

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Code** 340

**Product Name** **MAGNESIUM ALUMINATE SPINEL**

**Contains** Spinel, CAS 1302-67-6

**Synonyms** AR 78, AR 90, MR 66

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

**Recommended Use** Refractory

**Uses advised against** No information available

### 1.3. Details of the supplier of the safety data sheet

Almatis GmbH Lyoner Str. 9 60528 Frankfurt Germany Phone: +49 69 9573410	Almatis GmbH Giulinistrasse 2 67065 Ludwigshafen Germany Phone: +49 621 57070
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### For further information, please contact

**E-mail address** info@almatis.com

### 1.4. Emergency telephone number

**Emergency Telephone Number** 3E Global Incident Response Hotline (Almatis access code: 334735)

GB: +44 20 35147487  
UK: 0 800 680 0425  
US: +01 760 476 3961  
US: +01 760 476 3959

## 2. HAZARDS IDENTIFICATION

### 2.1. - Classification of the substance or mixture

#### **REGULATION (EC) No 1272/2008**

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

#### **Classification according to Regulation (EC) No. 1272/2008 [CLP]**

No data available

### 2.2. Label Elements

#### **Signal word**

None

#### **Hazard statements**

None

**2.3. Other information**

No information available

**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.1. Substances**

Chemical name	CAS No.	Weight-%	REACH Reg. No
Spinel (Mg(AlO <sub>2</sub> ) <sub>2</sub> )	1302-67-6	85-100	01-2119457267-32-0000
Aluminum oxide	1344-28-1	5-15	01-2119529248-35-0024 01-2119529248-35-0125 01-2119529248-35-0086 01-2119529248-35-0238
Magnesium oxide	1309-48-4	0-5	

**4. FIRST AID MEASURES****4.1. Description of first aid measures**

<b>Eye Contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
<b>Skin Contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Rinse mouth
<b>Inhalation</b>	Remove to fresh air
<b>General Advice</b>	If symptoms persist, call a physician Show this safety data sheet to the doctor in attendance

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

No information available

**4.3. Indication of any immediate medical attention and special treatment needed****Notes to Physician**

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

**Extinguishing media which must not be used for safety reasons**

No information available

**5.2. Special hazards arising from the substance or mixture****Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases**

None in particular.

**5.3. Advice for firefighters****Special protective equipment for fire-fighters**

As in any fire, wear self-contained breathing apparatus and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures**

Wear personal protective equipment  
Avoid dust formation

**6.2. Environmental precautions**

No special environmental precautions required

**6.3. Methods and material for containment and cleaning up**

Recover product. Place into appropriate container for disposal.

**Methods for Cleaning Up**

Sweep up and shovel into suitable containers for disposal

**6.4. Reference to other sections**

See Section 12 for additional information.

## 7. HANDLING AND STORAGE

**7.1. Precautions for Safe Handling****Handling**

Provide appropriate exhaust ventilation at places where dust is formed

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice

**Exposure scenario**

No information available

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

Keep in a dry place

**7.3. Specific end use(s)**

No information available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1. Control parameters**

Chemical name	EU	United Kingdom	France	Spain	Germany OEL (TWA)
Spinel (Mg(AlO <sub>2</sub> ) <sub>2</sub> ) 1302-67-6	N/A		N/A	N/A	N/A
Aluminum oxide 1344-28-1			VME: 10 mg/m <sup>3</sup>	VLA-ED: 10 mg/m <sup>3</sup>	1.25 mg/m <sup>3</sup> 6.0 mg/m <sup>3</sup> (a)
Magnesium oxide 1309-48-4		TWA: 10 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>	VME: 10 mg/m <sup>3</sup>	VLA-ED: 10 mg/m <sup>3</sup>	6 mg/m <sup>3</sup> respirable fraction

(a) GOEL - Germany - TRGS 900 - Occupational Exposure Limits - TWAs, (a) exempt facilities listed in 2.4(8) and (9)

Component	Italy	Portugal	Netherlands	Finland	Denmark
Spinel (Mg(AlO <sub>2</sub> ) <sub>2</sub> ) 1302-67-6 ( 85-100 )	N/A	N/A	N/A	N/A	N/A
Aluminum oxide 1344-28-1 ( 5-15 )		TWA: 10 mg/m <sup>3</sup>			TWA: 10 mg/m <sup>3</sup>
Magnesium oxide 1309-48-4 ( 0-5 )		TWA: 10 mg/m <sup>3</sup>			TWA: 6 mg/m <sup>3</sup>

