

SAFETY DATA SHEET

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

1.1. Product identifier

| | |
|------------------------------|-----------------------|
| Name of the substance | Lithium Aluminate |
| Identification number | 234-434-9 (EC number) |
| Registration number | - |
| Document number | 1LT |
| Synonyms | None. |
| Materion Code | 1LT |
| Issue date | 16-December-2015 |
| Version number | 05 |
| Revision date | 05-May-2021 |
| Supersedes date | 09-September-2019 |

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

| | |
|-----------------------------|----------------|
| Identified uses | Not available. |
| Uses advised against | None known. |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary Not available.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Lithium Aluminate

Hazard pictograms



Signal word Warning

Hazard statements

| | |
|------|-----------------------------------|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |

Precautionary statements

Prevention

| | |
|------|--|
| P261 | Minimise dust generation and accumulation. |
| P270 | Avoid breathing dust/fume. |
| P280 | Do not eat, drink or smoke when using this product. |
| | Wear protective gloves/protective clothing/eye protection/face protection. |

Response

| | |
|--------------------|--|
| P304 + P340 | IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. |
| P305 + P351 + P338 | If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312 | Call a POISON CENTRE/doctor if you feel unwell. |
| P332 + P313 | If skin irritation occurs: Get medical advice/attention. |
| P337 + P313 | If eye irritation persists: Get medical advice/attention. |

Storage Not available.

Disposal

| | |
|------|---|
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |
|------|---|

Supplemental label information None.

2.3. Other hazards Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

| Chemical name | % | CAS-No. / EC No. | REACH Registration No. | Index No. | Notes |
|-------------------|-----|-------------------------|------------------------|-----------|-------|
| Lithium Aluminate | 100 | 12003-67-7 234-434-9 | - | - | |

Classification: Skin Irrit. 2;H315, STOT SE 3;H335

List of abbreviations and symbols that may be used above

#: This substance has been assigned Union workplace exposure limit(s).

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

General information Not available.

4.1. Description of first aid measures

Inhalation If breathing has stopped, perform artificial respiration and obtain medical help.

Skin contact If skin irritation occurs: Get medical advice/attention.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion Never give anything by mouth to an unconscious person. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed Not available.

4.3. Indication of any immediate medical attention and special treatment needed Not available.

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media None known.

5.2. Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special firefighting procedures No unusual fire or explosion hazards noted.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away.

For emergency responders Keep unnecessary personnel away.

6.2. Environmental precautions Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Not available.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Not available.

7.2. Conditions for safe storage, including any incompatibilities Not available.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Belgium. Exposure Limit Values

| Material | Type | Value |
|------------------------------------|------|---------------------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 2 mg/m ³ |

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

| Material | Type | Value |
|------------------------------------|------|---------------------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 2 mg/m ³ |

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

| Material | Type | Value |
|------------------------------------|------|---------------------|
| Lithium Aluminate (CAS 12003-67-7) | MAC | 2 mg/m ³ |

Denmark. Exposure Limit Values

| Material | Type | Value |
|------------------------------------|------|---------------------|
| Lithium Aluminate (CAS 12003-67-7) | TLV | 1 mg/m ³ |

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended

| Material | Type | Value |
|------------------------------------|------|---------------------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 2 mg/m ³ |

Finland. Workplace Exposure Limits

| Material | Type | Value |
|------------------------------------|------|---------------------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 2 mg/m ³ |

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

| Material | Type | Value |
|------------------------------------|------|---------------------|
| Lithium Aluminate (CAS 12003-67-7) | VME | 2 mg/m ³ |

Regulatory status: Indicative limit (VL)

Greece. OELs (Decree No. 90/1999, as amended)

| Material | Type | Value |
|------------------------------------|------|---------------------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 2 mg/m ³ |

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

| Material | Type | Value |
|------------------------------------|------|---------------------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 2 mg/m ³ |

Ireland. Occupational Exposure Limits

| Material | Type | Value |
|------------------------------------|------|---------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 2 mg/m3 |

Italy. Occupational Exposure Limits

| Material | Type | Value | Form |
|------------------------------------|------|---------|----------------------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 1 mg/m3 | Respirable fraction. |

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

| Material | Type | Value |
|------------------------------------|------|---------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 1 mg/m3 |

Norway. Administrative Norms for Contaminants in the Workplace

| Material | Type | Value |
|------------------------------------|------|---------|
| Lithium Aluminate (CAS 12003-67-7) | TLV | 2 mg/m3 |

