



>>Entry Name: Tetramethoxysilane

Synonym(s): Silicic acid tetramethyl ester, 9Cl. Methyl orthosilicate. Tetramethyl silicate. Tetramethyl orthosilicate. Silicon tetramethoxide. TMOS

CAS Registry Number: 681-84-5

Extra CAS Registry Numbers(s): 12002-26-5

$\text{Si}(\text{OMe})_4$ (T_d)

Molecular Formula: $\text{C}_4\text{H}_{12}\text{O}_4\text{Si}$

Molecular Weight: 152.222

Accurate Mass: 152.050487

Percentage Composition: C 31.56%; H 7.95%; O 42.04%; Si 18.45%

Source/Synthesis: Synth. from SiCl_4 + MeOH

Use/Importance: Cocatalyst with CsF for Michael additions. Catalyst for alkene polym.

Physical Description: Liq.

Melting Point: Mp 4-5°

Boiling Point: Bp 120-121°. Bp₃₄ 42.5°

Density: d_4^{22} 1.03

Hazard & Toxicity: Flammable, fl. p. 20°. Severe eye and respiratory tract irritant. Risk of permanent eye damage by direct contact. Nephrotoxic (ipr administration). Low oral and dermal toxicity. LD₅₀ (rat, orl) 700 mg/kg

Aldrich: 21847-2

Fluka: 87682

Sigma: T5426

Other: Gelest SIT7510.0

References:

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