>>**Entry Name: Dimethylcadmium,** 9Cl

CAS Registry Number: 506-82-1
Type of Compound Code(s): BB0170 BB0200 BB0240 BA0530
$CdMe_2$

Molecular Formula: C_2H_6Cd
Molecular Weight: 142.48
Accurate Mass: 143.950307
Percentage Composition: C 16.86%; H 4.24%; Cd 78.90%
Source/Synthesis: Synth. from MeMgI and $CdCl_2$
Use/Importance: Polym. catalyst; reagent for synth. of methyl ketones from acyl halides; adds to aldehydes and ketones in presence of Mg salts; undergoes 1,2- and 1,4-addn. to enones
Physical Description: Liq. with musty odour
Melting Point: Mp –2.4°
Boiling Point: Bp 105.7°
Density: $d^{17.9}$ 1.985
Refractive Index: n_D^{17} 1.5488
Hazard & Toxicity: May dec. explosively above 100°. Pyrophoric. Forms explosive peroxide on exp. to air. V. toxic

>>**Derivative:** Bipy complex

CAS Registry Number: 15094-74-3
Molecular Formula: $C_{12}H_{14}CdN_2$
Molecular Weight: 298.667
Accurate Mass: 300.019055
Percentage Composition: C 48.26%; H 4.72%; Cd 37.64%; N 9.38%
Physical Description: Volatile yellow cryst.
Other Data: Dissoc. on heating at <110° *in vacuo*

>>**Derivative:** 4,4'-Bipy complex

CAS Registry Number: 107574-22-1
Physical Description: Colourless cryst. (THF at –30°)
Other Data: Dissoc. completely on heating at 110° *in vacuo*

>>**Derivative:** TMED complex
Synonym(s): Dimethyl(tetramethylethylenediamine)cadmium

CAS Registry Number: 107574-21-0
Molecular Formula: $C_8H_{22}CdN_2$
Molecular Weight: 258.686
Accurate Mass: 260.081655
Percentage Composition: C 37.14%; H 8.57%; Cd 43.45%; N 10.83%
Physical Description: White cryst. (by subl.)
Melting Point: Mp 62-63°
Boiling Point: $Subl._{0.02}$ 70°
Solubility: Sol. Et_2O

>>**Derivative:** 1,4-Dioxan complex

CAS Registry Number: 15094-72-1
Molecular Formula: $C_6H_{14}CdO_2$
Molecular Weight: 230.586
Accurate Mass: 232.002737
Percentage Composition: C 31.25%; H 6.12%; Cd 48.75%; O 13.88%
Melting Point: Mp 57°
Boiling Point: $Subl._{0.02}$ 22°
Other Data: 1-D polymeric struct. with 1,4-dioxan bridging Me_2Cd units $\rightarrow$ 4-coord. metal centres