

Revision date 26-Sep-2023

Revision Number 5

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

**Product Code(s)** 1259  
**Product Name** SPECIALTY ALUMINA

**Other means of identification**

**Chemical name** Alumina

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

**Recommended use** Refractory, Technical ceramics  
**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** 3E Global Incident Response Hotline (Almatis access code: 334735)  
GB: +44 20 35147487  
UK: 0 800 680 0425

<b>Emergency Telephone - §45 - (EC)1272/2008</b>
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<b>Europe</b>	<b>Not applicable</b>
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**SECTION 2: Hazards 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 [CLP]

**2.2. Label elements**

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

**Signal word**

None

**Hazard statements**

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]  
 EUH210 - Safety data sheet available on request

**Precautionary Statements - EU (§28, 1272/2008)**

P403 + P235 - Store in a well-ventilated place. Keep cool

**2.3. Other hazards**

May form combustible dust concentrations in air.

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

Not applicable

**3.2 Mixtures**

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Aluminum oxide 1344-28-1	>=90	01-211952924 8-35-xxxx	215-691-6	-	-	-	-

**Full text of H- and EUH-phrases: see section 16**Acute Toxicity Estimate

No information available

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Aluminum oxide 1344-28-1	5000	No data available	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

**SECTION 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 doctor.
<b>Skin contact</b>	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water.

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

<b>Symptoms</b>	Contact with dust can cause mechanical irritation or drying of the skin.
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#### **4.3. Indication of any immediate medical attention and special treatment needed**

<b>Note to doctors</b>	Treat symptomatically.
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### **SECTION 5: Firefighting measures**

#### **5.1. Extinguishing media**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Large Fire</b>	No information available.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.

#### **5.2. Special hazards arising from the substance or mixture**

<b>Specific hazards arising from the chemical</b>	Avoid generation of dust. Fine dust dispersed in air may ignite.
<b>Hazardous combustion products</b>	Carbon monoxide. Carbon dioxide (CO <sub>2</sub> ).

#### **5.3. Advice for firefighters**

<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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### **SECTION 6: Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Ensure adequate ventilation. Avoid generation of dust. Avoid contact with eyes. Use personal protective equipment as required. Do not breathe dust. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.

#### **6.2. Environmental precautions**

<b>Environmental precautions</b>	See Section 12 for additional Ecological Information.
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#### **6.3. Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so. Prevent dust cloud.
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**Methods for cleaning up** Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Pick up and transfer to properly labelled containers.

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

#### 6.4. Reference to other sections

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

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

**Advice on 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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges.

**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)**  
No information available.

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

## **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

#### **Exposure Limits**

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Aluminum oxide 1344-28-1	-	TWA: 5 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 10.0 mg/m <sup>3</sup> TWA: 1.5 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Aluminum oxide 1344-28-1	-	TWA: 10.0 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> STEL: 4 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>	-
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Aluminum oxide 1344-28-1	TWA: 10 mg/m <sup>3</sup>	TWA: 1.25 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup> TWA: 1.5 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 52 mg/m <sup>3</sup>
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Aluminum oxide 1344-28-1	TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>	-	TWA: 1 mg/m <sup>3</sup>	TWA: 6 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>

	STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>				
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Aluminum oxide 1344-28-1	-	-	-	TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>	TWA: 2.5 mg/m <sup>3</sup> TWA: 1.2 mg/m <sup>3</sup>
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Aluminum oxide 1344-28-1	TWA: 1 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> TWA: 3 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> STEL: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup> TWA: 1.5 mg/m <sup>3</sup>	-	TWA: 10 mg/m <sup>3</sup>
Chemical name	Sweden		Switzerland		United Kingdom
Aluminum oxide 1344-28-1	NGV: 5 mg/m <sup>3</sup> NGV: 2 mg/m <sup>3</sup>		TWA: 3 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup> STEL: 24 mg/m <sup>3</sup>		TWA: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup> STEL: 12 mg/m <sup>3</sup>

### Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Aluminum oxide 1344-28-1	-	60 µg/g Creatinine (urine - Aluminum after end of work day, at the end of a work week/end of the shift) ( - )	-	-	-
Chemical name	Slovenia	Spain	Switzerland	United Kingdom	
Aluminum oxide 1344-28-1	-	-	50 µg/g creatinine (urine - Aluminum after several shifts (for long-term exposures)) 0.21 µmol/mmol creatinine (urine - Aluminum after several shifts (for long-term exposures))	-	

