

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	Almatis GmbH Giulinistrasse 2 67065 Ludwigshafen Germany
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For further information, please contact

info@almatis.com
www.almatis.com

1.4. Emergency telephone number

Almatis: +1 501-776-4677

CHEMTREC:

+1-703-527-3887 (INTERNATIONAL)
+1-800-424-9300 (NORTH AMERICA)

2. HAZARDS IDENTIFICATION

2.1. - Classification of the substance or mixture

REGULATION (EC) No 1272/2008

The product is not classified as dangerous according to Regulation (EC) No. 1272/2008

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

R-Phrases

Not applicable

GHS Classification

The product is not classified as hazardous according to GHS

2.2. Label Elements

Symbol(s)

None

Signal Word

None

Hazard Statements

None

Precautionary Statements

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P280 - Wear eye protection/ face protection

P285 - In case of inadequate ventilation wear respiratory protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

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 ₂) ₂)	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****Eye Contact**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Skin Contact

Wash skin with soap and water.

Ingestion

Rinse mouth

Inhalation

Remove to fresh air

General AdviceIf 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

Shovel or sweep up

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 ₂) ₂) 1302-67-6	N/A		N/A	N/A	N/A
Aluminum oxide 1344-28-1			VME: 10 mg/m ³	VLA-ED: 10 mg/m ³	1.25 mg/m ³ 6.0 mg/m ³ (a)
Magnesium oxide 1309-48-4		TWA: 10 mg/m ³ STEL: 10 mg/m ³ TWA: 4 mg/m ³	VME: 10 mg/m ³	VLA-ED: 10 mg/m ³	6 mg/m ³ 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 ₂) ₂) 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 ³			TWA: 10 mg/m ³
Magnesium oxide 1309-48-4 (0-5)		TWA: 10 mg/m ³			TWA: 6 mg/m ³

Component	OSHA PEL	ACGIH TWA
Aluminum oxide 1344-28-1 (5-15)	15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction)	1 mg/m ³ TWA (respirable fraction)
Magnesium oxide 1309-48-4 (0-5)	15 mg/m ³ TWA (fume, total particulate)	10 mg/m ³ TWA (inhalable fraction)

Derived No Effect Level (DNEL) 3 mg/m³, respirable, 8 hour TWA

Predicted No Effect Concentration (PNEC) No information available

8.2. Exposure controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas

Personal protective equipment

Eye Protection

Safety glasses with side-shields

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

Physical State	Powder, Granules, Balls
Color	Off-white
Odor	None
pH	6.00 - 9.50
Flash point (°C) DEGREES	Not applicable
Autoignition temp (°F) DEGREES	Does not ignite
Boiling point/range (°C) DEGREES	Not determined
Melting point (°C) DEGREES	2135 °C
Solubility	Insoluble
Density	3.0-3.4 g/cm ³
Bulk Density	0.7-2.7 g/cm ³
Explosives	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**

Acute oral toxicity	Conclusive but not sufficient for classification
Acute dermal toxicity	Conclusive but not sufficient for classification
Acute inhalation toxicity	Conclusive but not sufficient for classification

Chronic Toxicity

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

None known

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/

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Revision 5, April 2008
Section 1, changed contact address
Section 16, added email address and revision history
Revision 6, December 2009
Section 3, revised weight %
Revision 7, March 2011
Update to format
Revision 8, February 2014
Section 8, revised ACGIH TWA
Revision 9, August 2014
Section 8, revised GOEL
Revision 10, February 2015
Section 1, revised product name
Section 2, Added GHS statement (not hazardous)
Section 15, revised IECSC status

Updates

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

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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End of Safety Data Sheet