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

1.1 Product identifier

   Trade name  :  ALUDUR LA 15 n.l.
   Material number  :  059901DA001

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

This information is not available.

1.3 Details of the supplier of the safety data sheet

   Company  :  ECKART GmbH
              Guentherthal 4
              91235 Hartenstein
   Telephone  :  +499152770
   Telefax  :  +499152777008
   E-mail address of person responsible for the SDS  :  msds.eckart@altana.com

1.4 Emergency telephone number

   GBK Gefahrgrt Büro GmbH, Ingelheim, Germany:
   From outside US:  :  (001) 352-323-3500
   (First call in English, response in your language is possible)
   US & Canada (toll free)  :  1-800-5355-053

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

   Classification (REGULATION (EC) No 1272/2008)
   Not a dangerous substance according to GHS.

   Classification (67/548/EEC, 1999/45/EC)
   Not a hazardous substance or mixture.

2.2 Label elements

   Labelling (REGULATION (EC) No 1272/2008)
   Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

   Additional Labelling:
EUH210 Safety data sheet available on request.

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5</td>
<td>F; R11</td>
<td>Flam. Sol. 1; H228</td>
<td>&gt;= 50 - &lt;= 100</td>
</tr>
<tr>
<td></td>
<td>231-072-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>01-2119529243-45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzenamine, N-phenyl-, reaction</td>
<td>68411-46-1</td>
<td>R52/53</td>
<td>Aquatic Chronic 3; H412</td>
<td>&gt;= 2.5 - &lt; 10</td>
</tr>
<tr>
<td>products with 2,4,4-trimethylpentene</td>
<td>270-128-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>01-2119491299-23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>octylphosphonic acid</td>
<td>4724-48-5</td>
<td>C; C; R34</td>
<td>Acute Tox. 4; H302 Skin Corr. 1B; H314</td>
<td>&gt;= 1 - &lt; 3</td>
</tr>
<tr>
<td></td>
<td>225-218-5</td>
<td>Xn; Xn; R48/22 Xn; Xn; R22</td>
<td>Eye Dam. 1; H318 STOT RE 2; H373</td>
<td></td>
</tr>
<tr>
<td></td>
<td>01-2119970569-20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.
For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move the victim to fresh air.
No hazards which require special first aid measures.

If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : Wash off immediately with soap and plenty of water.

In case of eye contact : Remove contact lenses.
If eye irritation persists, consult a specialist.
If swallowed: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms: No information available.
Risks: No information available.

4.3 Indication of any immediate medical attention and special treatment needed
Treatment: No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media: Dry sand
Special powder against metal fire
Unsuitable extinguishing media: ABC powder
Carbon dioxide (CO2)
Water
Foam

5.2 Special hazards arising from the substance or mixture
Specific hazards during firefighting: Contact with water liberates extremely flammable gas (hydrogen).

5.3 Advice for firefighters
Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.
Further information: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Personal precautions: Use personal protective equipment. Evacuate personnel to safe areas. Avoid dust formation.

6.2 Environmental precautions
This information is not available.
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

ALUDUR LA 15 n.l.

Version 1.0 Revision Date: 08.03.2017 SDS Number: 102000025732 Print Date: 20.11.2018 Date of first issue: 08.03.2017

6.3 Methods and material for containment and cleaning up

Methods for cleaning up:
- Use mechanical handling equipment.
- Do not use a vacuum cleaner.

Pick up and arrange disposal without creating dust.
Sweep up and shovel.
Do not flush with water.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
This information is not available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling:
- Avoid dust formation.
- Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.
- Store away from heat.

For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion:
- Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures:
- General industrial hygiene practice.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:
- Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions:
- Protect from humidity and water.

Advice on common storage:
- Do not store together with oxidizing and self-igniting products.
- Never allow product to get in contact with water during storage.
- Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Other data:
- No decomposition if stored and applied as directed.

7.3 Specific end use(s)
This information is not available.
## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis (Version Date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5</td>
<td>TWA (Inhalable)</td>
<td>10 mg/m³</td>
<td>GB EH40 (2011-12-01)</td>
</tr>
</tbody>
</table>

**Further information**

The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

| aluminium powder (stabilised) | 7429-90-5        | TWA (Respirable)              | 4 mg/m³            | GB EH40 (2011-12-01) |

**Further information**

For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3.

Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be...
aluminium powder (stabilised) 7429-90-5 TWA (Respirable) 4 mg/m³ GB EH40 (2005-04-06)

Further information
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aluminium powder (stabilised) 7429-90-5 TWA (inhalable dust) 10 mg/m³ GB EH40 (2011-12-01)

Further information
For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m⁻³ 8-hour TWA of inhalable dust or 4 mg.m⁻³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed ‘inhalable’ and ‘respirable’. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.
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### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium (7429-90-5)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – local effects</td>
<td>3.72 mg/m³</td>
</tr>
<tr>
<td>Consumers</td>
<td>Oral</td>
<td>long term – systemic effects</td>
<td>3.95 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene (68411-46-1)</td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>0.62 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>4.37 mg/m³</td>
</tr>
<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>0.31 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>1.09 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>0.31 mg/kg</td>
<td></td>
</tr>
<tr>
<td>octylphosphonic acid (4724-48-5)</td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>4 mg/kg</td>
</tr>
<tr>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>0.14 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>0.02 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>
Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>aluminium (7429-90-5)</td>
<td>Fresh water</td>
<td>0.0749 mg/l</td>
</tr>
<tr>
<td></td>
<td>clarification plant</td>
<td>20 mg/l</td>
</tr>
<tr>
<td>Benzenamine, N-phenyl-, reaction products with 2,4,4-</td>
<td>Fresh water</td>
<td>0.051 mg/l</td>
</tr>
<tr>
<td>trimethylpentene (68411-46-1)</td>
<td>Marine water</td>
<td>0.0051 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>9320 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>932 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>1860 mg/kg</td>
</tr>
<tr>
<td></td>
<td>clarification plant</td>
<td>1 mg/l</td>
</tr>
<tr>
<td>octylphosphonic acid (4724-48-5)</td>
<td>Fresh water</td>
<td>0.04 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0.49 mg/kg</td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td>100 mg/l</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>0.075 mg/kg</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

