

TECHNICAL DATA SHEET

Date of Issue: 2025/11/28

Lithium Aluminum Deuteride

CAS-No. 14128-54-2

EC-No. 237-980-6

Molecular formula LiAlD_4

Product number 11008282

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

PURITY Deuterium content >99%

SPECIFICATION

Lithium Aluminum Deuteride: min. 97 %

METHOD OF ANALYSIS

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

PHYSICAL PROPERTIES

Appearance powder

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.



Decomposition temperature > 125 °C

Bulk density 400 kg/m³

Water solubility (Not applicable)

Thermal Stability Appreciable decomposition with evolution of deuterium at 125 °C and above

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 deuterium will be observed at ambient temperature. We recommend to use lithium aluminum deuteride within a period of six months after receipt. Higher temperatures can be temporarily accepted, for example, during transport, but should not exceed 35°C.

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

The material is double-packed in plastic bags (solvent soluble SecuBags® inside of a normal PE bag), enclosed in tin cans. Standard packaging sizes are 50g to 1kg, customized packaging on request.

OTHER INFORMATION

Further Related Documents

Safety Data Sheet

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