1. Identification

1.1. Product identifier

Product Code(s)  834
Product Name  ALPHABOND
Synonyms  Alphabond 300

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

Recommended use  Binder
Uses advised against  No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer  Almatis GmbH
Lyoner Str. 9
60528 Frankfurt
Germany
+ 49 69 9573410

For further information, please contact
E-mail address  info@almatis.com

1.4. Emergency telephone number

Emergency Telephone  GB: +44 20 35147487
                        UK: 0 800 680 0425

Emergency Telephone  - §45 - (EC)1272/2008
Europe  112

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

Hazard statements
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.3. Other hazards

No information available
3. Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>EC No</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>REACH registration number</th>
</tr>
</thead>
</table>

Full text of H- and EUH-phrases: see section 16

4. First-aid measures

4.1. Description of first aid measures

Inhalation  Remove to fresh air.
Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
Ingestion Clean mouth with water and drink afterwards plenty of water.

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

Symptoms Contact with dust can cause mechanical irritation or drying of the skin.

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

Note to physicians Treat symptomatically.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

5.3. Advice for firefighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Ensure adequate ventilation.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions
See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Pick up and transfer to properly labeled containers.

Prevention of secondary hazards
Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections
Advises on safe handling: See Section 7 for more information. Personal protective equipment [PPE]: See section 8 for more information. Disposal: See section 13 for more information.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
Ensure adequate ventilation.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Specific use(s)
Binder.

Risk Management Methods (RMM)
The information required is contained in this Material Safety Data Sheet.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>European Union</th>
<th>United Kingdom</th>
<th>France</th>
<th>Spain</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>-</td>
<td>TWA: 10 mg/m³</td>
<td>TWA: 10 mg/m³</td>
<td>TWA: 10 mg/m³</td>
<td>-</td>
</tr>
<tr>
<td>1344-28-1</td>
<td></td>
<td>TWA: 4 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>Italy</td>
<td>TWA: 10 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1344-28-1</td>
<td>Portugal</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Netherlands</td>
<td>TWA: 10 mg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Finland</td>
<td>-</td>
<td></td>
<td></td>
<td>TWA: 5 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TWA: 2 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Austria</td>
<td>Switzerland</td>
<td>Poland</td>
<td>Norway</td>
<td>Ireland</td>
</tr>
</tbody>
</table>

Page 3 / 9
### Chemical name

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Austria</th>
<th>Switzerland</th>
<th>Poland</th>
<th>Norway</th>
<th>Ireland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide 1344-28-1</td>
<td>-</td>
<td>60 µg/g creatinine - urine (Aluminum) - no restrictions</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Derived No Effect Level (DNEL)
No information available.

#### Predicted No Effect Concentration (PNEC)
No information available.

### 8.2. Exposure controls

#### Engineering controls
Apply technical measures to comply with the occupational exposure limits.

#### Personal protective equipment

- **Eye/face protection:** No special protective equipment required. EN 166.
- **Hand protection:** Wear suitable gloves. EN 374.
- **Skin and body protection:** Wear suitable protective clothing. EN 6529.
- **Respiratory protection:** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

#### General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

#### Environmental exposure controls
Avoid release to the environment.

### 9. Physical and chemical properties

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>white Powder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>White to off-white</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>None.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>-</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>None known</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Relative density | No data available | None known
Water solubility | insoluble | None known
Solubility(ies) | insoluble | None known
Partition coefficient | No data available | None known
Autoignition temperature | Does not ignite | None known
Decomposition temperature | No data available | None known
Kinematic viscosity | No data available | None known
Dynamic viscosity | No data available | None known
Explosive properties | No information available | None known
Oxidizing properties | No information available | None known

## 9.2. Other information

- Softening point: No information available
- Molecular weight: No information available
- VOC Content (%): No information available
- Liquid Density: 3.2 g/cm³
- Bulk density: 0.32-1.09 g/cm³

## 10. Stability and reactivity

### 10.1. Reactivity

**Reactivity**: None under normal use conditions.

### 10.2. Chemical stability

**Stability**: Stable under normal conditions.

**Explosion data**

- **Sensitivity to mechanical impact**: None.
- **Sensitivity to static discharge**: None.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions**: None under normal processing.

### 10.4. Conditions to avoid

**Conditions to avoid**: None known based on information supplied.

### 10.5. Incompatible materials

**Incompatible materials**: None known based on information supplied.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products**: Not applicable.

## 11. Toxicological information

### 11.1. Information on toxicological effects

**Information on likely routes of exposure**

- **Product Information**
  - **Inhalation**: May cause irritation.
  - **Eye contact**: Dust contact with the eyes can lead to mechanical irritation.
Skin contact

No known hazard in contact with skin.

Ingestion

No known hazard by swallowing.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

No information available.

Numerical measures of toxicity

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>&gt; 5000 mg/kg (Rat)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Aspiration hazard

No information available.

12. Ecological information

12.1. Toxicity

Ecotoxicity

Not considered to be harmful to aquatic life.

12.2. Persistence and degradability

Persistence and degradability

Not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation

Does not bioaccumulate.

12.4. Mobility in soil

Mobility in soil

No information available.

Mobility

No information available.
12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment
No information available.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>PBT and vPvB assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>The substance is not PBT / vPvB PBT assessment does not apply</td>
</tr>
</tbody>
</table>

12.6. Other adverse effects

Other adverse effects
No information available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products
Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging
Do not reuse empty containers.

Waste codes / waste designations according to EWC / AVV
According to the European Waste Catalog, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. 01 03 08.

14. Transport information

IMDG
14.1 UN number
Not regulated
14.2 UN proper shipping name
Not regulated
14.3 Transport hazard class(es)
Not regulated
14.4 Packing group
Not regulated
14.5 Marine pollutant
Not applicable
14.6 Special Provisions
None
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
No information available

RID
14.1 UN number
Not regulated
14.2 UN proper shipping name
Not regulated
14.3 Transport hazard class(es)
Not regulated
14.4 Packing group
Not regulated
14.5 Environmental hazards
Not applicable
14.6 Special Provisions
None

ADR
14.1 UN number
Not regulated
14.2 UN proper shipping name
Not regulated
14.3 Transport hazard class(es)
Not regulated
14.4 Packing group
Not regulated
14.5 Environmental hazards
Not applicable
14.6 Special Provisions
None

IATA
14.1 UN number
Not regulated
14.2 UN proper shipping name  Not regulated
14.3 Transport hazard class(es)  Not regulated
14.4 Packing group  Not regulated
14.5 Environmental hazards  Not applicable
14.6 Special Provisions  None

15. Regulatory information

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

European Union

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

Authorizations and/or restrictions on use:
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants
Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009  Not applicable

International Inventories
TSCA  Complies
DSL/NDSL  Listed on DSL
EINECS/ELINCS  Complies
ENCS  Complies
IECSC  Complies
KECL  Complies
PICCS  Complies
AICS  Complies

Legend:
TSCA  United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL  Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS  European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS  Japan Existing and New Chemical Substances
IECSC  China Inventory of Existing Chemical Substances
KECL  Korean Existing and Evaluated Chemical Substances
PICCS  Philippines Inventory of Chemicals and Chemical Substances
AICS  Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report  No information available

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend
SVHC: Substances of Very High Concern for Authorization:
Legend  Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
TWA  TWA (time-weighted average)  STEL  STEL (Short Term Exposure Limit)
Ceiling  Maximum limit value  *  Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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Revision date  10-Jul-2019

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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