TECHNICAL DATA SHEET

Date of Issue: 2017/04/11

Lithium Aluminum Hydride, typ. 15.3 % solution in THF / Toluene (typ. 3.6 M)

CAS-No. 16853-85-3
EC-No. 240-877-9
REACH No. 01-2119919039-36
Molecular Formula LiAlH₄
Product Number 401629

APPLICATION Versatile reducing agent for organic chemical and pharmaceutical industry.

FURTHER INGREDIENTS

Tetrahydrofuran
CAS-No. 109-99-9
EC-No. 203-726-8
Toluene
CAS-No. 108-88-3
EC-No. 203-625-9

SPECIFICATION

Lithium Aluminium Hydride: 14.8 - 15.8 %

METHOD OF ANALYSIS

Oxidimetric determination of active hydrogen content (Fellkin’s method): Oxidation by a solution of iodine, followed by back-titration of excess iodine with sodium thiosulphate solution.

PHYSICAL PROPERTIES

Appearance turbid liquid
Color gray
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**Flash point**  
-21.2 °C (Tetrahydrofuran)

**Boiling point/boiling range**  
66 °C (Tetrahydrofuran)

**Density**  
ca. 0.89 g/cm³ at 20 °C

**Water solubility**  
(Not applicable)

**Molecular weight**  
37.95 g/mol

**Additional Physical Properties**

- Solvent: Tetrahydrofuran / Toluene (2.4 : 1)
- Molarity: abt. 3.6
- Decomposition rate: abt. 0.2 % per month (20 °C, based on total activity)

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**HANDLING & STORAGE**

**Handling**  
Dilute spilled solution with paraffin oil (but never with halogenated hydro-carbons, alcohols, ketons, esters etc.) and cover with ground limestone or cement. The soaked material should then be taken to a safe place and be decomposed from a safe distance by a jet of water. Pay also attention to the official safety regulations (see: „Marking“). The safety data sheet is available on request. Please see also our brochure “Lithium Aluminum Hydride”. In use may form flammable/explosive vapor-air mixtures. Harmful in contact with skin and if swallowed. Keep under argon or nitrogen. Keep container in a well ventilated place. Never add water to this product. Take precautionary measures against static discharges. In case of fire use powder based on sodium chloride or limestone powder. Never use water, halons or carbon dioxide.

**Storage**  
Under exclusion of air and humidity, the solutions are fairly stable. However, even at room temperature slight decomposition with evolution of hydrogen is observed after prolonged storage (decomposition rate: see above). As decomposition accelerates with temperature, we recommend not to (continued) exceed a storage temperature of 20 °C and to use the product within a period of six months after receipt.
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TRANSPORT & PACKAGING

UN number 1411

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Signal Word Danger
H&P Phrases See Safety Data Sheet
Labelling The labelling is according to EU-GHS classification ((EG) 1272/2008) and may vary in other countries. Please refer to the respective Safety Data Sheet for your country.

Packaging

Steel containers with the following characteristics, filled to max. 90 % according to the international transport regulations:

<table>
<thead>
<tr>
<th>Nominal volume (l)</th>
<th>filled up to (l)</th>
<th>content of LiAlH4 (kg)</th>
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<tbody>
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<td>40</td>
<td>36</td>
<td>4.7</td>
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<tr>
<td>125</td>
<td>112</td>
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<td>450</td>
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OTHER INFORMATION

Further Related Documents Safety Data Sheet
Our brochure(s) Lithium Aluminum Hydride