



>>Entry Name: Hafnium bromide (HfBr₄), 11Cl

Synonym(s): Hafnium tetrabromide

CAS Registry Number: 13777-22-5

HfBr₄

Molecular Formula: Br₄Hf

Molecular Weight: 498.106

Accurate Mass: 495.699889

Percentage Composition: Br 64.17%; Hf 35.83%

General Statement: Prob. has SnI₄ struct. in the solid state. Tetrahedral molecule in gas phase

Source/Synthesis: Synth. from HfO₂, Br₂ and C at 400°, by reaction of Hf with molten PbBr₂, or HfCl₄ with BBr₃, or from Hf and Br₂ at 400°

Physical Description: Colourless to yellow solid

Melting Point: Mp 425°

Boiling Point: Subl. 420° *in vacuo*

Other Data: ΔH_f° -840 kJ mol⁻¹

References:

Berdonosov, S.S. *et al.*, *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1963, **8**, 277, (*synth, cryst struct*)

Druce, P.M. *et al.*, *J.C.S.(A)*, 1971, 3595, (*synth*)

Thomas, W. *et al.*, *J. Inorg. Nucl. Chem.*, 1976, **38**, 2227, (*synth*)

Vasil'ev, V.P. *et al.*, *Zh. Neorg. Khim.*, 1998, **43**, 458-461; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1998, **43**, 394-397, (*thermodyn*)