

**GELEST, INC.**

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MATERIAL SAFETY  
DATA SHEET

EMERGENCY TELEPHONE  
CHEMTREC: 1-800-424-9300

NAME USED ON LABEL: **TITANIUM DI-n-BUTOXIDE (BIS-2,4-PENTANEDIONATE) - AKT853**

CHEMICAL NAME: TITANIUM DI-n-BUTOXIDE BIS(-2,4-PENTANEDIONATE)

SYNONYMS: TITANIUM DI-n-BUTOXY BIS(ACETYLACETONATE)

CHEMICAL FAMILY: TITANATE ESTER

FORMULA: C<sub>18</sub>H<sub>32</sub>O<sub>6</sub>Ti

HMIS CODES HEALTH: 2 FLAMMABILITY: 2 REACTIVITY: 1

**INGREDIENTS**

IDENTITY	CAS NO.	%	TLV	OSHA PEL
TITANIUM DI-n-BUTOXIDE BIS(-2,4-PENTANEDIONATE)	16902-59-3	>95	NA	NA
n-BUTANOL	71-36-3	<5	100ppm	50ppm

**PHYSICAL DATA**

Boiling Point: >150°C at 1mm

Specific Gravity: 1.085

Vapor Density (air =1): >1

% volatiles: >25%

Molecular Weight: 392.32

Appearance & Color: Clear, orange-red liquid

Melting Point: <0°C

Vapor Pressure: not determined

Solubility in water, Slightly soluble, reacts

Evaporation rate: NA

Other: N/A

**FIRE & EXPLOSION DATA**

Flash Point, COC: >110°C (>230°F) Autoignition Temp.: not determined

Flammability Limits: LEL: NA UEL: NA

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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## ENVIRONMENTAL INFORMATION

Spill response: Absorb material onto inert material such as clay or vermiculite. Sweep material and transfer to a suitable container for disposal.

Recommended disposal: Incinerate. Follow all chemical pollution control regulations.

## HEALTH HAZARD DATA

Eye Contact: The titanium di-n-butoxide bis(pentanedionate) -n-butanol mixture will cause immediate or delayed severe eye irritation and may cause corneal ulceration.

Skin contact: May produce irritation or contact dermatitis. Material generates isopropanol 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, 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. *Note to physician: Ophthalmic cortisone has been recommended for conjunctivitis and keratitis caused by n-butanol vapor exposure).*

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 two full cups of water to dilute ingested material. Get medical attention.

## REACTIVITY DATA

Stability: Stable

Conditions to avoid: Material decomposes slowly in contact with moist air and rapidly in contact with water slowly liberating n-butanol; TLV(TWA) = 100ppm. Avoid contact with oxidizing agents.

Hazardous decomposition products: n-butanol, pentanedione, organic acid vapors and titanium oxide.

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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.

## 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 AKT853: 3/10/03

SUPERSEDES: 11/15/99

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