

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Product Description: Diisobutylaluminum hydride, 25% w/w in hexane  
Cat No. : **42588**  
Molecular Formula **C<sub>8</sub> H<sub>19</sub> Al**

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

Recommended Use Laboratory chemicals  
Uses advised against No Information available

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

Company  
Avocado Research Chemicals Ltd.  
(Part of Thermo Fisher Scientific)  
Shore Road, Heysham  
Lancashire, LA3 2XY,  
United Kingdom  
Office Tel: +44 (0) 1524 850506  
Office Fax: +44 (0) 1524 850608

E-mail address [begel.sdsdesk@thermofisher.com](mailto:begel.sdsdesk@thermofisher.com)

### 1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

##### Physical hazards

|                                                                        |                   |
|------------------------------------------------------------------------|-------------------|
| Flammable liquids                                                      | Category 2 (H225) |
| Substances/mixtures which, in contact with water, emit flammable gases | Category 1 (H260) |
| Pyrophoric liquids                                                     | Category 1 (H250) |

##### Health hazards

|                                   |                     |
|-----------------------------------|---------------------|
| Aspiration Toxicity               | Category 1 (H304)   |
| Skin Corrosion/Irritation         | Category 1 A (H314) |
| Serious Eye Damage/Eye Irritation | Category 1 (H318)   |

# SAFETY DATA SHEET

Diisobutylaluminum hydride, 25% w/w in hexane

Revision Date 14-Mar-2026

Reproductive Toxicity  
Specific target organ toxicity - (single exposure)  
Specific target organ toxicity - (repeated exposure)

Category 2 (H361f)  
Category 3 (H336)  
Category 1 (H372)

## Environmental hazards

Chronic aquatic toxicity

Category 2 (H411)

Full text of Hazard Statements: see section 16

## 2.2. Label elements



Signal Word

**Danger**

## Hazard Statements

H225 - Highly flammable liquid and vapor  
H250 - Catches fire spontaneously if exposed to air  
H260 - In contact with water releases flammable gases which may ignite spontaneously  
H304 - May be fatal if swallowed and enters airways  
H314 - Causes severe skin burns and eye damage  
H336 - May cause drowsiness or dizziness  
H361f - Suspected of damaging fertility  
H411 - Toxic to aquatic life with long lasting effects  
H372 - Causes damage to organs through prolonged or repeated exposure  
EUH014 - Reacts violently with water

## Precautionary Statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P231 + P232 - Handle and store contents under inert gas. Protect from moisture  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER or doctor/physician

## 2.3. Other hazards

This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

| Component | CAS No   | EC No             | Weight % | GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567 |
|-----------|----------|-------------------|----------|-----------------------------------------------------------------------------------------|
| Hexane    | 110-54-3 | EEC No. 203-777-6 | 75.00    | Flam. Liq. 2 (H225)                                                                     |

ALFAA42588

# SAFETY DATA SHEET

Diisobutylaluminum hydride, 25% w/w in hexane

Revision Date 14-Mar-2026

|                            |           |                   |       |                                                                                                                                   |
|----------------------------|-----------|-------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------|
|                            |           |                   |       | Asp. Tox. 1 (H304)<br>Skin Irrit. 2 (H315)<br>STOT SE 3 (H336)<br>Repr. 2 (H361f)<br>STOT RE 1 (H372)<br>Aquatic Chronic 2 (H411) |
| Diisobutylaluminum hydride | 1191-15-7 | EEC No. 214-729-9 | 25.00 | Pyr. Liq. 1 (H250)<br>Water-react. 1 (H260)<br>Skin Corr. 1A (H314)<br>Eye Dam. 1 (H318)<br>EUH014                                |

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

|                                           |                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Advice</b>                     | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.                                                                                                                                                                                                                                                                                   |
| <b>Eye Contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.                                                                                                                                                                                                                                                   |
| <b>Skin Contact</b>                       | Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.                                                                                                                                                                                             |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.                                                                                                                                 |
| <b>Inhalation</b>                         | If not breathing, give artificial respiration. Remove from exposure, lie down. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately. Risk of serious damage to the lungs (by aspiration). |
| <b>Self-Protection of the First Aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.                                                                                                                                                                                                                                    |

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

Causes burns by all exposure routes. Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

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

|                           |                                                 |
|---------------------------|-------------------------------------------------|
| <b>Notes to Physician</b> | Treat symptomatically. Symptoms may be delayed. |
|---------------------------|-------------------------------------------------|

## SECTION 5: FIREFIGHTING MEASURES

# SAFETY DATA SHEET

Diisobutylaluminum hydride, 25% w/w in hexane

Revision Date 14-Mar-2026

## 5.1. Extinguishing media

### **Suitable Extinguishing Media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

### **Extinguishing media which must not be used for safety reasons**

Water.

