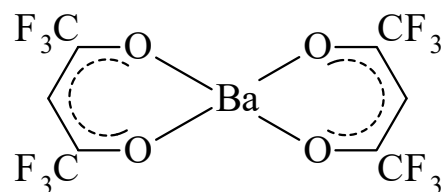




>>Entry Name: Bis(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato-*O,O'*)barium(II)

Synonym(s): Bis(hexafluoroacetylacetonato)barium. Barium hexafluoroacetylacetonate



CAS Registry Number: 118131-57-0

Molecular Formula: C₁₀H₂BaF₁₂O₄

Molecular Weight: 551.431

Accurate Mass: 551.881378

Percentage Composition: C 21.78%; H 0.37%; Ba 24.90%; F 41.34%; O 11.61%

Source/Synthesis: Prepd. by condensing hexafluoroacetylacetonate onto Ba chips at -196°, warming to ambient temp. and finally heating to 55° for several h

Use/Importance: Commercially available as MOCVD precursor; precursor for barium-containing superconducting film deposition

Physical Description: Solid

Melting Point: Mp 210 dec.°

Boiling Point: Bp 205-220°

Other Data: Difficult to obt. anhyd. compd. unless exceptional precautions are taken to exclude moisture

Other: Gelest AKB119

>>Derivative: Monohydrate

CAS Registry Number: 141572-91-0

Molecular Formula: C₁₀H₄BaF₁₂O₅

Molecular Weight: 569.446

Percentage Composition: C 21.09%; H 0.71%; Ba 24.12%; F 40.04%; O 14.05%

Source/Synthesis: Prepd. from Ba(OH)₂·8H₂O and hexafluoroacetylacetonate in EtOH aq.

>>Derivative: Et₂O complex (2:1)

CAS Registry Number: 154964-72-4

Molecular Formula: C₂₄H₁₄Ba₂F₂₄O₉

Molecular Weight: 1176.985

Accurate Mass: 1177.835921

Percentage Composition: C 24.49%; H 1.20%; Ba 23.34%; F 38.74%; O 12.23%

Source/Synthesis: Prepd. by dissolution of Ba metal in a pentane/Et₂O (1:1) soln. of hexafluoroacetylacetonate

Use/Importance: Used in MOCVD studies

Physical Description: Moisture-sensitive colourless prismatic cryst. (pentane/Et₂O)

>>Derivative: Tetraglyme complex (1:1)

CAS Registry Number: 130691-53-1

Extra CAS Registry Numbers(s): 134316-23-7

Use/Importance: Precursor for MOCVD

Physical Description: Air-stable cryst.

Melting Point: Mp 151-152°

Boiling Point: Subl._{0.03} 150°

References:

Bridge, S.I. *et al.*, *Chemtronics*, 1989, **4**, 266, (*use*)

Purdy, P. *et al.*, *Inorg. Chem.*, 1989, **28**, 2799, (*synth, props*)

Timmer, K. *et al.*, *Inorg. Chim. Acta*, 1991, **190**, 109-117, (*tetraglyme complex, synth, ir, pmr, ms, cryst struct*)

Ebihara, K. *et al.*, *Mater. Res. Soc. Symp. Proc.*, 1991, **190**, 155, (*plasma enhanced mocvd*)

Bradley, D.C. *et al.*, *Chem. Comm.*, 1992, 575, (*H₂O complex, synth, cryst struct*)

M'Handi, R. *et al.*, *J. Supercrit. Fluids*, 1992, **5**, 55, (*soly, supercrit CO₂*)

Japan. Pat., 1992, 92 134 044; *CA*, **117**, 174522w, (*use*)

Tsyganova, E.I. *et al.*, *Zh. Obshch. Khim.*, 1992, **62**, 2422; *J. Gen. Chem. USSR (Engl. Transl.)*, 1992, **62**, 1999, (*thermal dec*)

Drozдов, A. *et al.*, *Chem. Comm.*, 1993, 1619, (*Et₂O complex, synth, cryst struct*)

Sato, H. *et al.*, *Inorg. Chem.*, 1993, **32**, 1941, (*thermal anal*)

Inorg. Synth., 1997, **31**, 1-7, (*synth, pmr*)