**Derived No Effect Level (DNEL) - Workers** No information available

**Derived No Effect Level (DNEL) - General Public** No information available.

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

### 8.2. Exposure controls

**Engineering controls** No information available.

#### Personal protective equipment

**Eye/face protection** Eye protection must conform to standard EN 166.

**Hand protection** Wear suitable gloves. Gloves must conform to standard EN 374.

<b>Skin and body protection</b>	Wear suitable protective clothing. Wear fire/flame resistant/retardant clothing.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>General hygiene considerations</b>	Handle in accordance with good industrial hygiene and safety practice.
<b>Environmental exposure controls</b>	Avoid creating dust. Avoid release to the environment.

## SECTION 9: Physical and chemical properties

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

<b>Physical state</b>	Solid Powder
<b>Appearance</b>	white Powder
<b>Colour</b>	white
<b>Odour</b>	None.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Melting point / freezing point</b>	No data available	None known
<b>Initial boiling point and boiling range</b>	No data available	None known
<b>Flammability</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Flash point</b>	No data available	None known
<b>Autoignition temperature</b>	-	Does not ignite
<b>Decomposition temperature</b>		None known
<b>pH</b>	No data available	None known
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Water solubility</b>	No data available	Insoluble
<b>Solubility(ies)</b>	Insoluble	
<b>Partition coefficient</b>	No data available	None known
<b>Vapour pressure</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Bulk density</b>	770-1250 kg/m <sup>3</sup>	
<b>Liquid Density</b>	2.7-3.94 g/cm <sup>3</sup>	
<b>Relative vapour density</b>	No data available	
<b>Particle characteristics</b>		
<b>Particle Size</b>	No information available	
<b>Particle Size Distribution</b>	No information available	

### 9.2. Other information

9.2.1. Information with regards to physical hazard classes

Not applicable

**Explosives** None

9.2.2. Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

**10.1. Reactivity**

**Reactivity** No information available.

**Remarks** None under normal processing.

**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** Excessive heat. Heating in air, dust formation. Avoid generation of dust. Avoid accumulation of airborne dust.

**10.5. Incompatible materials**

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

**10.6. Hazardous decomposition products**

**Hazardous decomposition products** Carbon monoxide. Carbon dioxide (CO<sub>2</sub>).

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****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.

**Acute toxicity****Numerical measures of toxicity**

No information available

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Aluminum oxide	> 5000 mg/kg ( Rat )	-	-

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**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 sensitisation** 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.

**11.2. Information on other hazards**

**11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**11.2.2. Other information**

**Other adverse effects** No information available.

**SECTION 12: Ecological information**

**12.1. Toxicity**

**Ecotoxicity** Not considered to be harmful to aquatic life. Aquatic toxicity is unlikely due to low solubility.

**12.2. Persistence and degradability**

**Persistence and degradability** Not readily biodegradable.

**12.3. Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**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** The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Aluminum oxide	The substance is not PBT / vPvB PBT assessment does not apply

**12.6. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**12.7. Other adverse effects**

No information available.

**SECTION 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 Catalogue, 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.

**SECTION 14: Transport information****IATA**

14.1 UN number or ID number Not regulated  
 14.2 EPNI 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 precautions for user  
 Special Provisions None

**IMDG**

14.1 UN number or ID number Not regulated  
 14.2 EPNM 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 precautions for user  
 Special Provisions None  
 14.7 Maritime transport in bulk according to IMO instruments No information available

**RID**

14.1 UN number	Not regulated
14.2 EPNR	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 precautions for user Special Provisions	None

**ADR**

14.1 UN number or ID 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 precautions for user Special Provisions	None

**SECTION 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.

**Authorisations and/or restrictions on use:**

This product does not contain substances subject to authorisation (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	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

**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  
**AIIC** - Australian Inventory of Industrial Chemicals  
**NZIoC** - New Zealand Inventory of Chemicals

**15.2. Chemical safety assessment**

**Chemical Safety Report** No information available

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorisation:  
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Chemicals  
vPvB: Very Persistent and very Bioaccumulative (vPvB) Chemicals

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

**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)  
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
European Chemicals Agency (ECHA) (ECHA\_API)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AELG(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)  
National Institute of Technology and Evaluation (NITE)  
Australian 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)  
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
Organisation for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

NOT FOR MEDICAL USE

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**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**