

TECHNICAL DATA SHEET

Date of Issue: 2025/11/28

Lithium Aluminum Hydride, fine crystalline

CAS-No.	16853-85-3
EC-No.	240-877-9
REACH No.	01-2119919039-36-0000
Molecular formula	LiAlH_4
Product number	10000104

APPLICATION Versatile reducing agent for organic chemical and pharmaceutical industry.

SPECIFICATION

Lithium Aluminum Hydride: min. 97 %

METHOD OF ANALYSIS

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

PHYSICAL PROPERTIES

Appearance	powder (Note:10000104; 10001446) tablet (Note:10000105)
Colour	white to light grey

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.com.

Please contact us at www.albemarle.com/contact with questions.



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Decomposition temperature	> 125 °C
Density	0.9 g/cm ³
Bulk density	400 kg/m ³
Water solubility	(Not applicable)
Solubility in other solvents	ca. 278 g/l at 25 °C Medium: Diethylether ca. 134 g/l at 25 °C Medium: Tetrahydrofuran ca. 15 g/l at 25 °C Medium: Di-n-butyl ether 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	When stored according to SDS, 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. Higher temperatures can be temporarily accepted, for example, during transport, but should not exceed 35°C.

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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	

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

The material is double-packed in plastic bags (solvent soluble SecuBags® inside of a normal PE bag), with smaller quantities being optionally enclosed in tin cans (standard: 500g and 1kg), and larger quantities (standard: 2kg and 5kg) without cans. The outermost packing is appropriate clamping ring steel drums.

OTHER INFORMATION

Further Related Documents

Safety Data Sheet

Our brochure(s)

Lithium Aluminum Hydride

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