



>>Entry Name: Lithium trifluoromethanesulfonate

Synonym(s): Trifluoromethanesulfonic acid lithium salt, 9Cl, 8Cl. Lithium triflate

CAS Registry Number: 33454-82-9

LiOS(O)(O)CF3

Molecular Formula: CF3LiO3S

Molecular Weight: 156.011

Accurate Mass: 155.968027

Percentage Composition: C 7.70%; F 36.53%; Li 4.45%; O 30.77%; S 20.55%

Source/Synthesis: Synth. from the acid and LiOH

Use/Importance: Commercially available. Electrolyte component for lithium batteries. Safer alternative to LiClO4

Physical Description: Hygroscopic white cryst.

Solubility: Sol. H2O, polar org. solvs.

Hazard & Toxicity: Irritant

Aldrich: 28266-9

Fluka: 62621

>>Derivative: THF complex (1:1)

CAS Registry Number: 132572-20-4

Molecular Formula: C5H8F3LiO4S

Molecular Weight: 228.118

Accurate Mass: 228.025542

Percentage Composition: C 26.33%; H 3.53%; F 24.98%; Li 3.04%; O 28.05%; S 14.06%

Physical Description: Colourless monoclinic cryst. (THF)

References:

Bennion, D.N. *et al.*, *J. Chem. Eng. Data*, 1971, **16**, 368, (*phys props*)

Kubisen, S.J. *et al.*, *J.A.C.S.*, 1979, **101**, 5985, (*synth, props*)

Fujinaga, T. *et al.*, *Pure Appl. Chem.*, 1980, **52**, 1387, (*rev*)

Watanabe, M. *et al.*, *Kinzoku Hyomen Gijutsu*, 1986, **37**, 214; *CA*, 1986, **105**, 104503, (*uses*)

Ito, Y. *et al.*, *Solid State Ionics*, 1986, **18-19**, 277, (*uses*)

Sigma-Aldrich Library of Chemical Safety Data, 1988, **2**, 2159D, (*haz*)

Schumann, H. *et al.*, *Z. Naturforsch., B*, 1990, **45**, 1304, (*THF complex, cryst struct, pmr, cmr, F-19 nmr*)

Angé, J. *et al.*, *Tet. Lett.*, 1996, **37**, 7714, (*use, catalyst*)