

Material Safety Data Sheet (MSDS)

Diisobutylaluminum Hydride (DIBAL-H)

Prepared by Tuoda Industry Limited

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1. Identification

Product Name:	Diisobutylaluminum Hydride (DIBAL-H)
CAS No.:	1191-15-7
EINECS/ELINCS No.:	214-738-0
Recommended Use:	Reduction agent in organic synthesis, polymerization catalyst component.
Uses Advised Against:	Food, drug, pesticide, or biocidal product use.
Supplier:	Tuoda Industry Limited
Emergency Telephone (24H):	+86 13589106478 (WhatsApp)

2. Hazard(s) Identification

Classification (GHS/OSHA 29 CFR 1910.1200):

- Flammable liquids (Category 1)
- Substances/mixtures which, in contact with water, emit flammable gases (Category 1)
- Skin corrosion/irritation (Category 1B)
- Serious eye damage/eye irritation (Category 1)

Signal Word: Danger

Hazard Statements:

- Extremely flammable liquid and vapor.
- Reacts violently with water releasing flammable gases.
- Causes severe skin burns and eye damage.
- May cause respiratory irritation.

3. Composition/Information on Ingredients

Diisobutylaluminum Hydride

CAS No.: 1191-15-7

4. First-aid Measures

Inhalation: Remove to fresh air. Seek immediate medical attention.

Skin Contact: Remove contaminated clothing. Rinse thoroughly with water for at least 15 minutes. Seek medical attention.

Eye Contact: Rinse cautiously with water for several minutes. Seek medical attention immediately.

Ingestion: Do NOT induce vomiting. Rinse mouth. Seek immediate medical attention.

5. Fire-fighting Measures

Suitable Extinguishing Media: Dry sand, dry chemical, CO₂. Do not use water or foam.

Hazards: Reacts violently with water, forms flammable gases.

Protective Equipment: Self-contained breathing apparatus, full protective gear.

6. Accidental Release Measures

Personal Precautions: Evacuate area. Use full protective equipment. Remove ignition sources.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for Cleanup: Cover with dry inert material, collect carefully under inert atmosphere.

7. Handling and Storage

Handling: Handle under inert atmosphere (nitrogen or argon). Avoid water, moisture, and air exposure.

Storage: Store tightly sealed in dry, cool, well-ventilated areas under inert gas.

8. Exposure Controls / Personal Protection

Engineering Controls: Local exhaust ventilation under inert atmosphere.

Personal Protective Equipment:

- Eyes: Safety goggles (EN166)
- Skin: Impervious gloves and clothing
- Respiratory: Full face mask with suitable gas filter (EN149/NIOSH)

9. Physical and Chemical Properties

Appearance	Colorless to pale yellow liquid
Density at 20°C	0.79 g/cm ³
Melting Point	< -80°C
Boiling Point	84-86°C (under reduced pressure)
Flash Point	-17°C
Solubility	Decomposes violently in water

10. Stability and Reactivity

Reactivity: Highly reactive. Reacts violently with water and moisture.

Stability: Stable under inert gas and recommended storage conditions.

Incompatible Materials: Water, air, oxidizing agents.

Hazardous Decomposition Products: Aluminum oxides, hydrogen gas.

11. Toxicological Information

Acute Toxicity: Causes burns to skin, eyes, and respiratory tract.

Inhalation: Causes respiratory irritation.

Skin Contact: Causes severe burns.

Eye Contact: Causes serious eye damage.

Ingestion: Harmful if swallowed.

Carcinogenicity: Not classified.

Specific Target Organ Toxicity (STOT): May cause respiratory system effects.

12. Ecological Information

Ecotoxicity: Harmful to aquatic life.

Persistence: Reacts rapidly with environmental moisture.

Bioaccumulation: Not expected due to rapid decomposition.

13. Disposal Considerations

Dispose in accordance with local, regional, and national regulations. Neutralize carefully under inert atmosphere before disposal.

14. Transport Information

UN Number	UN2929
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Proper Shipping Name	Pyrophoric liquid, organic, n.o.s. (Diisobutylaluminum Hydride)
Hazard Class	4.2 (Pyrophoric substances)
Packing Group	I

15. Regulatory Information

TSCA (US): Listed

EINECS (EU): Listed

REACH: Use restricted.

16. Other Information

Prepared By: Safety & Compliance Department, Tuoda Industry Limited

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Disclaimer: The information herein is accurate to the best of our knowledge. It is provided for safety guidance and does not constitute a warranty.