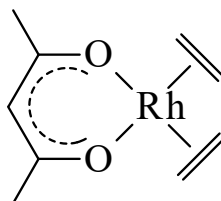




>>Entry Name: Bis(η^2 -ethene)(2,4-pentanedionato-*O,O'*)rhodium, 10Cl, 9Cl

Synonym(s): Bis(ethylene)acetylacetonatorhodium(*I*). Bis(ethylene)rhodium acetylacetonate



CAS Registry Number: 12082-47-2

Molecular Formula: C₉H₁₅O₂Rh

Molecular Weight: 258.122

Accurate Mass: 258.012705

Percentage Composition: C 41.88%; H 5.86%; O 12.40%; Rh 39.87%

Source/Synthesis: Synth. from [RhCl(η^2 -C₂H₄)₂]₂ + acacH in Et₂O + aq. KOH at -20° to -10° for 40 min.

Use/Importance: Catalyst for polym. of alkenes and also the conversion of alkenes + O₂ to carbonyl compds. via C=C bond cleavage, e.g. styrene → acetophenone; catalyst for hydroacylation of alkenes; hydrosilylation and hydrogermylation of alkynes; co-dimerisation of ethene/butadiene; polym. of allene

Physical Description: Orange-yellow platelets (Et₂O); best stored at 0°

Melting Point: Mp 144-146 dec.°

Solubility: Sol. Et₂O, CHCl₃, CH₂Cl₂, THF, Me₂CO, MeOH, MeCN

References:

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Otsuka, S. *et al.*, *J. Polym. Sci., Polym. Lett. Ed.*, 1967, **5**, 973, (*use, polym of allene*)

Russell, D.R. *et al.*, *Chem. Comm.*, 1971, 197, (*cryst struct*)

Bouchal, K. *et al.*, *Coll. Czech. Chem. Comm.*, 1972, **37**, 3081, (*synth*)

Haegeler, K.D. *et al.*, *Inorg. Chem.*, 1974, **13**, 1960, (*ms*)

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Jesse, A.C. *et al.*, *Inorg. Chim. Acta*, 1978, **26**, 129, (*ir, Raman, cmr*)

Su, A.C.L., *Adv. Organomet. Chem.*, 1979, **17**, 269, (*use, codimerisation*)

Vora, K.P. *et al.*, *J. Organomet. Chem.*, 1980, **192**, 257, (*use, hydroacylation of alkenes*)

Mausser, E. *et al.*, *Helv. Chim. Acta*, 1982, **65**, 26, (*Rh-103 nmr*)

Bönnemann, H. *et al.*, *Helv. Chim. Acta*, 1983, **66**, 177, (*use, oxidn of alkenes*)

Wada, F. *et al.*, *Bull. Chem. Soc. Jpn.*, 1991, **64**, 1701, (*use, hydrosilylation, hydrogermylation of alkynes*)

Jakemark, B. *et al.*, *Organometallics*, 1991, **10**, 733, (*Rh-103 nmr, reactions*)