TEB

Triethylborane

TEB is a borane alkyl used for asymmetric reduction reactions in organic synthesis

CAS number
97-94-9

EINECS/ELINCS No.
202-620-9

TSCA status
listed on inventory

Notes:
[a] Analyzed by a combination of gas chromatography, laser Raman spectroscopy, and 1H or 11B nuclear magnetic resonance spectroscopy. [b] NBP = Normal Boiling Point i.e. temperature at which the vapor pressure is 760 mm Hg (1 bar).

Applications

TEB may be used in organic synthesis as an agent for stereochemical control. TEB is also used as an adjuvant for Ziegler-Natta and silica-supported chromium catalysts for olefin polymerization.

Storage

TEB and its solutions are stable when stored under a dry, inert atmosphere and away from heat.

Packaging and transport

TEB and its solutions are available worldwide in cylinders and portable tanks. In North America only, TEB is also available in tank trailers and rail cars. Containers are fabricated from carbon steel and are equipped with dip tubes for top discharge and all connections are located in the vapor space. Both packaging and transport meet the international regulations.

Safety and handling

TEB ignites upon exposure to air (burns with a green flame). Hydrocarbon solutions of TEB may also ignite upon exposure to air. TEB reacts with carboxylic acids and alcohols, but is virtually unreactive with water. However, it is prudent to keep water out of TEB process equipment in the event that other metal alkyls might be used in such equipment. TEB and its solutions must be handled under an inert atmosphere, e. g. , nitrogen or argon. Products of complete combustion of TEB and its solutions are boron oxides, carbon dioxide and water. TEB causes severe burns to the skin and eyes. It is imperative that proper personal protective equipment be worn when handling TEB. Wearing a self-contained breathing apparatus is also recommended while handling TEB. Please refer to the Material Safety Data Sheet (MSDS) for further information on the safe storage, use and handling of TEB. This information should be thoroughly reviewed prior to acceptance of this product. The MSDS is available at nouryon.com/sds-search. Additional information is provided in a technical bulletin entitled Properties of Alkylboranes from Nouryon. Copies may be obtained through your Nouryon representative.

Additional information

Availability: TEB is a commercial product available as the neat pyrophoric liquid and as pyrophoric and non-pyrophoric solutions in a variety of solvents. Consult your Nouryon representative for further information.

Contact Us

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