

**MATERIAL SAFETY
DATA SHEET**

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NAME ON LABEL: TETRAKIS(METHYLETHYLKETOXIME)SILANE
CHEMICAL NAME: TETRAKIS(METHYLETHYLKETOXIME)SILANE, 50% in
toluene
SYNONYMS: TETRAKIS(BUTANONEOXIME)SILANE
CHEMICAL FAMILY: ORGANOSILANE
FORMULA: C₁₆H₃₂N₄O₄Si
HMIS CODES HEALTH: 3 FLAMMABILITY: 3 REACTIVITY: 1

INGREDIENTS

IDENTITY

TETRAKIS(METHYLETHYLKETOXIME)SILANE
CAS NO. % TLV OSHA PEL
34206-40-1 >45 not established
METHYLETHYLKETOXIME 96-29-7 < <5 10ppm not established
TOLUENE 108-88-3 >45 50ppm 200ppm

PHYSICAL DATA

Boiling Point- (initial, toluene): 111°C Melting Point: <0°C
Specific Gravity: 0.938 Vapor Pressure, 25°: (toluene): 54mm
Vapor Density (air=1) (toluene): 3.2 Solubility in water: insoluble, reacts
rapidly
% volatiles: >90 Evaporation rate: N/A
Molecular Weight: 372.55 Other: NA
Appearance & Color: Clear solution with aromatic odor.

FIRE & EXPLOSION DATA

Flash Point, COC- toluene: 4°C (40°F) Autoignition Temp.: (toluene) 536°C
Flammability Limits (toluene)- LEL: 1.0 UEL: 7.1
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.

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: May be incinerated. Alternately, absorb onto clay or
vermiculite and dispose of absorbent material as solid waste. Follow all chemical

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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
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pollution control regulations.

HEALTH HAZARD DATA

Eye Contact: Will cause immediate or delayed severe eye irritation. Burns will develop unless treated.

Skin contact: May produce irritation or contact dermatitis which may be delayed several hours. May cause allergic reactions. Prompt and thorough washing with soap and water will reduce or eliminate potential dermal effects.

Inhalation: Inhalation of vapors or particulates of may irritate the respiratory tract. Vapors from decomposition or exposure to atmospheric moisture may cause a reversible narcotic effect. Overexposure may cause coma and respiratory failure. Oral Toxicity - rat, LD50 (toluene): 5000mg/kg. Subchronic oral toxicity studies with the hydrolysis product, methylethylketoxime, indicate that ingestion may produce blood effects, reducing the blood's ability to transport oxygen (methemoglobinemia and anemia.)

Chronic Toxicity: There are no known chronic effects related to this compound. The hydrolysis product, methylethylketoxime, in lifetime inhalation studies in which mice and rats were exposed 6hrs/day, 5days/week for 18 and 24 months, respectively, showed a statistical increase in liver carcinomas at exposure levels of 375ppm. In vivo and in vitro studies did not indicate mutagenicity or genotoxicity.

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

REACTIVITY DATA

Stability: Stable in sealed containers. Do not expose to moisture acid, oxidizers and metals such as iron.

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

Incompatibility (materials to avoid): Reacts with water and moisture in air and acids liberating methylethylketoxime (MEKO). Contact with iron should be avoided. Contact with electrophiles such as ferric chloride can lead to a violent reaction.

Hazardous decomposition products: Organic vapors including methylethylketoxime, methylethylketone, silicon dioxide, CO, CO₂ and NO_x.

SPECIAL PROTECTION INFORMATION

Ventilation: Local exhaust is required. Mechanical is recommended.

Respiratory Protection: If exposure exceeds TLV air-supplied or combination organic vapor acid gas respirator.

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

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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 without contacting iron or steel.

TRANSPORTATION

DOT SHIPPING NAME: FLAMMABLE LIQUID, NOS (TOLUENE)

DOT HAZARD CLASS: 3

DOT LABEL: FLAMMABLE LIQUID

DOT ID No: UN1993 PG:II

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