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 phamaceutical 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

Decomposition temperature	> 125 °C
Density	0.9 g/cm3
Bulk density	400 kg/m3
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

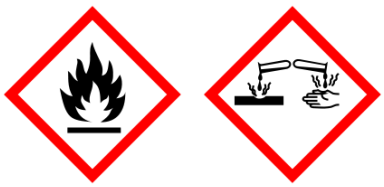
Handling	Pay also attention to the official safety regulations (see: „Marking“). The safety data sheet is available on request. Please see also our brochure “Lithium Aluminum Hydride”. In use may form flammable/explosive dust-air mixtures. Harmful in contact with skin and if swallowed. Keep container 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.

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