

**GELEST, INC.**  
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MATERIAL SAFETY  
DATA SHEET

EMERGENCY TELEPHONE  
CHEMTREC: 1-800-424-9300

NAME USED ON LABEL: **TETRAKIS(ETHOXYETHOXY)SILANE, 90% - SIT7282.0**

CHEMICAL NAME: TETRAKIS(ETHOXYETHOXY)SILANE, 90%

SYNONYMS: SILICON TETRAETHOXYETHOXIDE

CHEMICAL FAMILY: SILICATE ESTER

FORMULA: C<sub>16</sub>H<sub>36</sub>O<sub>8</sub>Si

HMIS CODES    HEALTH: 2    FLAMMABILITY: 1    REACTIVITY: 0

**INGREDIENTS**

IDENTITY	CAS NO.	%	TLV	OSHA PEL
TETRAKIS(ETHOXYETHOXY)SILANE	18407-94-8	>90	not established	
2-ETHOXYETHANOL	110-80-5	<5	not established	
ETHOXY[TRIS(ETHOXYETHOXY)]SILANE	not found	<5	not established	

**PHYSICAL DATA**

Boiling Point: 200°C at 1 mm

Melting Point: <0°C

Specific Gravity: 1.02

Vapor Pressure, 25°: <0.1mm

Vapor Density (air = 1): >4

Solubility in water, reacts

% volatiles: <1

Evaporation rate: NA

Molecular Weight: 384.54

Other: NA

Appearance & Color: Clear liquid, characteristic odor

**FIRE & EXPLOSION DATA**

Flash Point, COC: 131°C (268°F)

Autoignition Temp.: not determined

Flammability Limits: not determined

Extinguishing Media: Water spray or fog, 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.

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Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose, LC: Lethal Concentration; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number

## ENVIRONMENTAL INFORMATION

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

Recommended Disposal: Incinerate. 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. Material generates ethoxyethanol on contact with water or moisture in skin, eyes and mucous membranes and has an irritating, dehydrating effect on overexposed tissue. Prompt and thorough washing with soap and water will reduce or eliminate potential dermal effects.

Inhalation: Inhalation may irritate the respiratory tract. Overexposure can cause lung damage - pulmonary toxin.

Note: The hydrolysis product of this product is ethoxyethanol (ethyleneglycol, ethyl ether). Ethoxyethanol has been found to affect female and male reproductive systems. Additional laboratory studies with ethoxyethanol observed birth defects, fetotoxicity, embryoletality, immunosuppression and damage to male reproductive tissues.

Oral Toxicity: not determined

Inhalation 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. To conscious individual give one full cup of water to dilute ingested material. Get medical attention.

## REACTIVITY DATA

Stability: Stable

Conditions to avoid: Material decomposes slowly in contact with moist air or with water liberating ethoxyethanol. Avoid contact with oxidizing agents.

Hazardous decomposition products: Ethoxyethanol, organic acid vapors and silicon dioxide.

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## SPECIAL PROTECTION INFORMATION

Ventilation: Local exhaust is required. Mechanical is recommended.

Respiratory Protection: If exposure exceeds TLV, NIOSH approved organic vapor 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 and industrial use only.

Storage and Handling: Store in sealed containers.

Containers require grounding during use.

## TRANSPORTATION

DOT SHIPPING NAME: Chemicals, NOI

DOT HAZARD CLASS: Not regulated

DOT LABEL: Not Required

DOT ID No: Not Required

Prepared by safety and environmental affairs

ISSUE DATE SIT7282.0: 8/27/03

SUPERSEDES: 7/3/96

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