

# TECHNICAL DATA SHEET

Date of Issue: 2016/12/15

## Lithium Aluminum Hydride, fine crystalline

|                   |                    |
|-------------------|--------------------|
| CAS-No.           | 16853-85-3         |
| EC-No.            | 240-877-9          |
| REACH No.         | 01-2119919039-36   |
| Molecular Formula | LiAlH <sub>4</sub> |
| Product Number    | 401614             |

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**APPLICATION** Versatile reducing agent for organic chemical and pharmaceutical industry.

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### SPECIFICATION

Lithium Aluminum Hydride: min. 97 %

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### METHOD OF ANALYSIS

Volumetric determination after hydrolysis by aqueous dioxane. Detailed description available on request.

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### PHYSICAL PROPERTIES

|                           |  |
|---------------------------|--|
| Appearance                | powder (401614; 401617)<br>tablet (401616) |
| Color                     | white to light gray                        |
| Decomposition temperature | > 125 °C                                   |
| Density                   | 0.9 g/cm <sup>3</sup>                      |
| Bulk density              | ca. 400 kg/m <sup>3</sup>                  |
| Water solubility          | (Not applicable)                           |

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The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of Albemarle Corporation and its subsidiaries and affiliates. It is the responsibility of the user to comply with all applicable laws and regulations and to provide for a safe workplace. The user should consider any health or safety hazards or information contained herein only as a guide, and should take those precautions which are necessary or prudent to instruct employees and to develop work practice procedures in order to promote a safe work environment. Further, nothing contained herein shall be taken as an inducement or recommendation to manufacture or use any of the herein materials or processes in violation of existing or future patent.

Technical data sheets may change frequently. You can download the latest version from our website [www.albemarle-lithium.com](http://www.albemarle-lithium.com). Please contact us at [www.albemarle-lithium.com/contact](http://www.albemarle-lithium.com/contact) with questions.



|                                |   |
|--------------------------------|---|
| Solubility in other solvents   | ca. 278 g/L at 25 °C Medium: Diethyl ether<br>ca. 134 g/L at 25 °C Medium: Tetrahydrofuran<br>ca. 15 g/L at 25 °C Medium: dibutyl ether<br>ca. 1 g/L at 25 °C Medium: Dioxane |
| Molecular weight               | 37.95 g/mol   |
| Thermal Stability              | Appreciable decomposition with evolution of hydrogen at 125 °C and above  |
| Additional Physical Properties | Theoretical hydrogen content: 10.62 % equivalent to 2.36 litres of hydrogen per g evolved in hydrolysis   |

## HANDLING & STORAGE

|          |  |
|----------|--|
| Handling | 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 dust-air mixtures. Harmful in contact with skin and if swallowed. Keep container in a well-ventilated place. Keep under argon or nitrogen. 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 material has fair stability, however within a certain period of time a slight grey discolouration (aluminum precipitation) with generation of hydrogen will be observed at ambient temperature. We recommend to use lithium aluminum hydride within a period of six months after receipt.   |

## TRANSPORT & PACKAGING

UN number 1410

|        |            |       |   |
|--------|------------|-------|---|
| ADR    | Class: 4.3 | PG: I | Label: 4.3                                |
| RID    | Class: 4.3 | PG: I | Label: 4.3                                |
| IMDG   | Class: 4.3 | PG: I | Label: 4.3                                |
| IATA_C | Class: 4.3 | PG: I | Packing instruction (cargo aircraft): 487 |
| IATA_P | Class: 4.3 | PG: I |   |

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Hazard pictograms



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

Inner Packing: Solvent soluble SecuBags® from 10 g to 2,000 g in cans and 5 kg SecuBags®.

Outer Packing: Appropriate clamping ring steel drums.

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**OTHER INFORMATION**

Further Related                      Safety Data Sheet  
Documents

Our brochure(s)                      Lithium Aluminum Hydride

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