

**GELEST, INC.**

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MATERIAL SAFETY  
DATA SHEET

EMERGENCY TELEPHONE  
CHEMTREC: 1-800-424-9300

NAME USED ON LABEL: **t-BUTYLDIMETHYLSILYLNITRILE - SIB1965.0**

CHEMICAL NAME: t-BUTYLDIMETHYLSILYLNITRILE

SYNONYMS: t-BUTYLDIMETHYLSILYL CYANIDE

CHEMICAL FAMILY: ORGANOSILANE

FORMULA: C<sub>7</sub>H<sub>15</sub>NSi

HMIS CODES HEALTH: 4 FLAMMABILITY: 3 REACTIVITY: 1

**INGREDIENTS**

IDENTITY	CAS NO.	%	TLV
t-BUTYLDIMETHYLSILYLNITRILE	56522-24-8	>97	not determined
(OSHA PEL for hydrogen cyanide, skin: 5ppm)			

**PHYSICAL DATA**

Boiling Point: 163-5°C

Specific Gravity: <1

Vapor Density (air=1): >1

% volatiles: 100

Molecular Weight: 141.29

Appearance & Color: Clear to straw liquid with acrid odor of hydrogen cyanide

Freezing Point: 76-8°C

Vapor Pressure: not determined

Solubility in water: reacts

Evaporation rate: not determined

Odor Threshold: 2ppm (hydrogen cyanide)

**FIRE & EXPLOSION DATA**

Flash Point, COC : 45°C (113°F)

Autoignition Temp.: not determined

Flammability Limits: not determined

Extinguishing Media: If no greater threat is present, this material should be allowed to burn, since combustion eliminates acute toxic potential. If a greater threat is present, use carbon dioxide or dry chemical.

Special Fire Fighting Procedures: Avoid inhalation, eye and skin contact. Do not breathe fumes or inhale vapors. Wear self-contained air supply.

Unusual Fire and Explosion Hazards: **Toxic fumes of hydrogen cyanide will develop when material is exposed to water.**

-1-(SIB1965.0)

## ENVIRONMENTAL INFORMATION

Spill response: May be hazardous to aquatic life if released to open waters. Cover spill with absorbent material. Transfer to a suitable container for disposal.

Recommended Disposal: Controlled incineration is preferred. Alternately, in an enclosed vessel with a caustic vent scrubber, hydrolyze material by mixing slowly with dilute sodium hydroxide, maintaining basic pH at all times. Aqueous layer contains sodium cyanide. Organic layer may be incinerated. Follow all chemical pollution control regulations.

## HEALTH HAZARD DATA

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

Skin contact: Highly toxic. May be fatal if absorbed through the skin. Prompt and thorough washing with soap and water will reduce or eliminate potential dermal effects.

Inhalation: Highly toxic. May be fatal if inhaled. At low levels may cause cyanosis (blue-gray coloring of skin, lips and fingernails caused by lack of oxygen).

Inhalation Toxicity: Not determined

Oral Toxicity- rat, ALD50 (estimated): 10-30mg/kg.

Chronic Toxicity: There are no known chronic effects related to this compound.

## 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. Call a physician.

INGESTION: If swallowed give two glasses of water and induce vomiting. Never give fluids or induce vomiting if patient is unconscious or having convulsions. Get medical attention.

Note to physician: If cyanosis is evident treat for cyanide poisoning. Provide oxygen.

## REACTIVITY DATA

Stability: Stable in sealed containers stored under a dry inert atmosphere.

Conditions to avoid: Combustible; avoid contact with heat, sparks or open flame.

Incompatibility (materials to avoid): Reacts with water and moisture in air, liberating hydrogen cyanide. Avoid contact with alcohols, acids, oxidizers.

Hazardous decomposition products: Hydrogen cyanide, organic acid vapors..

-2-(SIB1965.0)

## SPECIAL PROTECTION INFORMATION

Ventilation: Local exhaust is required. Mechanical is recommended.

Respiratory Protection: If exposure exceeds TLV for hydrogen cyanide, air-supplied or combination organic vapor/acid gas 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: TOXIC SOLID, FLAMMABLE, ORGANIC, N.O.S.  
(t-BUTYLDIMETHYLSILYLNITRILE)

DOT HAZARD CLASS: 6.1 SUB: 3

DOT LABEL: Toxic and Flammable Solid

DOT ID No: UN2930 PG: II ERG: 131

Prepared by safety and environmental affairs ISSUE DATE SIB1965.0: 6/3/03  
SUPERSEDES: 8/24/00

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