



>>Entry Name: Tetrabutyl titanate

Synonym(s): Butanol titanium(4+) salt, 9Cl. Butyl alcohol titanium(4+) salt, 8Cl. Butyl titanate. Titanium(IV) butoxide. Tetrabutoxytitanate

CAS Registry Number: 5593-70-4

Related CAS Registry Numbers(s): 70799-68-7

$\text{Ti}(\text{OCH}_2\text{CH}_2\text{CH}_2\text{CH}_3)_4$

Molecular Formula: $\text{C}_{16}\text{H}_{36}\text{O}_4\text{Ti}$

Molecular Weight: 340.338

Accurate Mass: 340.209307

Percentage Composition: C 56.47%; H 10.66%; O 18.80%; Ti 14.07%

Use/Importance: Used in paint industry as coating and sealant; catalyst for polym. cross-linking and esterification

Physical Description: Oil

Boiling Point: Bp_1 155°

Density: d_4^{25} 0.993

Other Data: Heating at 200-225° → polymer. Rapidly hydrol. by H_2O → polymeric butyl titanates and TiO_2 . Exists in liq. phase as trimer and trimer aggregates

Hazard & Toxicity: Fl. p. 76°. LD_{50} (rat, orl) 3122 mg/kg

Aldrich: 42767-5

Fluka: 86910

Other: Gelest AKT850

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 1281B, (ir)

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Cullinane, N.M. *et al.*, *J. Appl. Chem.*, 1951, **1**, 400, (synth, props)

Boyd, T., *J. Polym. Sci.*, 1951, **7**, 591, (use)

Mehrotra, R.C., *J.A.C.S.*, 1954, **76**, 2266, (use)

Bradley, D.C. *et al.*, *J.C.S.(A)*, 1968, 1316, (pmr)

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