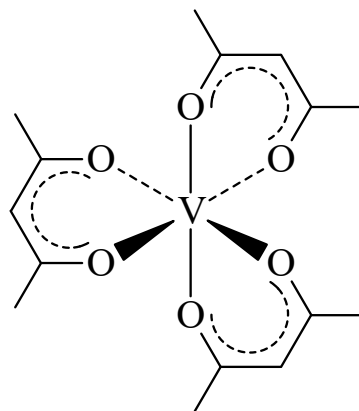




>>Entry Name: **Tris(2,4-pentanedionato-*O,O'*)vanadium, ¹¹Cl**

Synonym(s): Tris(acetylacetonato)vanadium(*III*). Vanadium(*III*) acetylacetonate



CAS Registry Number: 13476-99-8

Molecular Formula: C₁₅H₂₁O₆V

Molecular Weight: 348.269

Accurate Mass: 348.077777

Percentage Composition: C 51.73%; H 6.08%; O 27.56%; V 14.63%

Source/Synthesis: Synth. from VCl₃·6H₂O or VCl₃ with acac in EtOH in the presence of a base; by electrochem. oxidn. of a V anode in the presence of acac; or by reducing V(acac)₄ with zinc

Use/Importance: Commercially available; subject of a large number of patents for use as a catalyst for olefin polym., epoxidation, cross-linking and hydrocracking

Physical Description: Brown solid

Melting Point: Mp 184°

Other Data: Paramagnetic; $\mu_{\text{eff}} = 2.60\mu_{\text{B}}$ (20K); $2.87\mu_{\text{B}}$ (300K). Esr: $g_{\text{(parallel)}} = 1.96$; $g_{\text{(perpendicular)}} = 1.78$. $\Delta H_{\text{f}}^{\circ} - 1522.8 \text{ kJ mol}^{-1}$

Hazard & Toxicity: Toxic

Aldrich: 22711-0

Fluka: 94700

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 1278C, (*ir*)

Machin, D.J. *et al.*, *J.C.S.(A)*, 1967, 1498, (*magnetism*)

Morosin, B. *et al.*, *Acta Cryst. B*, 1969, **25**, 1354, (*cryst struct*)

Dilli, S. *et al.*, *Aust. J. Chem.*, 1976, **29**, 2369, (*synth, thermal props*)

Gregson, A.K. *et al.*, *Inorg. Chem.*, 1978, **17**, 1216, (*magnetism*)

Van Dam, H. *et al.*, *J. Electron Spectrosc. Relat. Phenom.*, 1979, **17**, 353, (*pe*)

Grobe, J. *et al.*, *Z. Naturforsch., B*, 1984, **39**, 808, (*electrochem synth*)

Boyd, P.D.W. *et al.*, *J.C.S. Dalton*, 1986, 887, (*synth, uv-vis*)