

PRODUCT OVERVIEW

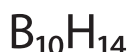
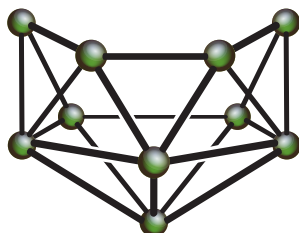
Decaborane ($B_{10}H_{14}$) CAS no. 17702-41-9

Applications

Decaborane and related chemicals were evaluated in the 1950's as propellants. Due to cost and other factors, this application did not achieve significant adoption.

However, since that time, decaborane has continued to be of interest for research and some commercial applications, often as a source of incorporating boron into or onto another material, including:

- Ion implantation dopant for production of p-type electronics semiconductors
- Source of mono-atomic boron for chemical vapor deposition of thin films
- Boron nitride nanotube (BNNT) synthesis
- Precursor for ceramics / borides
- Starting material for synthesis of other boron clusters like $B_{12}H_{12}$, including compounds used in boron neutron capture therapy (BNCT) experimental cancer treatment research
- Proton or hydrogen source for advanced energy storage and generation applications.



Physical properties

- Appearance: colorless to light yellow solid
- Molecular weight: 122.24 g/mole
- Molecular formula: $B_{10}H_{14}$
- pH: not applicable
- Melting point: 99.7 °C (lit)
- Boiling point: 213 °C (with decomposition and release of hydrogen)
- Flash point: 80 °C
- Specific gravity: 0.94 @ 25 °C
- Vapor density: 4.2
- Vapor pressure: 0.15 mmHg @ 20 °C
- Sublimation may occur even at room temp
- Solubility: Soluble in benzene, hexane toluene. Slightly soluble in cold water, hydrolyzes in hot water.

Regulatory

Decaborane is a hazardous material.

For Safety Data Sheet, please contact Boron Specialties.

Decaborane is regulated by ITAR. Boron Specialties holds the U.S. State Department license required to manufacture these products. Export licenses are required for sales outside the U.S.

Boron Specialties, LLC



Decaborane is made in the U.S.A. by Boron Specialties, a small, woman-owned chemistry technology and manufacturing company

www.boron.com

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UNITED STATES and CANADA

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