

Safety Data Sheet

1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Lithium aluminium hydride

Product code (SDS NO): 39255jis_J_E2-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

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2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

PHYSICAL AND CHEMICAL HAZARDS

Substances and mixtures which, in contact with water, emit flammable gases: Category 1

HEALTH HAZARDS

Skin corrosion/irritation: Category 1A

Serious eye damage/eye irritation: Category 1

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

Label elements



Signal word: Danger

HAZARD STATEMENT

In contact with water releases flammable gases which may ignite spontaneously

Causes severe skin burns and eye damage

Causes serious eye damage

PRECAUTIONARY STATEMENT

Prevention

Do not allow contact with water.

Handle under inert gas. Protect from moisture.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash contaminated parts thoroughly after handling.

Wear protective gloves, protective clothing or face protection.

Wear protective gloves and face protection.

Wear eye protection/face protection.

Response

In case of fire: Use appropriate media other than water for extinction.

Immediately call a POISON CENTER or doctor/physician.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Lithium aluminium hydride, JUNSEI CHEMICAL CO., LTD., 39255jis_J_E2-1, 26/03/2019

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

Wash contaminated clothing before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage

Store locked up.

Store in a dry place. Store in a closed container.

Disposal

Dispose of contents/container in accordance with local/national regulation.

Specific Physical and Chemical hazards

May catch fire or form flammable gas in contact with water.

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Common name, synonyms: Lithium tetrahydridoaluminate

Ingredient name: Aluminium lithium hydride

Content (%): 94 <

Chemical formula: AlH_4Li

Chemicals No, Japan: 1-16

CAS No.: 16853-85-3

MW: 37.95

ECNO: 240-877-9

Note : The figures shown above are not the specifications of the product.

4. First-aid measures

Descriptions of first-aid measures

General measures

Immediately call a POISON CENTER or doctor/physician.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth. Do NOT induce vomiting.

Call a POISON CENTER or doctor/physician if you feel unwell.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use dry powder, dry sand to extinguish.

Unsuitable extinguishing media

Water, Foam.

Specific hazards arising from the substance or mixture

- Containers may explode when heated.
- Fire may produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may cause pollution.
- May re-ignite after fire is extinguished.

Advice for firefighters

Specific fire-fighting measures

- Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

- Wear fire/flame resistant/retardant clothing.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

- Keep unauthorized personnel away.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Ventilate area until material pick up is complete.
- Wear proper protective equipment.
- PUBLIC SAFETY:** Ventilate closed spaces before entering.
- Do not touch or walk through spilled material.

Environmental precautions

- Avoid release to headsprings, rivers, lakes, ocean and groundwater.
- Runoff may create fire or explosion hazard.

Methods and materials for containment and cleaning up

- Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.
- Sweep up, place in a bag and hold for waste disposal.
- Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.
- Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
- Dike for later disposal; do not apply water unless directed to do so.
- DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

Preventive measures for secondary accident

- Collect spillage.
- Stop leak if you can do it without risk.
- ELIMINATE** all ignition sources (no smoking, flares, sparks or flames in immediate area).
- DO NOT GET WATER** on spilled substance or inside containers.

7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

- Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

- Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
- Do not allow contact with water.

Exhaust/ventilator

- Exhaust/ventilator should be available.

Safety treatments

- Avoid contact with skin.
- Avoid contact with eyes.
- Avoid breathing dust, fume, gas, mist or vapor.

Safety Measures/Incompatibility

- Wear protective gloves, protective clothing or face protection.
- Wear protective gloves and face protection.
- Wear eye protection/face protection.
- Use personal protective equipment as required.
- Handle under inert gas. Protect from moisture.
- When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities**Recommendation for storage**

- Store in a well-ventilated place. Keep container tightly closed.
- Keep cool. Protect from sunlight.
- Store locked up.
- Store in a dry place. Store in a closed container.

