1. Identification

Product identifier

Product Name: TABULAR ALUMINA

Other means of identification

Product Code(s): 154

Synonyms: T60/64 CD and all sizes, T160, T162 all sizes, Filter Bed Alumina (FBA), Premix, Tabalox

Recommended use of the chemical and restrictions on use

Recommended use: Aluminum filter, Heat exchanger, Inert bed support, Refractory

Restrictions on use: No information available

Details of the supplier of the safety data sheet

Supplier Address: Almatis, Inc.
P.O. Box 300
4701 Alcoa Road
Bauxite, AR 72022
USA
Telephone: +1 501-776-4677

Manufacturer Address: Almatis, Inc.
P.O. Box 300
4701 Alcoa Road
Bauxite, AR 72022
USA
Telephone: +1 501-776-4677

Emergency telephone number

Emergency Telephone: US/Canada: +01 760 476 3962, +1 866 519 4752

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)

No information available

Label elements

Not classified

Hazard statements

Not classified

Precautionary Statements - Prevention

Not applicable

Precautionary Statements - Response
Not applicable

Precautionary Statements - Storage
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal
Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other information
Not applicable

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance</th>
<th>Common name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumina.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>1344-28-1</td>
<td>&gt;99</td>
<td>-</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

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.
Ingestion  Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

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

Indication of any immediate medical attention and special treatment needed

Note to physicians  Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media  Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media  No information available.

Specific hazards arising from the chemical

Avoid generation of dust.

Explosion data

<table>
<thead>
<tr>
<th>Sensitivity to mechanical impact</th>
<th>None.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity to static discharge</td>
<td>Yes.</td>
</tr>
</tbody>
</table>
**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

#### Personal precautions, protective equipment and emergency procedures

**Personal precautions**

Ensure adequate ventilation. Avoid generation of dust. Avoid contact with eyes. Use personal protective equipment as required. Do not breathe dust.

**Other information**

Refer to protective measures listed in Sections 7 and 8.

#### Methods and material for containment and cleaning up

**Methods for containment**

Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

**Methods for cleaning up**

Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal.

### 7. Handling and storage

**Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with eyes.

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

**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place.

### 8. Exposure controls/personal protection

#### Control parameters

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide 1344-28-1</td>
<td>TWA: 1 mg/m³ respirable particulate matter</td>
<td>TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 10 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction</td>
<td>-</td>
</tr>
</tbody>
</table>

**Appropriate engineering controls**

**Engineering controls**

Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations. Ventilation systems.

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

**Eye/face protection**

No special protective equipment required.

**Hand protection**

No special protective equipment required.

**Skin and body protection**

No special protective equipment required.

**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  
Do not breathe dust.

9. Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid Powder</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>white Powder granules Balls</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>white</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>No data available</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>2053 °C / 3727.4 °F</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>- / °F</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>- / °F</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>No information available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
<td>None known</td>
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<tr>
<td>Water solubility</td>
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</tr>
<tr>
<td>Solubility in other solvents</td>
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<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>- / °F</td>
<td>Does not ignite</td>
</tr>
<tr>
<td>Hyphen</td>
<td>No data available</td>
<td>No information available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td>No information available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
<td>No information available</td>
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</table>

Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
<td></td>
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<tr>
<td>Oxidizing properties</td>
<td>Not oxidizing</td>
<td></td>
</tr>
<tr>
<td>Softening point</td>
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</tr>
<tr>
<td>Molecular weight</td>
<td>No information available</td>
<td></td>
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<tr>
<td>VOC Content (%)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Liquid Density</td>
<td>3.5-3.7 g/cm³</td>
<td></td>
</tr>
<tr>
<td>Bulk density</td>
<td>800-2800 kg/m³</td>
<td></td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Reactivity  
No information available.

Chemical stability  
Stable under normal conditions.

Possibility of hazardous reactions  
None under normal processing.

Hazardous polymerization  
None under normal processing.

Conditions to avoid  
dust formation.

Incompatible materials  
None known based on information supplied.

Hazardous decomposition products  
Steam.
11. Toxicological information

Information on likely routes of exposure

Product Information

- **Inhalation**: May cause irritation of respiratory tract.
- **Eye contact**: Dust contact with the eyes can lead to mechanical irritation.
- **Skin contact**: May cause irritation.
- **Ingestion**: Specific test data for the substance or mixture is not available.

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 (Rat)</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>&gt; 5000 mg/kg</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1344-28-1</td>
<td></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.
- **Other adverse effects**: No information available.
- **Interactive effects**: No information available.

12. Ecological information

- **Ecotoxicity**: Aquatic toxicity is unlikely due to low solubility. Not considered to be harmful to aquatic life.
- **Persistence and degradability**: Not readily biodegradable.
13. Disposal considerations

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.

14. Transport information

DOT
Not regulated

TDG
Not regulated

MEX
Not regulated

ICAO (air)
Not regulated

IATA
Not regulated

IMDG
Not regulated

RID
Not regulated

ADR
Not regulated

ADN
Not regulated

15. Regulatory information

International Inventories

TSCA
Complies.

DSL/NDSL
Complies.

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
**US Federal Regulations**

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

**CWA (Clean Water Act)**
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations**

**California Proposition 65**
This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

**US State Regulations**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>1344-28-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other information**

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Legend</th>
<th>Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>TWA (time-weighted average)</td>
</tr>
<tr>
<td>Ceiling</td>
<td>Maximum limit value</td>
</tr>
<tr>
<td></td>
<td>STEL (Short Term Exposure Limit)</td>
</tr>
<tr>
<td></td>
<td>Skin designation</td>
</tr>
</tbody>
</table>

**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

Prepared By
Product Safety Department
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info@almatis.com.

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Revision date
01-Sep-2020

Revision Note
No data available.

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