by Exposure	Other pulmonary conditions and diseases
Emergency and First Aid Procedures	Remove person to dust free area if irritation is caused. Skin: wash with soap and water. Eyes: flush with water.
(7) Procedures for Safe Handling and Use	
Steps to be Taken in Case Material is Released or Spilled	NA
Waste Disposal Method	Can be disposed of as non-hazardous waste in accordance with local regulations.
Precautions to be Taken in Handling and Storing	Keep product dry. If wet, potentially violent cracking may occur in contact with molten metal.
Other Precautions	Use safety glasses and approved dust mask in a well-ventilated area. Use proper procedures for handling so that airborne dust does not exceed the TLV. Wet cutting/grinding will prevent creation of dust.
(8) Control Measures	
Respiratory Protection (Specify Type)	Use NIOSH approved dust respirator.
Ventilation Requirements	Local exhaust in areas where dust may be generated
Protective Gloves	Abrasion resistant
Eye Protection	Safety glasses

Other Protective Clothing or Equipment	Metatarsal safety shoes
Work/Hygienic Practices	Wash with soap and water

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