

**GELEST, INC.**

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MATERIAL SAFETY  
DATA SHEET

EMERGENCY TELEPHONE  
CHEMTREC: 1-800-424-9300

NAME USED ON LABEL: **ZIRCONIUM (BIS-2-2-(ALLYLOXYMETHYL)BUTOXIDE)TRIS-(DIOCTYLPHOSPHATE) 95% - AKZ941**

CHEMICAL NAME: ZIRCONIUM (BIS-2-2-(ALLYLOXYMETHYL)BUTOXIDE)TRIS-(DIOCTYLPHOSPHATE)

SYNONYMS: (BIS-2-2-(ALLYLOXYMETHYL)BUTOXIY)TRIS(DIOCTYLPHOSPHATO)ZIRCONATE

CHEMICAL FAMILY: ZIRCONIUM COMPOUND

FORMULA: C<sub>60</sub>H<sub>123</sub>P<sub>3</sub>O<sub>15</sub>Zr

HMIS CODES HEALTH: 2 FLAMMABILITY: 2 REACTIVITY: 1

**INGREDIENTS**

IDENTITY	CAS NO.	%	TLV
ZIRCONIUM (BIS-2-2-(ALLYLOXYMETHYL)BUTOXIDE)TRIS(DIOCTYLPHOSPHATE)	111053-49-7	>95	not established (Zr = TWA: 5mg/m <sup>3</sup> )

**PHYSICAL DATA**

Boiling Point: >150°C@ 1mm	Melting Point: <0°C
Specific Gravity: 1.06	Vapor Pressure: NA
Vapor Density (air=1): >1	Solubility in water: reacts
% volatiles: NA	Evaporation rate: NA
Molecular Weight: 1328.28	Viscosity: 140-180 cSt.
Appearance & Color: Viscous amber liquid, characteristic odor	

**FIRE & EXPLOSION DATA**

Flash Point, COC: 76°C (169°F)      Autoignition Temp.: not determined  
Flammability Limits: not determined

Extinguishing Media: Water spray, foam, carbon dioxide, dry chemical.  
Special Fire Fighting Procedures: Avoid eye and skin contact. Do not breathe fumes or inhale vapors.  
Unusual Fire and Explosion Hazards: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

-1-(AKZ941)

## ENVIRONMENTAL INFORMATION

Spill response: Sweep material and transfer to a suitable container for disposal.

Recommended Disposal: Absorb onto clay or vermiculite. Dispose of as solid waste. Follow all chemical pollution control regulations.

## HEALTH HAZARD DATA

Eye Contact: May cause immediate or delayed severe eye irritation.

Skin contact: May produce irritation or contact dermatitis. Prompt and thorough washing with soap and water will reduce or eliminate potential dermal effects.

Inhalation: Inhalation may irritate the respiratory tract.

Oral Toxicity: not determined  
Chronic Toxicity: not determined

### SUGGESTED FIRST AID

**EYES:** In case of contact, immediately flush eyes with flowing water for at least 15 minutes. Get medical attention.

**SKIN:** Flush with water, then wash with soap and water.

**INHALATION:** Move exposed individual to fresh air. Administer oxygen if needed. Call a physician.

**INGESTION:** Never give fluids or induce vomiting if patient is unconscious or having convulsions. Get medical attention.

## REACTIVITY DATA

Stability: Stable

Conditions to avoid: Material decomposes slowly in contact with water.

Hazardous decomposition products: Organic acid vapors and zirconium oxide fumes.

-2-(AKZ941)

## SPECIAL PROTECTION INFORMATION

Ventilation: Local exhaust is required. Mechanical is recommended.

Respiratory Protection: If exposure exceeds TLV, NIOSH approved dust and mist respirator.

Eye and Face Protection: Chemical worker's goggles. Do not wear contact lenses.

Other Clothing and Equipment: Rubber, neoprene or nitrile gloves. An eyewash and emergency shower should be available. Launder clothing before reuse.

## OTHER PRECAUTIONS

For research use only.

Storage and Handling: Store in sealed containers.

## TRANSPORTATION

DOT SHIPPING NAME: COMBUSTIBLE LIQUID, N.O.S

DOT HAZARD CLASS: NONE REQUIRED

DOT LABEL: NONE REQUIRED

DOT ID No: NONE REQUIRED

Prepared by safety and environmental affairs

ISSUE DATE AKZ941: 8/12/05

SUPERSEDES: none

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-3-(AKZ941)

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