



# SAFETY DATA SHEET

**MATERION**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Trade name or designation of the mixture** Magnesium Oxide Titanuim Oxide Product  
**Synonyms** None.  
**Document number** 373  
**Issue date** 06-September-2017  
**Version number** 01

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

**Identified uses** Not available.  
**Uses advised against** None known.

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

#### Supplier

**Company name** Materion Advanced Materials Group  
**Address** 42 Mt. Ebo Road South  
Brewster, NY 10509  
United States  
**Division**  
**Telephone** Supplier Phone 1+845.279.0900  
**e-mail** Not available.  
**Contact person** Not available.

**1.4. Emergency telephone number** Chemtrec 1+703.527.3887

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008 as amended

**Hazard summary** Exposure to powder or dusts may be irritating to eyes, nose and throat.

### 2.2. Label elements

#### Label according to Regulation (EC) No. 1272/2008 as amended

**Contains:** Magnesium oxide, Titanium oxide (TiO)  
**Hazard pictograms** None.  
**Signal word** None.  
**Hazard statements** The Material as sold in solid form is generally not considered hazardous. However, if the process involves grinding, melting, cutting or any other process that causes a release of dust or fumes, hazardous levels of airborne particulate could be generated.

#### Precautionary statements

**Prevention** Not available.  
**Response** Not available.  
**Storage** Not available.  
**Disposal** Not available.

**Supplemental label information** None.

**2.3. Other hazards** None known.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

## General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Magnesium oxide	50 - 99	1309-48-4 215-171-9	-	-	
<b>Classification:</b>	-				
Titanium oxide (TiO)	1 - 49	12137-20-1 235-236-5	-	-	
<b>Classification:</b>	-				

## SECTION 4: First aid measures

**General information** Not available.

### 4.1. Description of first aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.  
**Skin contact** Not available.  
**Eye contact** Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.  
**Ingestion** Not available.

**4.2. Most important symptoms and effects, both acute and delayed** Dusts may irritate the respiratory tract, skin and eyes.

**4.3. Indication of any immediate medical attention and special treatment needed** Not available.

## SECTION 5: Firefighting measures

**General fire hazards** Not available.

### 5.1. Extinguishing media

**Suitable extinguishing media** Not available.  
**Unsuitable extinguishing media** Not available.

**5.2. Special hazards arising from the substance or mixture** Not available.

### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Not available.  
**Special firefighting procedures** Use water spray to cool unopened containers.

## SECTION 6: Accidental release measures

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

**For non-emergency personnel** Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.  
**For emergency responders** Not available.

**6.2. Environmental precautions** Avoid discharge into drains, water courses or onto the ground.

**6.3. Methods and material for containment and cleaning up** Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13 of the SDS.

**6.4. Reference to other sections** For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

## SECTION 7: Handling and storage

- 7.1. Precautions for safe handling** Minimise dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Practice good housekeeping.
- 7.2. Conditions for safe storage, including any incompatibilities** Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
- 7.3. Specific end use(s)** Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	MAK	5 mg/m <sup>3</sup>	Respirable fraction.
		5 mg/m <sup>3</sup>	Respirable fume.
	STEL	10 mg/m <sup>3</sup>	Inhalable fraction.
		20 mg/m <sup>3</sup>	Respirable fume.
		20 mg/m <sup>3</sup>	Inhalable fraction.
		10 mg/m <sup>3</sup>	Respirable fraction.

##### Belgium. Exposure Limit Values.

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m <sup>3</sup>	Fume.

##### Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m <sup>3</sup>

##### Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	MAC	4 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Total dust.

##### Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m <sup>3</sup>	Fume.

##### Czech Republic. OELs. Government Decree 361

Components	Type	Value
Magnesium oxide (CAS 1309-48-4)	Ceiling	10 mg/m <sup>3</sup>
	TWA	5 mg/m <sup>3</sup>

##### Denmark. Exposure Limit Values

Components	Type	Value
Magnesium oxide (CAS 1309-48-4)	TLV	6 mg/m <sup>3</sup>

##### Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	5 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Total dust.
		1 mg/m <sup>3</sup>	Dust.

**Finland. Workplace Exposure Limits Components**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m <sup>3</sup>	Dust.

**France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984 Components**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	VME	10 mg/m <sup>3</sup>	Fume.

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG) Components**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	4 mg/m <sup>3</sup>	Inhalable fraction.
		1,5 mg/m <sup>3</sup>	Respirable fraction.

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace Components**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	AGW	10 mg/m <sup>3</sup>	Inhalable fraction.
		1,25 mg/m <sup>3</sup>	Respirable fraction.

**Greece. OELs (Decree No. 90/1999, as amended) Components**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	5 mg/m <sup>3</sup>	Respirable.
		10 mg/m <sup>3</sup>	Inhalable

**Hungary. OELs. Joint Decree on Chemical Safety of Workplaces Components**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	STEL	24 mg/m <sup>3</sup>	Respirable.
	TWA	6 mg/m <sup>3</sup>	Respirable.

**Iceland. OELs. Regulation 154/1999 on occupational exposure limits Components**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	6 mg/m <sup>3</sup>	

**Ireland. Occupational Exposure Limits Components**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m <sup>3</sup>	Fume.
		5 mg/m <sup>3</sup>	Fume.
		4 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Total inhalable dust.