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

| Material | Type | Value | Form |
|------------------------------------|------|---------|----------------------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 1 mg/m3 | Respirable fraction. |

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

| Material | Type | Value |
|------------------------------------|------|---------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 2 mg/m3 |

Spain. Occupational Exposure Limits

| Material | Type | Value |
|------------------------------------|------|---------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 2 mg/m3 |

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

| Material | Type | Value | Form |
|------------------------------------|---------|------------|-----------------|
| Lithium Aluminate (CAS 12003-67-7) | Ceiling | 0,02 mg/m3 | Inhalable dust. |
| | TWA | 1 mg/m3 | Total dust. |

Switzerland. SUVA Grenzwerte am Arbeitsplatz

| Material | Type | Value | Form |
|------------------------------------|------|---------|---------------------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 2 mg/m3 | Inhalable fraction. |

UK. EH40 Workplace Exposure Limits (WELs)

| Material | Type | Value |
|------------------------------------|------|---------|
| Lithium Aluminate (CAS 12003-67-7) | TWA | 2 mg/m3 |

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no effect levels (DNELs)

Not available.

Predicted no effect concentrations (PNECs)

Not available.

8.2. Exposure controls**Appropriate engineering controls**

Not available.

Individual protection measures, such as personal protective equipment**General information**

Not available.

Eye/face protection

Wear safety glasses with side shields (or goggles).

| | |
|--|---|
| Skin protection | |
| - Hand protection | Wear appropriate chemical resistant gloves. |
| - Other | Wear suitable protective clothing. |
| Respiratory protection | In case of insufficient ventilation, wear suitable respiratory equipment. |
| Thermal hazards | Wear appropriate thermal protective clothing, when necessary. |
| Hygiene measures | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |
| Environmental exposure controls | Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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|---|----------------|
| Appearance | Solid. |
| Physical state | Solid. |
| Form | Solid. |
| Colour | White. |
| Odour | Not available. |
| Odour threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point | Not available. |
| Initial boiling point and boiling range | Not available. |
| Flash point | Not available. |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Vapour pressure | Not available. |
| Vapour density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | Not available. |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Explosive properties | Not explosive. |
| Oxidising properties | Not oxidising. |

9.2. Other information

| | |
|--------------------------|--------------------|
| Molecular formula | LiAlO ₂ |
| Molecular weight | 65,92 g/mol |

SECTION 10: Stability and reactivity

| | |
|---|---|
| 10.1. Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| 10.2. Chemical stability | Material is stable under normal conditions. |
| 10.3. Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| 10.4. Conditions to avoid | None known. |
| 10.5. Incompatible materials | Not available. |

10.6. Hazardous decomposition products No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful.
Skin contact Not available.
Eye contact Direct contact with eyes may cause temporary irritation.
Ingestion May cause discomfort if swallowed.

Symptoms Not available.

11.1. Information on toxicological effects

Acute toxicity Not known.
Skin corrosion/irritation Not available.
Serious eye damage/eye irritation Not available.
Respiratory sensitisation Not available.
Skin sensitisation Causes skin irritation.
Germ cell mutagenicity Due to partial or complete lack of data the classification is not possible.
Carcinogenicity Due to partial or complete lack of data the classification is not possible.

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

Reproductive toxicity Not available.
Specific target organ toxicity - single exposure Not available.
Specific target organ toxicity - repeated exposure Due to partial or complete lack of data the classification is not possible.
Aspiration hazard Due to partial or complete lack of data the classification is not possible.
Mixture versus substance information No information available.
Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity Due to partial or complete lack of data the classification for hazardous to the aquatic environment, is not possible.
12.2. Persistence and degradability No data is available on the degradability of this product.
12.3. Bioaccumulative potential No data available.
Partition coefficient n-octanol/water (log Kow) Not available.
Bioconcentration factor (BCF) Not available.
12.4. Mobility in soil No data available.
12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations.
Contaminated packaging Not available.
EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. - 14.6.: Not regulated as dangerous goods.

RID

14.1. - 14.6.: Not regulated as dangerous goods.

ADN

14.1. - 14.6.: Not regulated as dangerous goods.

IATA

14.1. - 14.6.: Not regulated as dangerous goods.

IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

References

Not available.

Information on evaluation method leading to the classification of mixture

Not applicable.

Training information

Follow training instructions when handling this material.

Disclaimer

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