



>>Entry Name: **Dibromoborane**, 10Cl, 9Cl, 8Cl

Synonym(s): Dibromoborine

CAS Registry Number: 13709-65-4

BBr₂H

Molecular Formula: BBr₂H

Molecular Weight: 171.627

Accurate Mass: 169.893802

Percentage Composition: B 6.30%; Br 93.11%; H 0.59%

General Statement: Prototype of the series of alkylidibromoboranes. Readily disproportionates into diborane, monobromoborane and BBr₃. More stable as its dimethyl sulfide complex

Physical Description: Unstable gas, sensitive to moisture

Solubility: Reacts with hydroxylic solvs. and more slowly with ethers

>>Derivative: Me₂S complex

Synonym(s): Dibromo(dimethyl sulfide)hydroboron. Dibromohydro[thiobis[methane]]boron, 10Cl

CAS Registry Number: 55671-55-1

Molecular Formula: C₂H₇BBr₂S

Molecular Weight: 233.762

Accurate Mass: 231.912822

Percentage Composition: C 10.28%; H 3.02%; B 4.62%; Br 68.36%; S 13.72%

Use/Importance: Hydroborating agent for alkenes and alkynes with high regiospecificity; provides a route to alkylidibromoboranes and alkylidihydroxyboranes

Physical Description: Air- and moisture-sensitive solid

Melting Point: Mp 30-33°

Aldrich: 26205-6

Fluka: 34035

>>Derivative: Et₂O complex

Synonym(s): Dibromo(diethyl ether)hydroboron. Dibromohydro[1,1'-oxybis[ethane]]boron, 10Cl. Dibromoborane etherate

CAS Registry Number: 71648-08-3

Molecular Formula: C₄H₁₁BBr₂O

Molecular Weight: 245.749

Accurate Mass: 243.966967

Percentage Composition: C 19.55%; H 4.51%; B 4.40%; Br 65.03%; O 6.51%

Physical Description: Moisture-sensitive

Other Data: Characterised only by ¹¹B nmr

>>Derivative: Dimer

Synonym(s): Tetrabromodiborane(6)

Molecular Formula: B₂Br₄H₂

Molecular Weight: 343.254

Accurate Mass: 339.787604

Percentage Composition: B 6.30%; Br 93.11%; H 0.59%

Other Data: Existence not confirmed

References:

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Bouix, J. et al., Bull. Soc. Chim. Fr., 1968, 3157, (synth, props)
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