**Personal protective equipment**

- **Eye protection**: Safety glasses
- **Hand protection**
  - **Material**: Protective gloves
  - **Remarks**: The suitability for a specific workplace should be discussed with the producers of the protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. The exact breakthrough time can be obtained from the protective glove producer and this has to be observed.
- **Skin and body protection**: Long sleeved clothing
- **Respiratory protection**: Use suitable breathing protection if workplace concentration requires. Breathing apparatus with filter. P1 filter

**Environmental exposure controls**
9.1 Information on basic physical and chemical properties

- **Appearance**: pellets
- **Colour**: silver
- **Odour**: odourless
- **Odour Threshold**: No data available
- **pH**: No data available
- **Freezing point**: No data available
- **Boiling point/boiling range**: No data available
- **Flash point**: Not applicable
- **Evaporation rate**: No data available
- **Flammability (solid, gas)**: The product is not flammable.
- **Auto-flammability**: not auto-flammable
- **Upper explosion limit**: No data available
- **Lower explosion limit**: No data available
- **Vapour pressure**: No data available
- **Relative vapour density**: No data available
- **Relative density**: No data available
- **Density**: 2.7 g/cm³
- **Bulk density**: No data available
- **Solubility (ies)**: 
  - **Water solubility**: insoluble
  - **Solubility in other solvents**: No data available
  - **Partition coefficient: n-octanol/water**: No data available
  - **Ignition temperature**: > 600 °C
- **Decomposition temperature**: No data available
- **Viscosity, dynamic**: No data available
- **Viscosity, kinematic**: No data available
- **Flow time**: No data available
- **Explosive properties**: No data available
- **Oxidizing properties**: No data available

**9.2 Other information**

No data available

**SECTION 10: Stability and reactivity**

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.
10.3 Possibility of hazardous reactions

Hazardous reactions: Contact with acids and alkalis may release hydrogen.
Stable under recommended storage conditions.
Dust may form explosive mixture in air.

10.4 Conditions to avoid

Conditions to avoid: No data available

10.5 Incompatible materials

Materials to avoid: Acids, Bases, Oxidizing agents, Water

10.6 Hazardous decomposition products

Contact with water or humid air: This information is not available.
Thermal decomposition: This information is not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:
Acute oral toxicity: Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components:
7429-90-5:
Acute inhalation toxicity: LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Skin corrosion/irritation

Product:
Result: No skin irritation
Remarks: Based on available data, the classification criteria are not met.

Components:
4724-48-5:
Remarks: Extremely corrosive and destructive to tissue.
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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Section 4: First-aid measures

4.1 Emergency procedures

4.1.1 Route of exposure

4.1.2 Ingestion

4.1.3 Inhalation

4.1.4 Skin contact

4.1.5 Eye contact

4.1.6 Fussing

4.1.7 Fire-fighting measures

4.1.8 Extinguishing media

4.1.9 Special protective equipment

Section 5: Fire and explosion hazards

5.1 Reactivity

5.2 Stability

5.3 Unstable decomposition products

Section 6: Health information

6.1 Symptoms of exposure may include

6.2 Acute and delayed effects

6.3 Long-term effects

6.4 Special dangers in case of incineration

Section 7: Handling and storage

7.1 Handling

7.2 Storage

7.3 Disposal

Section 8: Exposure controls and personal protective equipment

8.1 Control parameters

8.2 Personal protective equipment

Section 9: Physical and chemical properties

9.1 Identification of hazards

9.2 Physical data

9.3 Chemical data

9.4 Transport data

Section 10: Stability and reactivity

10.1 Reaction

10.2 Storing

10.3 Decomposition

Section 11: Toxicological information

11.1 Acute Toxicity

11.2 Chronic Toxicity

11.3 Other toxicological effects

Section 12: Ecological information

12.1 Toxicity

12.2 Persistence and degradability

12.3 Bioaccumulative potential

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

12.6 Other adverse effects
SAFETY DATA SHEET
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SECTION 13: Disposal considerations

European Waste Catalogue: 12 01 04 - non-ferrous metal dust and particles

13.1 Waste treatment methods
Product: In accordance with local and national regulations.
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. In accordance with local and national regulations.

SECTION 14: Transport information

14.1 UN number
14.2 UN proper shipping name
14.3 Transport hazard class(es)
14.4 Packing group
14.5 Environmental hazards
14.6 Special precautions for user
Remarks: Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable

15.2 Chemical safety assessment
This information is not available.

SECTION 16: Other information

Full text of R-Phrases
R11: Highly flammable.
R22: Harmful if swallowed.
R34: Causes burns.
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of H-Statements

H228: Flammable solid.
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H373: May cause damage to organs through prolonged or repeated exposure if swallowed.
H412: Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.: Acute toxicity
Aquatic Chronic: Chronic aquatic toxicity
Eye Dam.: Serious eye damage
Flam. Sol.: Flammable solids
Skin Corr.: Skin corrosion
STOT RE: Specific target organ toxicity - repeated exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Road; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative
Further information

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.

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