

## 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<br>Lyoner Str. 9<br>60528 Frankfurt<br>Germany<br>Phone: +49 69 9573410 | Almatis GmbH<br>Giulinistrasse 2<br>67065 Ludwigshafen<br>Germany<br>Phone: +49 621 57070 |
|--|---|

### For further information, please contact

**E-mail address** info@almatis.com  
www.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<br>01-2119529248-35-0125<br>01-2119529248-35-0086<br>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<br>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> )<br>1302-67-6 | N/A |   | N/A                       | N/A                          | N/A   |
| Aluminum oxide<br>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><br>6.0 mg/m <sup>3</sup> (a) |
| Magnesium oxide<br>1309-48-4                              |     | TWA: 10 mg/m <sup>3</sup><br>STEL: 10 mg/m <sup>3</sup><br>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> )<br>1302-67-6 ( 85-100 ) | N/A   | N/A                       | N/A         | N/A     | N/A                       |
| Aluminum oxide<br>1344-28-1 ( 5-15 )                                 |       | TWA: 10 mg/m <sup>3</sup> |             |         | TWA: 10 mg/m <sup>3</sup> |
| Magnesium oxide  |       | 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> )<br>1302-67-6 ( 85-100 ) | N/A  | 1 mg/m <sup>3</sup> TWA (respirable fraction)           |
| Aluminum oxide<br>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<br>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

|               |            |
|---------------|------------|
| TSCA          | Complies   |
| EINECS/ELINCS | Complies   |
| DSL/NDSL      | Not listed |
| PICCS         | Not listed |
| ENCS          | Not listed |
| IECSC         | Not listed |
| AICS          | Complies   |
| KECL          | 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/)

**Prepared By** Edwin van Hagen  
Almatis B.V.  
Theemsweg 30  
3197 KM Botlek Rt  
The Netherlands  
+31-181-270124  
[Edwin.vanhagen@almatis.com](mailto:Edwin.vanhagen@almatis.com)

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

**Revision Note**  
Reason for revision Revision 11, March 2018  
Updated Prepared By

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

#### 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**