



>>Entry Name: Rhodium(III) hydroxide (Rh(OH)₃), 8Cl

CAS Registry Number: 21656-02-0

Related CAS Registry Numbers(s): 120824-04-6

Rh(OH)₃

Molecular Formula: H₃O₃Rh

Molecular Weight: 153.927

Accurate Mass: 153.91372

Percentage Composition: H 1.96%; O 31.18%; Rh 66.85%

Source/Synthesis: Synth. from RhCl₃, or Rh(NO₃)₃ + aq. OH⁽⁻⁾ or M₃RhCl₆ (M = Na, K) + aq. OH⁽⁻⁾

Use/Importance: Starting material for a number of rhodium complexes, esp. for prepar. involving addition of acids in aq. soln.

Physical Description: Anhydr. solid dec. at 200-400° with loss of H₂O

Solubility: Insol. H₂O

>>Derivative: Di(or tri) hydrate

CAS Registry Number: 64131-93-7

Physical Description: Lemon yellow solid

Other Data: Loses H₂O of cryst. at 60-140°. Variable H₂O content. May be regarded as Rh₂O₃·4(5)H₂O

References:

Shukla, S.K., *Ann. Chim. (Paris)*, 1961, **6**, 1383, (*synth, props*)

Nishimura, S. *et al.*, *Bull. Chem. Soc. Jpn.*, 1966, **39**, 2467, (*synth*)

Pearlman, W.M., *Tet. Lett.*, 1967, 1663, (*synth*)

Alimasin, I.P. *et al.*, *J. Anal. Chem. USSR (Engl. Transl.)*, 1970, **25**, 1688, (*uv, props*)

Ivanov-Emin, B.N. *et al.*, *Zh. Neorg. Khim.*, 1971, **16**, 2766; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1971, **16**, 1475, (*props*)

Robb, W. *et al.*, *Inorg. Chim. Acta*, 1973, **7**, 626, (*synth*)

Sinibaldi, A. *et al.*, *J. Chromatogr.*, 1974, **94**, 338

Bayer, G. *et al.*, *Thermochim. Acta*, 1976, **15**, 213, (*synth, props*)

Prosychev, I.I. *et al.*, *Zh. Neorg. Khim.*, 1977, **22**, 2078; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1977, **22**, 1126, (*synth, ir, props*)

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