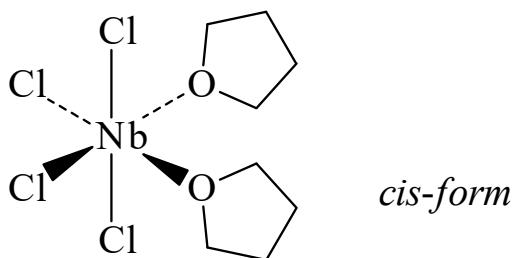




>>Entry Name: Tetrachlorobis(tetrahydrofuran)niobium(IV), 11Cl

Synonym(s): Niobium(IV) chloride bis(tetrahydrofuran)



CAS Registry Number: 61247-57-2

Molecular Formula: $C_8H_{16}Cl_4NbO_2$

Molecular Weight: 378.93

Accurate Mass: 376.896815

Percentage Composition: C 25.36%; H 4.26%; Cl 37.42%; Nb 24.52%; O 8.44%

Source/Synthesis: Synth. from $NbCl_5$ and Al or Na/Hg in MeCN, followed by addn. of THF

Use/Importance: Commercially available. Reductively couples imines and nitriles

Physical Description: Air-sensitive pale yellow cryst.

Melting Point: Mp 145°

Solubility: Sl. sol. org. solvs.

Hazard & Toxicity: Flammable, flash point 49°

Aldrich: 32636-4

>>Variant: *cis*-form

CAS Registry Number: 22943-66-4

Molecular Formula: $C_8H_{16}Cl_4NbO_2$

Molecular Weight: 378.93

Accurate Mass: 376.896815

Percentage Composition: C 25.36%; H 4.26%; Cl 37.42%; Nb 24.52%; O 8.44%

Physical Description: Pale yellow-brown solid

Other Data: Paramagnetic; $\mu_{\text{eff}} = 1.55\mu_B$ (313K); $1.45\mu_B$ (93K)

>>Variant: *trans*-form

CAS Registry Number: 38780-86-8

Molecular Formula: $C_8H_{16}Cl_4NbO_2$

Molecular Weight: 378.93

Accurate Mass: 376.896815

Percentage Composition: C 25.36%; H 4.26%; Cl 37.42%; Nb 24.52%; O 8.44%

References:

Fowles, G.W.A. *et al.*, *Inorg. Chem.*, 1969, **8**, 631, (*synth, ir, uv-vis, magnetism, cis-form*)

Johnson, D.P. *et al.*, *J. Inorg. Nucl. Chem.*, 1972, **34**, 2957, (*epr, trans-form*)

Inorg. Synth., 1982, **21**, 135, (*synth, ir*)

Roskamp, E.J. *et al.*, *J.A.C.S.*, 1987, **109**, 3152, (*use*)

Boyd, P.D.W. *et al.*, *J.C.S. Dalton*, 1987, 307, (*synth*)

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