1. Identification

Product identifier

Other means of identification

Product Code(s) 387

Synonyms A-Aluminas, CL-Aluminas, CT-Aluminas, CTC-Aluminas, E-SY 1000, Gilox, GMA, HVA, MPC, P-Aluminas, PSG, RAPOLO, RG-Aluminas, Therma Thermafill F-P Ultimate, WRA, Exception: CTC55 - see Material Safety Data Sheet 1000, Exception: CT3000 SDP - see Material Safety Data Sheet 1259

Recommended use of the chemical and restrictions on use

Recommended use Adsorbents Filler Polishing agent Refractory Ceramic

Restrictions on use No information available

Details of the supplier of the safety data sheet

Emergency telephone number

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

2. Hazard(s) identification

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazard statements

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
3. Composition/information on ingredients

Substance
Common name  Alumina.

<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
No information available.

Explosion data
Sensitivity to mechanical impact  None.
Sensitivity to static discharge  None.

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.

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.

7. Handling and storage

Precautions for safe handling

Advice on safe handling
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed in a dry 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</td>
<td>TWA: 1 mg/m³ respirable particulate matter</td>
<td>TWA: 15 mg/m³ total dust</td>
<td>-</td>
</tr>
<tr>
<td>1344-28-1</td>
<td></td>
<td>TWA: 5 mg/m³ respirable fraction</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) TWA: 10 mg/m³ total dust</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) TWA: 5 mg/m³ respirable</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>fraction</td>
<td></td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering controls
Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection
No special protective equipment required.

Skin and body protection
Wear suitable protective clothing.

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.

9. Physical and chemical properties

Information on basic physical and chemical properties
Physical state: Solid
Appearance: white Powder
Color: white
Odor: No information available
Odor threshold: No information available

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>-</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>2000 °C / 3632 °F</td>
<td>Literary reference</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flash point</td>
<td>- / °F</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Water solubility</td>
<td>insoluble</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Hyphen</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Other information:
Explosive properties: No information available
Oxidizing properties: No information available
Softening point: No information available
Molecular weight: 101.96
VOC Content (%): None
Liquid Density: 2.7-3.94 g/cm³
Bulk density: 350-1250 kg/m³

10. Stability and reactivity

Reactivity: None under normal processing.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: None under normal processing.
Hazardous polymerization: Hazardous polymerization does not occur.
Conditions to avoid: None known based on information supplied.
Incompatible materials: None known based on information supplied.
Hazardous decomposition products: None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure:
387 - CALCINED ALUMINA and POLISHING ALUMINA

Revision date 10-Nov-2021

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 effect based on information supplied.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms  No information available.

Numerical measures of toxicity

Product Information

Component Information

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

Product Information

Serious eye damage/eye irritation  No information available.

Product Information

Respiratory or skin sensitization  No information available.

Product Information

Germ cell mutagenicity  No information available.

Product Information

Carcinogenicity  No information available.

Product Information

Reproductive toxicity  No information available.

Product Information

STOT - single exposure  No information available.

Product Information

STOT - repeated exposure  No information available.

Product Information

Aspiration hazard  No information available.

Product Information

Other adverse effects  No information available.

Product Information

Interactive effects  No information available.

12. Ecological information
Ecotoxicity: Not considered to be harmful to aquatic life.

### Product Information

**Persistence and degradability**: Not readily biodegradable.

**Bioaccumulation**: MATERIAL DOES NOT BIOACCUMULATE.

**Mobility**: No information available.

**Other adverse effects**: No information available.

### 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**: Contact supplier for inventory compliance status.
- **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

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.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide - 1344-28-1</td>
<td>1.0</td>
</tr>
</tbody>
</table>

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
This product does not contain any substances regulated by state right-to-know 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
387 - CALCINED ALUMINA and POLISHING ALUMINA

NFPA

Health hazards
Flammability
Instability
Physical and chemical properties

HMIS

Health hazards
Flammability
Physical hazards
Personal protection

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

Legend

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average)
STEL STEL (Short Term Exposure Limit)

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
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 Toxicology Program (NTP)
New Zealand’s Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Prepared By

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info@almatis.com.

Issuing Date

18-Feb-2020

Revision date

04-Jun-2010

Revision Note

No information 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