8. Exposure controls/personal protection**Control parameters**

No control value data available in MHLW

Adopted value

No Adopted value data available in JSOH

Exposure controls**Appropriate engineering controls**

- Do not use in areas without adequate ventilation.
- Eye wash station should be available.
- Washing facilities should be available.

Individual protection measures**Respiratory protection**

Wear respiratory protection.

Hand protection

- Wear protective gloves.
- Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

Eye protection

- Wear chemical safety goggle.
- Wear eye/face protection.

Safety and Health measures

- Wash contaminated parts thoroughly after handling.
- Wash contaminated clothing before reuse.

9. Physical and Chemical Properties**Information on basic physical and chemical properties****Physical properties**

- Appearance: Crystals or crystalline powder
- Color: White~Gray
- Odor: None
- pH data N.A.

Phase change temperature

- Initial Boiling Point/Boiling point data N.A.
- Melting point/Freezing point: >125°C

Decomposition temperature: >125°C
Flash point data N.A.
Auto-ignition temperature data N.A.
Explosive properties data N.A.
Vapor pressure data N.A.
Vapor density data N.A.
Specific gravity/Density: 0.917g/cm³(20°C)
Solubility
Solubility in water: Reaction
Solubility in solvent: Soluble in ether and tetrahydrofuran.
n-Octanol/water partition coefficient data N.A.

10. Stability and Reactivity

Reactivity

Runaway polymerization will not occur.
React with water.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Releases hydrogen on contact with water and alcohols.

Conditions to avoid

Contact with incompatible materials.
Open flames. Heat. Sparks. Light.. Moisture. Air.

Incompatible materials

Acids, Oxidizing agents, Alcohols, Organic substances, Water

Hazardous decomposition products

Hydrogen, Metal oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral), Product
mouse LD₅₀=85mg/kg(Supplier's data/information; ChemIDplus)

Irritant properties

Causes severe eye and skin burns. (HSDB)

Skin corrosion/irritation

Harmonised classification – Annex VI of Regulation (EC) No 1272/2008 (CLP Regulation) :Skin Corr. 1A

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

No Carcinogenic effects data available

No reproductive toxicity data available

No STOT-single/repeated exposure data available

No Aspiration hazard data available

12. Ecological Information

Ecotoxicity

No Aquatic toxicity data available

No Persistence and degradability data available

No Bioaccumulative potential data available

13. Disposal considerations

Waste treatment methods

Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No, UN CLASS

UN No.: 1410

Proper Shipping Name : LITHIUM ALUMINIUM HYDRIDE

Class or division : 4.3

Packing group : I

ERG GUIDE No.: 138

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1410

Proper Shipping Name : LITHIUM ALUMINIUM HYDRIDE

Class or division : 4.3

Packing group : I

IATA Dangerous Goods Regulations

UN No.: 1410

Proper Shipping Name : LITHIUM ALUMINIUM HYDRIDE

Class or division : 4.3

Hazard labels : Dang. when wet

Packing group : I

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

15. Regulatory Information

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

Environmental hazards

US major regulations

TSCA

Aluminium lithium hydride

Other regulatory information

We are not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

Regulatory information in this section are limited to intentional ingredient(s) and/or impurities informed by supplier(s).

16. Other information

GHS classification and labelling

Water-react. 1: H260 In contact with water releases flammable gases which may ignite spontaneously

Skin Corr. 1A: H314 Causes severe skin burns and eye damage

Eye Dam. 1: H318 Causes serious eye damage

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN

IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

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IATA Dangerous Goods Regulations (60th Edition) 2019

Classification, labelling and packaging of substances and mixtures (table 3-1 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2018 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

NITE Chemical Risk Information Platform (NITE-CHRIP)

https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop

GHS Classification Guidance for Enterprises 2013 Revised Edition (Aug. 2013, METI)

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It is advised to make their own tests to determine the safety and suitability of each such product or combination for their own purposes.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2017).