Component	OSHA PEL	ACGIH TWA
Spinel (Mg(AlO <sub>2</sub> ) <sub>2</sub> ) 1302-67-6 ( 85-100 )	N/A	1 mg/m <sup>3</sup> TWA (respirable fraction)

Aluminum oxide 1344-28-1 ( 5-15 )	15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable fraction)	1 mg/m <sup>3</sup> TWA (respirable fraction)
Magnesium oxide 1309-48-4 ( 0-5 )	15 mg/m <sup>3</sup> TWA (fume, total particulate)	10 mg/m <sup>3</sup> TWA (inhalable particulate matter)

**Derived No Effect Level (DNEL)** 3 mg/m<sup>3</sup>, respirable, 8 hour TWA

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

## 8.2. Exposure controls

### Personal protective equipment

**Eye Protection** Wear safety glasses with side shields (or goggles)

**Skin Protection** No special protective equipment required.

**Hand Protection** No special protective equipment required.

**Respiratory Protection** In case of insufficient ventilation, wear suitable respiratory equipment  
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

**Environmental exposure controls** Avoid dust formation

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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

<b>Physical State</b>	Powder, Granules, Balls
<b>Color</b>	Off-white
<b>Odor</b>	None
<b>pH</b>	
<b>Flash point (°C) DEGREES</b>	Not applicable
<b>Autoignition temp (°F) DEGREES</b>	Does not ignite
<b>Solubility</b>	Insoluble
<b>Density</b>	3.0-3.4 g/cm <sup>3</sup>
<b>Bulk Density</b>	0.7-2.7 g/cm <sup>3</sup>
<b>Explosives</b>	Not applicable

## 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

None under normal processing

### 10.2. Chemical Stability

Stable under normal conditions

### 10.3. Possibility of Hazardous Reactions

None under normal processing

### 10.4. Conditions to Avoid

None under normal processing

### 10.5. Incompatible materials

None under normal processing

### 10.6. Hazardous Decomposition Products

None under normal processing

## 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

**Acute Toxicity**

<b>Acute toxicity - Oral</b>	Conclusive but not sufficient for classification
<b>Acute toxicity - Dermal</b>	Conclusive but not sufficient for classification
<b>Acute toxicity - Inhalation (Dusts/Mists)</b>	Conclusive but not sufficient for classification

**Chronic Toxicity**

<b>Irritation</b>	Conclusive but not sufficient for classification
<b>Corrosivity</b>	Conclusive but not sufficient for classification
<b>Sensitization</b>	Conclusive but not sufficient for classification
<b>Mutagenic Effects</b>	Conclusive but not sufficient for classification
<b>Carcinogenic effects</b>	Conclusive but not sufficient for classification
<b>Reproductive Effects</b>	Conclusive but not sufficient for classification
<b>Developmental Effects</b>	Conclusive but not sufficient for classification
<b>Aspiration Hazard</b>	Conclusive but not sufficient for classification

## 12. ECOLOGICAL INFORMATION

**12.1. Toxicity****Ecotoxicity effects**

Not water endangering  
Aquatic toxicity is unlikely due to low solubility

**12.2. Persistence and degradability**

No information available

**12.3. Bioaccumulative potential.**

No information available

**12.4. Mobility in soil**

No information available

**12.5. Results of PBT and vPvB assessment**

No information available

**12.6. Other adverse effects**

## 13. DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods****Waste from Residues/Unused Products**

Disposal should be in accordance with applicable regional, national and local laws and regulations

**Contaminated Packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal

## 14. TRANSPORT INFORMATION

**Note:** Not classified as dangerous in the meaning of transport regulations

**IMDG/IMO** Not regulated.

**RID** Not regulated.

**ADR** Not regulated

**ICAO** Not regulated

**IATA** Not regulated

## 15. REGULATORY INFORMATION

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

<b>TSCA</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>DSL/NDSL</b>	Not listed
<b>PICCS</b>	Not listed
<b>ENCS</b>	Not listed
<b>IECSC</b>	Not listed
<b>AICS</b>	Complies
<b>KECL</b>	Complies

**Legend**

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

**15.2. Chemical Safety Assessment**

A Chemical Safety Assessment has been carried out

**16. OTHER INFORMATION****Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

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**Issuing Date** 29-Mar-2011  
**Revision Date** 07-Mar-2018

**Revision Note**  
Reason for revision Revision 12, March 2018  
Updated Prepared By

**Updates** The most current version of this Safety Data Sheet is available at this URL:  
<http://almatiswv.thewerco.com/private/search.aspx?language=EN>

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End of Safety Data Sheet