



>>Entry Name: Phenyllithium, 9CI

Synonym(s): Lithium phenyl

CAS Registry Number: 591-51-5

PhLi

Molecular Formula: C_6H_5Li

Molecular Weight: 84.046

Accurate Mass: 84.055128

Percentage Composition: C 85.75%; H 6.00%; Li 8.26%

Source/Synthesis: Synth. from PhBr and Li or BuLi

Use/Importance: Commercially available. Undergoes mainly 1,2-addn. to enones; opens epoxides; used for elimination of quaternary ammonium salts to give alkenes; eliminates HF from fluoroarenes to give arynes

Physical Description: Solid

Solubility: Sol. ethers; insol. hydrocarbons

Other Data: Forms oligomeric complexes with Lewis bases, lithium halides

Aldrich: 22102-3

Fluka: 78792

>>Derivative: Et_2O complex (4:4)

Synonym(s): Tetrakis[1,1'-oxybis[ethane]]tetraphenyltetralithium, 10CI

CAS Registry Number: 86129-36-4

Molecular Formula: $C_{40}H_{60}Li_4O_4$

Molecular Weight: 632.676

Percentage Composition: C 75.94%; H 9.56%; Li 4.39%; O 10.12%

Physical Description: Cryst. (Et_2O /hexane)

>>Derivative: Et_2O , LiBr complex (3:3:1)

CAS Registry Number: 86129-37-5

Molecular Formula: $C_{30}H_{45}BrLi_4O_3$

Molecular Weight: 561.352

Percentage Composition: C 64.19%; H 8.08%; Br 14.23%; Li 4.95%; O 8.55%

Physical Description: Colourless cryst. (Et_2O)

>>Derivative: Me_2S complex (4:4)

Physical Description: Colourless cryst. (Me_2S /hexane)

References: