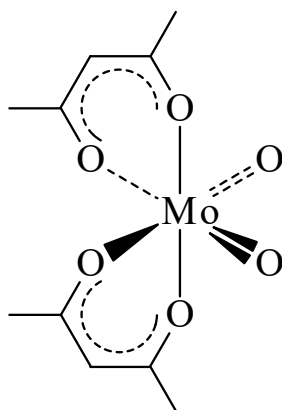




>>Entry Name: **Dioxobis(2,4-pentanedionato-*O,O'*)molybdenum**, 9CI

Synonym(s): Bis(acetylacetonato)dioxomolybdenum(*VI*). Molybdenyl acetylacetonate. Bis(2,4-pentanedionato)dioxomolybdenum(*VI*). Molybdenum bis(acetylacetonate) dioxide. $\text{MoO}_2(\text{acac})_2$



CAS Registry Number: 17524-05-9

Related CAS Registry Numbers(s): 21884-95-7

Type of Compound Code(s): BA0110 BA0530

Molecular Formula: $\text{C}_{10}\text{H}_{14}\text{MoO}_6$

Molecular Weight: 326.157

Accurate Mass: 327.984446

Percentage Composition: C 36.83%; H 4.33%; Mo 29.42%; O 29.43%

General Statement: Distorted octahedral arrangement about Mo with *cis*- MoO_2 groups

Source/Synthesis: Synth. by treatment of $\text{Na}_2\text{MoO}_4 \cdot 2\text{H}_2\text{O}$ in dil. HCl with acacH, with adjustment of pH

Use/Importance: Commercially available starting material; catalyst for epoxidation of alkenes, polym. of vinyl compds., manuf. of polyurethanes, adhesives and sealants

Physical Description: Yellow cryst. (EtOH/2,4-pentanedione). V. stable if washed and dried. Slowly turns blue when exposed to sunlight

Melting Point: Mp 179° (175°)

Other Data: $\Delta H_f^\circ -1365.5 \text{ kJ mol}^{-1}$

Aldrich: 22774-9

Other: Gelest AKM550

>>**Derivative:** Tris(pentafluorophenyl)borane complex

Synonym(s): Bis(acetylacetonato)dioxo[tris(pentafluorophenyl)boron]molybdenum

Molecular Formula: $\text{C}_{28}\text{H}_{14}\text{BF}_{15}\text{MoO}_6$

Molecular Weight: 838.142

Accurate Mass: 839.969796

Percentage Composition: C 40.13%; H 1.68%; B 1.29%; F 34.00%; Mo 11.45%; O 11.45%

General Statement: Only known isomer has *cis*-config.

Source/Synthesis: Synth. from the parent compd. and Tris(pentafluorophenyl)borane [MVS44-S](#) in toluene

Physical Description: Air-stable orange-red cryst. (toluene/pentane)

Solubility: Sol. C_6H_6

References:

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Sheldon, R.A. *et al.*, *J. Catal.*, 1973, **31**, 427, (*use, catalysis*)
Krasochka, O.N. *et al.*, *J. Struct. Chem. (Engl. Transl.)*, 1975, **16**, 648, (*cryst struct*)
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