

GELEST, INC.

11 East Steel Rd. Morrisville, PA 19067 Phone: (215) 547-1015

MATERIAL SAFETY DATA SHEET EMERGENCY TELEPHONE CHEMTREC: 1-800-424-9300

NAME: **TITANIUM TRIS(DIOCTYLPYROPHOSPHATO)-ISOPROPOXIDE, 90% - AKT889.1** CHEMICAL NAME: TITANIUM TRIS(DIOCTYLPYROPHOSPHATO)-ISOPROPOXIDE, 90%

SYNONYMS:TITANIUM IV 2-PROPANOLATO TRIS(DIOCTYL)PHOSPHATO-O

CHEMICAL FAMILY: TITANATE ESTER

FORMULA: C₅₁H₁₀₉O₁₃P₃Ti

HMIS CODES HEALTH: 2 FLAMMABILITY: 2 REACTIVITY: 1

INGREDIENTS

IDENTITY CAS NO. % TLV OSHA PEL

TITANIUM TRIS(DIOCTYLPYROPHOSPHATO)ISOPROPOXIDE

68585-79-5 >85

not established

OTHER TITANATE ESTERS

<15 not established

PHYSICAL DATA

Boiling Point: NA

Specific Gravity: 1.03-1.04

Vapor Density, air =1: NA

Volatiles: <10

Melting Point: <0°

Vapor Pressure: N/A

Solubility in water: reacts

Evaporation rate: N/A

Molecular Weight: 1191.33 Other: NA

Appearance & Color: Amber viscous liquid.

FIRE & EXPLOSION DATA

Flash Point, COC: 63°C (145°F) Autoignition Temp.: not determined

Flammability Limits LEL: N/A UEL: N/A

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.

-1-(AKT889.1)

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.: Chemcial Abstract Service Registration Number Gelest, Inc. © 2008



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 and may cause corneal ulceration.

Skin contact: May produce slight irritation or contact dermatitis. Material generates isopropanol and isooctyl alcohol on contact with water or moisture in skin, eyes and mucous membranes and has an irritating, dehydrating and defatting 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, cause headache or nausea.

Oral Toxicity: not determined Inhalation Toxicity: not determined Eye Irritation: 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 wash out mouth with water, then give two full cups of water to dilute ingested material.

REACTIVITY DATA

Stability: Stable in sealed containers.

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

Hazardous decomposition products: isopropanol, isooctyl alcohol, organic acid vapors and titanium oxide.

-2-(AKT889.1)



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 use only.

Storage and Handling: Store in sealed containers.

TRANSPORTATION

DOT SHIPPING NAME: CHEMICALS NOI

DOT HAZARD CLASS: NOT REQUIRED

DOT LABEL: NOT REQUIRED DOT ID No: NOT REQUIRED

Prepared by safety and environmental affairs

ISSUE DATE AKT889.1: 3/13/03 SUPERSEDES: 9/25/98

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore.

-3-(AKT889.1)