



>>Entry Name: Magnesium methoxide

Synonym(s): Dimethoxymagnesium, 12Cl. Methanol magnesium salt, 12Cl, 8Cl. Methyl alcohol magnesium salt

CAS Registry Number: 27428-49-5

Extra CAS Registry Numbers(s): 109-88-6

Mg(OMe)₂

Molecular Formula: C₂H₆MgO₂

Molecular Weight: 86.373

Accurate Mass: 86.021822

Percentage Composition: C 27.81%; H 7.00%; Mg 28.14%; O 37.05%

Source/Synthesis: Prepd. by addn. of MeOH to a slurry of MgH₂ in C₆H₆. Alternatively, Mg can be dissolved in dry MeOH. Activators such as HgCl₂ can be used to promote reaction

Use/Importance: Commercially available in MeOH soln. (8 wt. %). Catalyst for polym. of alkenes. Reagent for selective deprotection of alkyl acetates

Physical Description: Moisture-sensitive, white solid.

Solubility: Sol. MeOH; insol. C₆H₆, THF

Other Data: Reacts with H₂O to form Mg(OH)₂ and MeOH. Calcination in air or under vacuum yields, without hydrolysis, MgO

Hazard & Toxicity: Highly toxic. Fl. p. 16°

Other: Gelest: AKM530

References:

U.K. Pat., 1963, 928 716; *CA*, **59**, 14022e, (*manuf*)

Grigor'ev, A.I. *et al.*, *Dokl. Akad. Nauk SSSR, Ser. Khim.*, 1965, **162**, 98; *CA*, **63**, 9239f, (*ir*)

Ashby, E. *et al.*, *Inorg. Chem.*, 1971, **10**, 906, (*synth, props*)

Hattori, T. *et al.*, *J. Mater. Sci. Lett.*, 1983, **2**, 504, (*synth, calcination*)

Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1984, **11**, 309, (*use*)

Eur. Pat., 1986, 186 294; *CA*, **105**, 136473, (*synth*)

Xu, Y.-C. *et al.*, *J.O.C.*, 1996, **61**, 9087, (*use, selective deprotection*)

Xu, Y.-C. *et al.*, *Tet. Lett.*, 1996, **37**, 455, (*use, selective deprotection of esters*)