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

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Reacts violently with water. Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

### **Hazardous Combustion Products**

Isobutane.

## 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Take precautionary measures against static discharges.

### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

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

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Do not expose spill to water. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Do not allow contact with water. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

# SAFETY DATA SHEET

Diisobutylaluminum hydride, 25% w/w in hexane

Revision Date 14-Mar-2026

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

Corrosives area. Keep away from water or moist air. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame.

Technical Rules for Hazardous Substances (TRGS) 510 Class 4.2  
Storage Class (LGK) (Germany)

## 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE** - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

| Component                  | The United Kingdom                                                                      | European Union                                       | Ireland                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Hexane                     | TWA: 72 mg/m <sup>3</sup><br>TWA: 20 ppm<br>STEL: 60 ppm<br>STEL: 216 mg/m <sup>3</sup> | TWA: 20 ppm (8hr)<br>TWA: 72 mg/m <sup>3</sup> (8hr) | TWA: 20 ppm 8 hr.<br>TWA: 72 mg/m <sup>3</sup> 8 hr.<br>STEL: 60 ppm 15 min<br>STEL: 216 mg/m <sup>3</sup> 15 min<br>Skin |
| Diisobutylaluminum hydride | STEL: 6 mg/m <sup>3</sup> 15 min<br>TWA: 2 mg/m <sup>3</sup> 8 hr                       |                                                      |                                                                                                                           |

#### Biological limit values

List source(s):

#### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

| Component                    | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|------------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| Hexane<br>110-54-3 ( 75.00 ) |                              |                                 |                                | DNEL = 11mg/kg<br>bw/day          |

| Component                    | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|------------------------------|----------------------------------|-------------------------------------|------------------------------------|---------------------------------------|
| Hexane<br>110-54-3 ( 75.00 ) |                                  |                                     |                                    | DNEL = 75mg/m <sup>3</sup>            |

#### Predicted No Effect Concentration (PNEC)

No information available.

### 8.2. Exposure controls

ALFAA42588

# SAFETY DATA SHEET

Diisobutylaluminum hydride, 25% w/w in hexane

Revision Date 14-Mar-2026

## Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

## Personal protective equipment

### Eye Protection

Goggles (European standard - EN 166)

### Hand Protection

Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments        |
|----------------|-------------------|-----------------|-------------|-----------------------|
| Nitrile rubber | See manufacturers | -               | EN 374      | (minimum requirement) |
| Viton (R)      | recommendations   |                 |             |                       |

### Skin and body protection

Long sleeved clothing.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

### Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Recommended Filter type:** low boiling organic solvent Type AX Brown conforming to EN371 or Organic gases and vapours filter Type A Brown conforming to EN14387

### Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141

When RPE is used a face piece Fit Test should be conducted

### Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

#### Physical State

Liquid Solution

#### Appearance

Colorless

#### Odor

No information available

#### Odor Threshold

No data available

#### Melting Point/Range

No data available

#### Softening Point

No data available

#### Boiling Point/Range

No information available

#### Flammability (liquid)

Highly flammable

Estimated

#### Flammability (solid,gas)

Not applicable

Liquid

#### Explosion Limits

No data available

# SAFETY DATA SHEET

Diisobutylaluminum hydride, 25% w/w in hexane

Revision Date 14-Mar-2026

|                                         |                          |             |                          |
|-----------------------------------------|--------------------------|-------------|--------------------------|
| Flash Point                             | No information available | Method -    | No information available |
| Autoignition Temperature                | No data available        |             |                          |
| Decomposition Temperature               | No data available        |             |                          |
| pH                                      | No information available |             |                          |
| Viscosity                               | No data available        |             |                          |
| Water Solubility                        | No information available |             |                          |
| Solubility in other solvents            | No information available |             |                          |
| Partition Coefficient (n-octanol/water) |                          |             |                          |
| Component                               | log Pow                  |             |                          |
| Hexane                                  | 4.11                     |             |                          |
| Vapor Pressure                          | No data available        |             |                          |
| Density / Specific Gravity              | 0.701 g/cm3              | @ 20 °C     |                          |
| Bulk Density                            | Not applicable           | Liquid      |                          |
| Vapor Density                           | No data available        | (Air = 1.0) |                          |
| Particle characteristics                | Not applicable (liquid)  |             |                          |

## 9.2. Other information

|                                                                        |                                                          |
|------------------------------------------------------------------------|----------------------------------------------------------|
| Molecular Formula                                                      | C8 H19 Al                                                |
| Molecular Weight                                                       | 142.22                                                   |
| Explosive Properties                                                   | Vapors may form explosive mixtures with air              |
| Substances/mixtures which, in contact with water, emit flammable gases | Emitted gas ignites spontaneously<br>Gas(es) = Isobutane |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Yes

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

|                          |                                                            |
|--------------------------|------------------------------------------------------------|
| Hazardous Polymerization | No information available.                                  |
| Hazardous Reactions      | None under normal processing. Reacts violently with water. |

### 10.4. Conditions to avoid

Exposure to moist air or water. Exposure to moisture. Keep away from open flames, hot surfaces and sources of ignition.