**Italy. Occupational Exposure Limits Components**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.

**Latvia. OELs. Occupational exposure limit values of chemical substances in work environment Components**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	2 mg/m <sup>3</sup>	Dust.
		2 mg/m <sup>3</sup>	

**Lithuania. OELs. Limit Values for Chemical Substances, General Requirements Components**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	4 mg/m <sup>3</sup>	

**Norway. Administrative Norms for Contaminants in the Workplace Components**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TLV	10 mg/m <sup>3</sup>	

**Poland. MACs. Regulation regarding maximum permissible concentrations and intensities of harmful factors in the work environment, Annex 1**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.
Titanium oxide (TiO) (CAS 12137-20-1)	STEL	30 mg/m <sup>3</sup>	
	TWA	10 mg/m <sup>3</sup>	

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m <sup>3</sup>	Inhalable fraction.

**Romania. OELs. Protection of workers from exposure to chemical agents at the workplace**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	STEL	15 mg/m <sup>3</sup>	Fume.
	TWA	5 mg/m <sup>3</sup>	Fume.

**Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	4 mg/m <sup>3</sup>	Respirable fraction.
		10 mg/m <sup>3</sup>	Inhalable fraction.

**Spain. Occupational Exposure Limits**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m <sup>3</sup>	Dust and fume.

**Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	5 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Inhalable dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	3 mg/m <sup>3</sup>	Respirable dust.
		3 mg/m <sup>3</sup>	Fume and respirable dust.

**UK. EH40 Workplace Exposure Limits (WELs)**

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	4 mg/m <sup>3</sup>	Respirable dust and/or fume.
		10 mg/m <sup>3</sup>	Inhalable dust.

**Biological limit values** No biological exposure limits noted for the ingredient(s).**Recommended monitoring procedures** Follow standard monitoring procedures.**Derived no effect levels (DNELs)** Not available.**Predicted no effect concentrations (PNECs)** Not available.**8.2. Exposure controls****Appropriate engineering controls** If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.**Individual protection measures, such as personal protective equipment****General information** Not available.**Eye/face protection** Wear safety glasses with side shields (or goggles).**Skin protection****- Hand protection** Not available.**- Other** Not available.

<b>Respiratory protection</b>	Wear respirator with dust filter.
<b>Thermal hazards</b>	Not available.
<b>Hygiene measures</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
<b>Environmental exposure controls</b>	Not available.

## SECTION 9: Physical and chemical properties

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

#### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Powder.
<b>Colour</b>	Not available.
<b>Odour</b>	Not available.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	2800 °C (5072 °F) estimated
<b>Initial boiling point and boiling range</b>	3600 °C (6512 °F) estimated
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Vapour pressure</b>	0,00001 hPa estimated
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.

### 9.2. Other information

<b>Density</b>	3,58 g/cm <sup>3</sup> estimated
<b>Specific gravity</b>	3,58 estimated

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	Not available.
<b>10.2. Chemical stability</b>	Not available.
<b>10.3. Possibility of hazardous reactions</b>	Not available.
<b>10.4. Conditions to avoid</b>	Contact with incompatible materials.
<b>10.5. Incompatible materials</b>	Phosphorus. Chlorine.
<b>10.6. Hazardous decomposition products</b>	Not available.

## SECTION 11: Toxicological information

<b>General information</b>	Not available.
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## Information on likely routes of exposure

<b>Inhalation</b>	Dust may irritate respiratory system.
<b>Skin contact</b>	Dust or powder may irritate the skin.
<b>Eye contact</b>	Dust may irritate the eyes.
<b>Ingestion</b>	Not available.

**Symptoms** Dusts may irritate the respiratory tract, skin and eyes.

### 11.1. Information on toxicological effects

<b>Acute toxicity</b>	No data available.
<b>Skin corrosion/irritation</b>	Not available.
<b>Serious eye damage/eye irritation</b>	Not available.
<b>Respiratory sensitisation</b>	Not available.
<b>Skin sensitisation</b>	Not available.
<b>Germ cell mutagenicity</b>	Not available.

### Carcinogenicity

**Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)**

Not listed.

<b>Reproductive toxicity</b>	Not available.
<b>Specific target organ toxicity - single exposure</b>	Not available.
<b>Specific target organ toxicity - repeated exposure</b>	Not available.
<b>Aspiration hazard</b>	Not available.
<b>Mixture versus substance information</b>	Not available.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	No toxicity data noted for the ingredient(s).
<b>12.2. Persistence and degradability</b>	Not available.
<b>12.3. Bioaccumulative potential</b>	Not available.
<b>Partition coefficient n-octanol/water (log Kow)</b>	Not available.
<b>Bioconcentration factor (BCF)</b>	Not available.
<b>12.4. Mobility in soil</b>	Not available.
<b>12.5. Results of PBT and vPvB assessment</b>	Not a PBT or vPvB substance or mixture.
<b>12.6. Other adverse effects</b>	Not available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Residual waste</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>EU waste code</b>	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Disposal methods/information</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Special precautions</b>	Dispose in accordance with all applicable regulations.

## SECTION 14: Transport information

### ADR

14.1. - 14.6.: Not regulated as dangerous goods.

### RID

14.1. - 14.6.: Not regulated as dangerous goods.

### ADN

14.1. - 14.6.: Not regulated as dangerous goods.

### IATA

14.1. - 14.6.: Not regulated as dangerous goods.

### IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

## SECTION 15: Regulatory information

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

#### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**

Not listed.

**Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

Not listed.

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

#### Authorisations

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

#### Restrictions on use

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

Not listed.

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.**

Not listed.

#### Other EU regulations

**Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended**

Not listed.

#### Other regulations

Additional information is given in the Safety Data Sheet.

#### National regulations

Follow national regulation for work with chemical agents.

#### 15.2. Chemical safety assessment

Not available.

## SECTION 16: Other information

#### List of abbreviations

Not available.

#### References

Not available.

#### Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculator methods and test data, if available.



**Disclaimer**

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