

Versamag™ Magnesium Hydroxide

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 4/15/2012

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Version: 3.3

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

1.1. Product identifier

Product form : Substance
Substance name : Versamag™ Magnesium Hydroxide
Chemical name : Magnesium hydroxide
EC-No. : 215-170-3
REACH registration No : 01-2119488756-18
Formula : Mg(OH)₂
Other means of identification : Magnesium dihydroxide, Magnesium hydroxide, Magnesium(II) hydroxide, milk of magnesia

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only
Use of the substance/mixture : For use in specialty or industrial applications.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier	Importer
Martin Marietta Magnesia Specialties	M.A.F. Magnesite & Guyon S.A.S.
1800 Eastlake Road	Nieuwe Uitleg 10
49660 Manistee, Michigan - USA	2514BP Den Haag
T +001 410 780 5500	The Netherlands
	Tel: +31 70 3105900
	Fax: + 31 70 3105901
	www.magnesiumoxide.com
	R.vanderVen@Magnesiumoxide.com

1.4. Emergency telephone number

Emergency number : CHEMTREC, U.S.: 1-800-424-9300 INTERNATIONAL: +1-703-527-3887 Available 24/7

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

Other hazards not contributing to the classification : No additional hazards have been identified.

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent
Name : Versamag™ Magnesium Hydroxide
EC-No. : 215-170-3

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Magnesium hydroxide	(CAS-No.) 1309-42-8 (EC-No.) 215-170-3	98.8	Not classified
Oxides of silicon, iron, aluminum, and calcium	(CAS-No.) mixture	1	Not classified

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3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	: Not expected to be an irritant. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting.

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

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use. Do not breathe dust.
Symptoms/effects after inhalation	: Inhalation may cause: irritation, coughing, shortness of breath.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: May cause eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No special procedures required.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Not combustible. If there is a fire close by, use suitable extinguishing agents. Water fog. Carbon dioxide. Dry powder. Foam.
Unsuitable extinguishing media	: None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: If magnesium hydroxide is heated to the point of decomposition (>350 °C), it forms magnesium oxide and water. If magnesium oxide is heated to the point of volatilization (i.e. >1700 °C), magnesium oxide fumes may be generated.
Explosion hazard	: Product is not explosive.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: No additional risk management measures required.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid creating or spreading dust.

6.1.1. For non-emergency personnel

Protective equipment	: Where excessive dust may result, use approved respiratory protection equipment.
Emergency procedures	: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Where excessive dust may result, use approved respiratory protection equipment.
Emergency procedures	: Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Contain and collect as any solid.
Methods for cleaning up	: Sweep up spilled material without making dust.

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6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide good ventilation in process area to prevent formation of dust.
 Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Incompatible products : ACID (Strong) - vigorous reaction, heat generated; MALEIC ANHYDRIDE – Alkali and other alkaline earth compounds including magnesium compounds, will cause explosive decomposition of maleic anhydride; PHOSPHORUS – Phosphorus boiled with alkaline hydroxides yields mixed phosphines which may ignite spontaneously with air.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Magnesium hydroxide (1309-42-8)		
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ inhalable dust
United Kingdom	Dust, inorganic (respirable dust): 4 mg/m ³	
United Kingdom	Regulatory reference	EH40
USA - ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ as Particulates (insoluble or poorly soluble) not otherwise specified 3 mg/m ³ (respirable fraction / fraction respirable)

Versamag™ Magnesium Hydroxide	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	16.67 mg/kg bodyweight/day
Acute - systemic effects, inhalation	117.54 mg/m ³
Long-term - systemic effects, dermal	16.67 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	117.54 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	10 mg/kg bodyweight
Acute - systemic effects, inhalation	34.78
Acute - systemic effects, oral	10 mg/kg bodyweight
Long-term - systemic effects, oral	10 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	34.78 mg/m ³
Long-term - systemic effects, dermal	10 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.1 mg/l
PNEC aqua (marine water)	0.01 mg/l
PNEC aqua (intermittent, freshwater)	1 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.08188 mg/kg dwt
PNEC sediment (marine water)	0.008188 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.01912 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	66.67 mg/kg

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation to minimize exposure to dust.

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Dust production: dust mask with filter type P2. Use an N95 respirator. EN 143

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Other information:

Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Colour	: White.
Odour	: Odourless.
Odour threshold	: No data available
pH	: No data available
pH solution	: ≥ 10
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 350 °C decomposes
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: Does not self-ignite
Decomposition temperature	: > 350 °C
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 2.36 g/cm ³ (theoretical density of Mg(OH) ₂)
Solubility	: Water: 6.9 mg/l
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
Oxidising properties	: No oxidizing properties.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with : Incompatible materials.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

ACID (Strong) - vigorous reaction, heat generated; MALEIC ANHYDRIDE – Alkali and other alkaline earth compounds including magnesium compounds, will cause explosive decomposition of maleic anhydride; PHOSPHORUS – Phosphorus boiled with alkaline hydroxides yields mixed phosphines which may ignite spontaneously with air.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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Magnesium hydroxide (1309-42-8)	
LD50 oral rat	> 2000 mg/kg OECD Guideline 423
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 2.1 mg/l/4h OECD Guideline 403. No mortality seen at this level.
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: None under normal conditions.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

Magnesium hydroxide (1309-42-8)	
LC50 fish 1	1293 mg/l <i>Onchorinchus mykiss</i>
LC50 fish 2	511.31 mg/l <i>P. promelas</i>
EC50 Daphnia 1	284.76 mg/l
ErC50 (algae)	> 100 mg/l

12.2. Persistence and degradability

Versamag™ Magnesium Hydroxide	
Persistence and degradability	Not established.
Magnesium hydroxide (1309-42-8)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	Does not degrade although it does dissolve.

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Additional information : Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.
European List of Waste (LoW) code	: For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable

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UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Versamag™ Magnesium Hydroxide is not on the REACH Candidate List

Versamag™ Magnesium Hydroxide is not on the REACH Annex XIV List

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15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

Section	Change	Comments
	Modified	phrases in Sections 4, 6, 7, 13
1.1	Added	Only Representative
8.2	Modified	Protective equipment
10.4	Modified	Conditions to avoid
15	Modified	Regulatory information
3.1	Modified	Analysis

Abbreviations and acronyms:

ACGIH (American Conference of Government Industrial Hygienists)
ATE: Acute Toxicity Estimate
CAS (Chemical Abstracts Service) number
EC50: Environmental Concentration associated with a response by 50% of the test population.
GHS: Globally Harmonized System (of Classification and Labeling of Chemicals)
LD50: Lethal Dose for 50% of the test population
OSHA: Occupational Safety & Health Administration
TSCA: Toxic Substances Control Act
TWA: Time Weighted Average

Data sources : ESIS (European chemical Substances Information System; accessed at: <http://esis.irc.ec.europa.eu/index.php?PGM=cla>.
ACGIH 2000.
European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
European Chemicals Agency (ECHA) Registered Substances list. Accessed at <http://echa.europa.eu/>.
Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition.
NIOSH Occupational Health Guide for chemical Substances - Vol. II, September, 1978.
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
US National Library of Medicine National Institutes of Health Haz-Map. Accessed at <http://hazmap.nlm.nih.gov>

Other information : None.

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SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product