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

Isobutane.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Product Information

|                             |                                                                  |
|-----------------------------|------------------------------------------------------------------|
| (a) acute toxicity;<br>Oral | Based on available data, the classification criteria are not met |
|-----------------------------|------------------------------------------------------------------|

# SAFETY DATA SHEET

Diisobutylaluminum hydride, 25% w/w in hexane

Revision Date 14-Mar-2026

**Dermal**  
**Inhalation**

Based on available data, the classification criteria are not met  
Based on available data, the classification criteria are not met

## Toxicology data for the components

| Component | LD50 Oral              | LD50 Dermal                  | LC50 Inhalation              |
|-----------|------------------------|------------------------------|------------------------------|
| Hexane    | LD50 = 25 g/kg ( Rat ) | LD50 = 3000 mg/kg ( Rabbit ) | LC50 = 48000 ppm ( Rat ) 4 h |

(b) skin corrosion/irritation; Category 1 A

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

**Respiratory** No data available  
**Skin** No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product.

(g) reproductive toxicity;  
**Reproductive Effects**

Category 2  
California Proposition 65. Reproductive toxicity.

(h) STOT-single exposure;

Category 3

**Results / Target organs**

Central nervous system (CNS).

(i) STOT-repeated exposure;

Category 1

**Target Organs**

Central nervous system (CNS), Peripheral Nervous System (PNS).

(j) aspiration hazard;

Category 1

**Symptoms / effects, both acute and delayed**

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

## 11.2. Information on other hazards

**Endocrine Disrupting Properties**

Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## **SECTION 12: ECOLOGICAL INFORMATION**

### 12.1. Toxicity

**Ecotoxicity effects**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.



# SAFETY DATA SHEET

Diisobutylaluminum hydride, 25% w/w in hexane

Revision Date 14-Mar-2026

| Component | Freshwater Fish                                               | Water Flea          | Freshwater Algae |
|-----------|---------------------------------------------------------------|---------------------|------------------|
| Hexane    | LC50: 2.1 - 2.98 mg/L, 96h flow-through (Pimephales promelas) | EC50: 3.87 mg/L/48h |                  |

**12.2. Persistence and degradability** No information available  
**Degradation in sewage treatment plant** Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**12.3. Bioaccumulative potential** No information available

| Component | log Pow | Bioconcentration factor (BCF) |
|-----------|---------|-------------------------------|
| Hexane    | 4.11    | No data available             |

**12.4. Mobility in soil** No information available

**12.5. Results of PBT and vPvB assessment** No data available for assessment.

**12.6. Endocrine disrupting properties**  
**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

**12.7. Other adverse effects**  
**Persistent Organic Pollutant** This product does not contain any known or suspected substance  
**Ozone Depletion Potential** This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste from Residues/Unused Products** Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

**European Waste Catalogue (EWC)** According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

**Other Information** Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment.

## SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

ALFAA42588

# SAFETY DATA SHEET

Diisobutylaluminum hydride, 25% w/w in hexane

Revision Date 14-Mar-2026

**14.1. UN number** UN3399  
**14.2. UN proper shipping name** ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE  
**Technical Shipping Name** (diisobutylaluminum hydride, hexane)  
**14.3. Transport hazard class(es)** 4.3  
**Subsidiary Hazard Class** 3  
**14.4. Packing group** I

## ADR

**14.1. UN number** UN3399  
**14.2. UN proper shipping name** ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE  
**Technical Shipping Name** (diisobutylaluminum hydride, hexane)  
**14.3. Transport hazard class(es)** 4.3  
**Subsidiary Hazard Class** 3  
**14.4. Packing group** I

## IATA

**14.1. UN number** UN3399  
**14.2. UN proper shipping name** Organometallic substance, liquid, water-reactive, flammable  
**Technical Shipping Name** (diisobutylaluminum hydride, hexane)  
**14.3. Transport hazard class(es)** 4.3  
**Subsidiary Hazard Class** 3  
**14.4. Packing group** I

**14.5. Environmental hazards** Dangerous for the environment  
Product is a marine pollutant according to the criteria set by IMDG/IMO

