



>>Entry Name: Magnesium acetate

Synonym(s): Acetic acid, magnesium salt, 8CI. Ethanoic acid, magnesium salt

CAS Registry Number: 142-72-3

Mg(OAc)₂

Molecular Formula: C₄H₆MgO₄

Molecular Weight: 142.394

Accurate Mass: 142.011652

Percentage Composition: C 33.74%; H 4.25%; Mg 17.07%; O 44.94%

Source/Synthesis: Synth. by heating the tetrahydrate to =100° *in vacuo*

Use/Importance: Catalyst for the polym. of alkenes

Physical Description: White powder

Melting Point: Mp 357°

Solubility: V. sol. H₂O; sol. MeOH

Other Data: ΔH_f° -1367.7 kJ mol⁻¹. High temp. calcination leads to MgO

Fluka: 63052

>>Derivative: Tetrahydrate

CAS Registry Number: 16674-78-5

Molecular Formula: C₄H₁₄MgO₈

Molecular Weight: 214.455

Accurate Mass: 214.053912

Percentage Composition: C 22.40%; H 6.58%; Mg 11.33%; O 59.68%

Source/Synthesis: Cryst. from aq. soln. of Mg(OAc)₂ obt. by neutralisation of aq. Mg(OH)₂ by aq. AcOH

Use/Importance: Commercially available

Physical Description: Deliquescent colourless monoclinic cryst. Dec. on heating to form amorphous Mg(OAc)₂ at =160°, crystalline Mg(OAc)₂ at =200° and MgO at =300°

Melting Point: Mp 80°

Solubility: V. sol. H₂O (120 g per 100 cm³ at 15°), EtOH

Other Data: ΔH_f° -2566.1 kJ mol⁻¹. Dehyd. by (MeO)₂CMe₂ in MeOH gives Mg(OAc)₂.2MeOH.2H₂O

Aldrich: 22976-8

Fluka: 63049

Sigma: M5661

References:

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