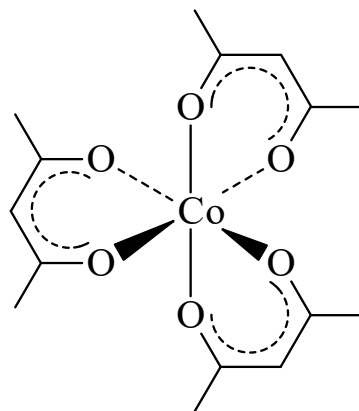




>>Entry Name: Tris(2,4-pentanedionato-*O,O'*)cobalt(III), 9Cl

Synonym(s): Tris(acetylacetonato)cobalt(III). Cobalt(III) acetylacetonate



CAS Registry Number: 21679-46-9

Related CAS Registry Numbers(s): 13681-88-4 34248-50-5 50600-77-6

Molecular Formula: C₁₅H₂₁CoO₆

Molecular Weight: 356.26

Accurate Mass: 356.067013

Percentage Composition: C 50.57%; H 5.94%; Co 16.54%; O 26.95%

Use/Importance: Fungicide, acting on cotton and linen fabrics. Widely used component in catalytic systems

Physical Description: Dark green cryst.

Melting Point: Mp 213° (240-241°)

Solubility: Sol. C₆H₆, Me₂CO, most org. solvs.

Other Data: ΔH_f (per Co) $-1233.9 \text{ kJ mol}^{-1}$. Diamagnetic. Isomorphous with Cr, Mn analogues. Can be resolved. Undergoes substitution at 3-position in ligand by electrophiles (NO₂, Br etc.)

Hazard & Toxicity: LD₅₀ (rat, orl) 720 mg/kg

Aldrich: C8390-2

Fluka: 60802

Other: Gelest AKC235

References:

- Aldrich Library of Infrared Spectra*, 3rd edn., 1981, 332B, (ir)
Inorg. Synth., 1960, **5**, 188; 1963, **7**, 205, (synth, reaction)
Dismukes, J.P. *et al.*, *J. Phys. Chem.*, 1961, **65**, 792, (ir)
Collman, J.P., *Transition Met. Chem. (New York)*, 1966, **2**, 1, (rev, reactions)
Hou, P.K. *et al.*, *J. Coord. Chem.*, 1973, **3**, 67, (cryst struct)
Kruger, G.J. *et al.*, *Acta Cryst. B*, 1974, **30**, 822, (cryst struct)
Stoner, J.H. *et al.*, *J. Paint Technol.*, 1975, **47**, 39, (use)
Peacock, R.D., *J.C.S. Dalton*, 1983, 291, (cd)
Nekhoroshkov, V.P. *et al.*, *Koord. Khim.*, 1984, **10**, 459, (ir)
Kolesov, B.A. *et al.*, *Koord. Khim.*, 1985, **11**, 485, (Raman)