**14.6. Special precautions for user** No special precautions required.

**14.7. Maritime transport in bulk according to IMO instruments** Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

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

#### International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component                  | CAS No    | EINECS    | ELINCS    | NLP | IECSC | TCSI | KECL     | ENCS | ISHL |
|----------------------------|-----------|-----------|-----------|-----|-------|------|----------|------|------|
| Hexane                     | 110-54-3  | 203-777-6 | 438-390-3 | -   | X     | X    | KE-18626 | X    | X    |
| Diisobutylaluminum hydride | 1191-15-7 | 214-729-9 | -         | -   | X     | X    | KE-10903 | X    | X    |

| Component                  | CAS No    | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|----------------------------|-----------|------|-----------------------------------------------|-----|------|------|-------|-------|
| Hexane                     | 110-54-3  | X    | ACTIVE                                        | X   | -    | X    | X     | X     |
| Diisobutylaluminum hydride | 1191-15-7 | X    | ACTIVE                                        | -   | X    | X    | X     | X     |

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### Authorisation/Restrictions according to EU REACH

| Component | CAS No | REACH (1907/2006) - Annex XIV - Substances | REACH (1907/2006) - Annex XVII - Restrictions | REACH Regulation (EC 1907/2006) article 59 - |
|-----------|--------|--------------------------------------------|-----------------------------------------------|----------------------------------------------|
|-----------|--------|--------------------------------------------|-----------------------------------------------|----------------------------------------------|

ALFAA42588

# SAFETY DATA SHEET

Diisobutylaluminum hydride, 25% w/w in hexane

Revision Date 14-Mar-2026

|                            |           | Subject to Authorization | on Certain Dangerous Substances                                     | Candidate List of Substances of Very High Concern (SVHC)                                                                 |
|----------------------------|-----------|--------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Hexane                     | 110-54-3  | -                        | Use restricted. See entry 75.<br>(see link for restriction details) | SVHC candidate list - EC 203-777-6 - Specific target organ toxicity after repeated exposure Article 57(f) - human health |
| Diisobutylaluminum hydride | 1191-15-7 | -                        | Use restricted. See entry 75.<br>(see link for restriction details) | -                                                                                                                        |

## REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

<https://echa.europa.eu/candidate-list-table>

## Seveso III Directive (2012/18/EC)

| Component                  | CAS No    | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|----------------------------|-----------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Hexane                     | 110-54-3  | Not applicable                                                                            | Not applicable                                                                           |
| Diisobutylaluminum hydride | 1191-15-7 | Not applicable                                                                            | Not applicable                                                                           |

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

| Component                  | CAS No    | OECD HPV | Restriction of Hazardous Substances (RoHS) | Basel Convention (Hazardous Waste) |
|----------------------------|-----------|----------|--------------------------------------------|------------------------------------|
| Hexane                     | 110-54-3  | Listed   | Not applicable                             | Annex I - Y42                      |
| Diisobutylaluminum hydride | 1191-15-7 | Listed   | Not applicable                             | Not applicable                     |

## Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

## Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

## National Regulations

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

## WGK Classification

Water endangering class = 2 (self classification)

| Component                  | Germany - Water Classification (AwSV) | Germany - TA-Luft Class |
|----------------------------|---------------------------------------|-------------------------|
| Hexane                     | WGK3                                  |                         |
| Diisobutylaluminum hydride | nwg                                   |                         |

| Component | France - INRS (Tables of occupational diseases)             |
|-----------|-------------------------------------------------------------|
| Hexane    | Tableaux des maladies professionnelles (TMP) - RG 59, RG 84 |

# SAFETY DATA SHEET

Diisobutylaluminum hydride, 25% w/w in hexane

Revision Date 14-Mar-2026

| Component                    | Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81) | Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC) | Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure |
|------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Hexane<br>110-54-3 ( 75.00 ) | Prohibited and Restricted Substances                                                                           | Group I                                                                         |                                                                                             |

## 15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

H250 - Catches fire spontaneously if exposed to air  
H260 - In contact with water releases flammable gases which may ignite spontaneously  
H304 - May be fatal if swallowed and enters airways  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H336 - May cause drowsiness or dizziness  
H361f - Suspected of damaging fertility  
H411 - Toxic to aquatic life with long lasting effects  
EUH014 - Reacts violently with water  
H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
H372 - Causes damage to organs through prolonged or repeated exposure

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer  
Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadviser - LOLI, Merck index, RTECS

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

**Physical hazards** On basis of test data

**Health Hazards** Calculation method

**Environmental hazards** Calculation method

# SAFETY DATA SHEET

Diisobutylaluminum hydride, 25% w/w in hexane

Revision Date 14-Mar-2026

---

## Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

Chemical incident response training.

|                         |                                             |
|-------------------------|---------------------------------------------|
| <b>Prepared By</b>      | Health, Safety and Environmental Department |
| <b>Creation Date</b>    | 16-Apr-2018                                 |
| <b>Revision Date</b>    | 14-Mar-2026                                 |
| <b>Revision Summary</b> | SDS sections updated, 2, 3, 15.             |

**This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.**

## Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**