

# LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS MSDS

CAS-No.: 16853-85-3 MSDS

## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
:  
EC Index-No. : 001-002-00-4  
EC-No. : 240-877-9  
CAS-No. : 16853-85-3  
Product code : 04430

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial  
For professional use only

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Labogens Fine Chem Industries  
1st Floor , Above Bank of India, Guru Vihar , Rahon Road,  
Ludhiana Pb. (141007)  
+91 9316777775, +91 7707855700  
[sales@labogens.com](mailto:sales@labogens.com) - [www.Labogens.com](http://www.Labogens.com)

#### 1.4. Emergency telephone number

Emergency number : +91 7707855700 (9:00am - 6:00 pm)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Substances and Mixtures H260  
which, in contact with  
water, emit flammable  
gases, Category 1  
Skin corrosion/irritation, H314  
Category 1A  
Serious eye damage/eye H318  
irritation, Category 1

Full text of H statements : see section 16

# LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS

## Safety Data Sheet

### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F; R15

C; R35

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS05

Signal word (CLP) :

-

Hazard statements (CLP) :

H260 - In contact with water releases flammable gases which may ignite spontaneously.  
H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) :

P223 - Do not allow contact with water.  
P231+P232 - Handle under inert gas. Protect from moisture.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P370+P378 - In case of fire: Use ... to extinguish.

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS

CAS-No. : 16853-85-3

EC-No. : 240-877-9

EC Index-No. : 001-002-00-4

Full text of R- and H-statements: see section 16

### 3.2. Mixtures

Not applicable

# LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS

## Safety Data Sheet

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
- First-aid measures after skin contact : Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects : Causes severe skin burns and eye damage.
- Symptoms/effects after eye contact : Causes serious eye damage.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

No additional information available

#### 5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required.
- Emergency procedures : Stop release.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

#### 6.4. Reference to other sections

No additional information available

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Additional hazards when processed : Do not allow contact with water.
- Precautions for safe handling : Protect from moisture. Handle under inert gas. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact during pregnancy/while nursing.
- Hygiene measures : Wash hands, forearms and face thoroughly after handling.

# LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS

## Safety Data Sheet

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Comply with applicable regulations.
Storage conditions	: Store in a dry place. Protect from moisture.
Incompatible materials	: Do not allow contact with water.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Hand protection	: protective gloves
Eye protection	: Chemical goggles or face shield
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Wear appropriate mask

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Molecular mass	: 37.95 g/mol
Colour	: White powder.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 125 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: In contact with water releases flammable gases which may ignite spontaneously.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available

# LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS

## Safety Data Sheet

Density	: 0.922 g/cm <sup>3</sup>
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

In contact with water releases flammable gases which may ignite spontaneously.

### 10.4. Conditions to avoid

Direct sunlight. Moisture. Air contact.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

# LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS

## Safety Data Sheet

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR)	: 1410
UN-No. (IMDG)	: 1410
UN-No. (IATA)	: 1410
UN-No. (ADN)	: 1410
UN-No. (RID)	: 1410

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: LITHIUM ALUMINIUM HYDRIDE
Proper Shipping Name (IMDG)	: LITHIUM ALUMINIUM HYDRIDE
Proper Shipping Name (IATA)	: Lithium aluminium hydride
Proper Shipping Name (ADN)	: LITHIUM ALUMINIUM HYDRIDE
Proper Shipping Name (RID)	: LITHIUM ALUMINIUM HYDRIDE
Transport document description (ADR)	: UN 1410 LITHIUM ALUMINIUM HYDRIDE, 4.3, I, (E)
Transport document description (IMDG)	: UN 1410 LITHIUM ALUMINIUM HYDRIDE, 4.3, I
Transport document description (IATA)	: UN 1410 Lithium aluminium hydride, 4.3, I

# LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS

## Safety Data Sheet

Transport document description (ADN) : UN 1410 LITHIUM ALUMINIUM HYDRIDE, 4.3, I

Transport document description (RID) : UN 1410 LITHIUM ALUMINIUM HYDRIDE, 4.3, I

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : 4.3

Danger labels (ADR) : 4.3



#### IMDG

Transport hazard class(es) (IMDG) : 4.3

Danger labels (IMDG) : 4.3



#### IATA

Transport hazard class(es) (IATA) : 4.3

Hazard labels (IATA) : 4.3



#### ADN

Transport hazard class(es) (ADN) : 4.3

Danger labels (ADN) : 4.3



#### RID

Transport hazard class(es) (RID) : 4.3

Danger labels (RID) : 4.3



### 14.4. Packing group

Packing group (ADR) : I

Packing group (IMDG) : I

Packing group (IATA) : I

# LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS

## Safety Data Sheet

Packing group (ADN) : I  
Packing group (RID) : I

### 14.5. Environmental hazards

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : W2  
Limited quantities (ADR) : 0  
Excepted quantities (ADR) : E0  
Packing instructions (ADR) : P403  
Mixed packing provisions (ADR) : MP2  
Transport category (ADR) : 1  
Special provisions for carriage - Packages (ADR) : V1  
Special provisions for carriage - Loading, unloading and handling (ADR) : CV23  
Special provisions for carriage - Operation (ADR) : S20  
Tunnel restriction code (ADR) : E  
EAC code : 4W

#### - Transport by sea

Limited quantities (IMDG) : 0  
Excepted quantities (IMDG) : E0  
Packing instructions (IMDG) : P403  
Special packing provisions (IMDG) : PP31  
EmS-No. (Fire) : F-G  
EmS-No. (Spillage) : S-M  
Stowage category (IMDG) : E  
Stowage and handling (IMDG) : H1  
Segregation (IMDG) : SG35, SG26  
MFAG-No : 138

#### - Air transport

PCA Excepted quantities (IATA) : E0  
PCA Limited quantities (IATA) : Forbidden  
PCA limited quantity max net quantity (IATA) : Forbidden  
PCA packing instructions (IATA) : Forbidden  
PCA max net quantity (IATA) : Forbidden  
CAO packing instructions (IATA) : 487  
CAO max net quantity (IATA) : 15kg  
ERG code (IATA) : 4W

#### - Inland waterway transport

Classification code (ADN) : W2  
Limited quantities (ADN) : 0  
Excepted quantities (ADN) : E0  
Equipment required (ADN) : PP, EX, A  
Ventilation (ADN) : VE01



# LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS

## Safety Data Sheet

Provisions for handling and stowage of the cargo (ADN) : HA08

Number of blue cones/lights (ADN) : 0

### - Rail transport

Classification code (RID) : W2

Limited quantities (RID) : 0

Excepted quantities (RID) : E0

Packing instructions (RID) : P403

Mixed packing provisions (RID) : MP2

Transport category (RID) : 1

Special provisions for carriage – Packages (RID) : W1

Special provisions for carriage - Loading, unloading and handling (RID) : CW23

Hazard identification number (RID) : X423

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS is not on the REACH Candidate List

LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 1, Slightly hazardous to water (Classification according to AwSV; ID No. 9282)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

##### Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

# LITHIUM ALUMINIUM HYDRIDE FOR SYNTHESIS

## Safety Data Sheet

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### 15.2. Chemical safety assessment

No additional information available

### SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Water-react. 1	Substances and Mixtures which, in contact with water, emit flammable gases, Category 1
H260	In contact with water releases flammable gases which may ignite spontaneously.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
R15	Contact with water liberates extremely flammable gases
R35	Causes severe burns
C	Corrosive
F	Highly flammable

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*