>>**Entry Name: Dimethylzinc,** 9Cl
Synonym(s): Zinc dimethyl. Zinc methyl

CAS Registry Number: 544-97-8
Type of Compound Code(s): BB0700 BB0200 BB0330 BB0260 BB0240 BB0170 BA0533
$ZnMe_2$

Molecular Formula: C_2H_6Zn
Molecular Weight: 95.459
Accurate Mass: 93.976095
Percentage Composition: C 25.16%; H 6.34%; Zn 68.50%
Source/Synthesis: Synth. from Me_3Al and $Zn(OAc)_2$
Use/Importance: Polym. catalyst. Gives enantioselective addn. to aldehydes in presence of chiral aminoalcohols; undergoes conjugate addn. to vinyl sulfoxide in presence of Ni catalysts and conjugate addn. to enones in presence of $Ni(acac)_2$ and Li salts; with Cp_2TiCl_2 gives reagent for methylenation of carbonyl compds.; substitutes Cl of α-chloro thio ethers with Me in presence of $TiCl_4$; in reactions of lithium enolates with electrophiles, suppresses undesired α-proton exchange; substitutes acyl halides; adds 1,2- to alkynyl aldehydes
Physical Description: Liq.
Melting Point: Mp –42.5°
Boiling Point: Bp 46°
Density: d_4^{16}1.386
Other Data: Hydrol. by $H_2O \rightarrow Zn(OH)_2 + CH_4$
Hazard & Toxicity: Pyrophoric. Explodes in oxygen

Aldrich: 36440-1
Fluka: 41766

>>**Derivative:** Me_3N complex

CAS Registry Number: 92382-16-6
Molecular Formula: $C_5H_{15}NZn$
Molecular Weight: 154.57
Accurate Mass: 153.049594
Percentage Composition: C 38.85%; H 9.78%; N 9.06%; Zn 42.30%
Source/Synthesis: Synth from $ZnMe_2$.2THF + Me_3N or by matrix isolation from gas phase
Physical Description: Colourless hygroscopic liq.
Melting Point: Mp –52°
Boiling Point: Bp 84°
Solubility: Sol. C_6H_6

>>**Derivative:** Me_3N complex (2:1)

CAS Registry Number: 53231-63-3
Molecular Formula: $C_8H_{24}N_2Zn$
Molecular Weight: 213.681
Accurate Mass: 212.123093
Percentage Composition: C 44.97%; H 11.32%; N 13.11%; Zn 30.60%
Source/Synthesis: Synth. from $ZnMe_2$.2THF + excess Me_3N, or by matrix isol. from gas phase
Use/Importance: Used for vapour deposition synth. of ZnSe
Physical Description: Colourless hygroscopic liq.
Boiling Point: Bp 84.5°
Solubility: Sol. C_6H_6

>>**Derivative:** Et_3N complex

CAS Registry Number: 36951-67-4
Extra CAS Registry Numbers(s): 88029-05-4
Molecular Formula: $C_8H_{21}NZn$
Molecular Weight: 196.651
Accurate Mass: 195.096544
Percentage Composition: C 48.86%; H 10.76%; N 7.12%; Zn 33.25%
Source/Synthesis: Synth. from $ZnMe_2$.2THF + Et_3N
Use/Importance: Used for vapour deposition synth. of ZnSe
Physical Description: Colourless hygroscopic liq.