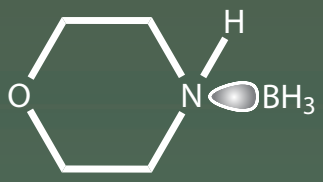
AMINE BORANE COMPLEXES



BORANE MORPHOLINE COMPLEX
ALMABOR® BMORPH
CAS# 4856-95-5

BORANE PYRIDINE COMPLEX
ALMABOR® BPYR
CAS# 110-51-0

APPLICATIONS

- Polymer Industry
- Metal Plating
- Dye Industry
- Pharmaceuticals

Anderson
DEVELOPMENT COMPANY

Anderson Development Company
1415 E. Michigan Street
Adrian, MI 49221

Phone: 517.263.2121 | Fax: 517.263.1000

sales@anddev.com
www.andersondevelopment.com

AMINE BORANE COMPLEXES

BENEFITS OF ALMABOR AMINE BORANES

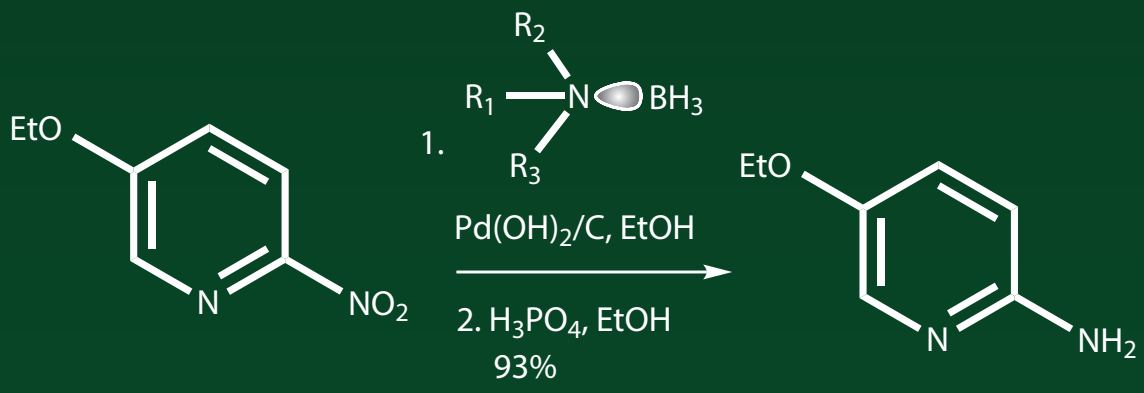
- Stable Borane Source
- Readily Soluble in many Solvents
- Versatile Reducing Agents
- High Quality
- Efficient Chemistry Performance
- Easily Used On a Large Scale
- Convenient Workup and Recovery of the Product
- Possibility to Recover and Recycle the Amine
- Custom Packaging
- Commercial Quantities
- Custom Development of product for specific applications
- Technical Support with safe handling and applications

Amine borane complexes are versatile reducing agents which avoid some of the problems and challenges associated with other borane reducing agents.

They are typically more stable borane sources. While they are somewhat less reactive than borane complexes of ethers or sulfides, they do not have the safety and environmental problems associated with borane dimethylsulfide's flammability, volatility and noxious odor.

Amine boranes are highly selective reducers of carbonyl groups such as aldehydes and ketones. The reduction of benzaldehyde produces benzyl alcohol.[1] They are inert towards carboxylic acids, esters or other functional groups. The use of catalyst can improve the process dramatically.[2,3]

The amine borane adducts have a wide range of physical and chemical properties and are used in a variety of applications in the polymer, dye, metal plating and pharmaceutical industries.



[1] Hutchkins, R. O.; Learn, K.; Nazer, B.; Pytlewski, D.; Petler, A. *Organic Preparations and Procedure Int.* **1984**, *16(5)*, 335.

[2] Burkhardt et al. *US 8*, 013189 B2

[3] Beaudin, J. et al. *Org. Process Res. Dev.* **2003**, *7*, 873.

See reverse side for available products.