

Premier ECOMAG Magnesium Hydroxide Suspension**Revision Date:** September 2013
Former Date: October 2011**Revision Number:** 3
Date printed: 30 October 2013**1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING****1.1 Product identifier**

Substance name	Magnesium Hydroxide
Synonyms	Magnesia Magma; Magnesium Hydrate, Milk of Magnesia
Chemical name and formula	Magnesium Hydroxide (Mg(OH) ₂)
Trade name	Premier ECOMAG Magnesium Hydroxide Suspension
CAS	1309-42-8
EINECS	215-170-3
Other Identification Codes	RTECS: OM3570000
Molecular weight	58.33 g/mol
REACH – Registration Number	01-2119488756-18-0016

1.2 Relevant identified uses of the substance and uses advised against

Identified Uses	<p><i>General function:</i> Neutralisation, pH adjustment and metal removal from acidic wastewater streams</p> <p><i>Industrial Use:</i> Polymer processing, Production substance, Production of plastics and rubber compounds, Formulation flame retardant preparation, Compounds used in transport industry, Compounds used in electrical application, Compounds used in building and construction, Use in coatings, inks, paints and roofing, Recycling plastics, De-acidification agent for paper, pH regulator, Production of corrosion inhibitors, use as corrosion inhibitor of gas turbines and boilers, Production of Magnesium compounds, Manufacture and formulation of pharmaceutical preparations, Abrasive for glass industry, ceramics and stones, PVC stabilizer, Use in cleaning agents, Use in oil field operations, Use in lubricants, Use in metal working fluids, Use in blowing agents, Use in binders and release agents, Fuel, Use in functional fluids, Use in agrochemicals, Use in water treatment chemicals, Use in mining chemicals</p> <p><i>Professional Use:</i> Polymer processing, Use in coatings, inks, paints and roofing, Use in agrochemicals, Use in cleaning agents, Use in oil field operations, Use in lubricants, Use in metal working fluids, Use in binders and release agents, Use in propellants, Fuel, Use in functional fluids, De-icing & anti-icing applications, Road and</p>
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Prepared in accordance with Annex II of the REACH Regulation EG 1907/2006, Regulation (EG) 1272/2008 and Regulation (EU) 453/2010

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construction applications, Use in explosives, Use in water treatment chemicals

Consumer Use: Use in coatings, inks, paints and roofing, Use in cleaning agents, Use in lubricants, Use in propellants, Fuel, Use in functional fluids, De-icing & anti-icing applications, Cosmetic additive, Use in water treatment chemicals

Uses Advised Against None known

1.3 Details of the supplier of the safety data sheet

Name Premier Periclase Ltd.
Address Boyne Road, Drogheda
Co. Louth, Ireland
Phone no: **+353 41 9870700**
Fax no: **+353 41 9870706**
E-mail of competent person responsible for SDS **ppl.info@rhi-ag.com**

1.4 Emergency telephone number

Emergency telephone number +353 41 987-0700 (normal working hours)

National Anti-Poison Centre National Poison Information Centre,
Beaumont Hospital, Beaumont Road,
Dublin 9, Ireland

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance

This material is not classified as dangerous or hazardous according to Council Directives **67/548/EEC** and **1272/2008/EC**. If product dries to dust it may be slightly irritating to the nose and eyes.

2.2 Label elements

2.2.1 Labelling according to Regulation (EC) 1272/2008

None required

2.2.2 Labelling according to Directive 67/548/EEC

None required

2.3 Other hazards

The substance does not meet the criteria for PBT or vPvB substance.
No other hazards identified.

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Component Name	Chemical Formula	Typical Weight (%)	EINECS Number	CAS Number
Magnesium Hydroxide	Mg(OH) ₂	35-45%	215-170-3	1309-42-8

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

If medical advice is required, bring this SDS with you.

Inhalation

This material in suspension form is not an inhalation risk. If the product dries to dust it may be considered a nuisance particulate; consequently no significant toxic effects are expected when exposures are kept under reasonable control. Adhere to established airborne exposure limits.

Skin Contact

The material is not absorbed through the skin, therefore it is not significantly hazardous upon skin contact. It is capable of causing minor skin irritation at most. If irritation occurs, wash gently and thoroughly with water and non-abrasive soap. If irritation persists, seek medical advice.

Eye Contact

Other than possible mechanical irritation, no adverse effects are expected. If irritation occurs, rinse eyes with lukewarm, gently flowing water until the particles have been removed. If the irritation persists, obtain medical advice.

Ingestion

The material is low in single dose oral toxicity. If ingestion occurs, rinse mouth with water and also drink some water. Deliberate ingestion of large quantities can result in abdominal cramps, diarrhoea or bowel obstruction. If this occurs, seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

May cause irritation of the eyes, nose and throat.

4.3 Indication of any immediate medical attention and special treatment needed

Follow advice given in section 4.1

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As for surrounding fire, CO₂, powder or water spray. The material is non-flammable and is not an explosion hazard.

5.1.2 Unsuitable Extinguishing Media

None known

5.2 Special hazards arising from the substance of mixture

None known

5.3 Advice for fire fighters

Avoid generation of dust. Use breathing apparatus. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

No special personal precautions required. Keep dust levels to a minimum

6.2 Environmental Precautions

The product has low toxicity and presents no unusual danger to the environment under most circumstances. Where possible, do not allow into waterways or onto bare soil.

6.3 Methods and materials for containment and cleaning up

For small spillages use a standard industrial vacuum cleaner. Small spillages can be washed away with water subject to local waste water disposal regulations.

Sweep or collect spilled material in a manner to avoid dust generation and put into appropriate containers. Reclaim product for reuse or dispose in an appropriate manner. For disposal of larger spillages see Section 13. Wash contaminated clothing to avoid possible irritation.

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Handle in accordance with good industrial hygiene and safe practice. Do not eat, drink or smoke when handling or using this material. Clean work area regularly to prevent a build-up of dust

7.2 Conditions for safe storage, including any incompatibilities

Keep storage vessels properly maintained and avoid leaks.

7.3 Specific Uses

As described in Section 1.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**8.1 Control parameters**

The material is sold as a suspension and the table below relates to dried Magnesium Hydroxide.

Substance	Long term (8 hour) limit (mg/m ³)	Short term (15 mins) limit (mg/m ³)	Status
Low toxicity dust/aerosol			
Respirable Dust	4	Not assigned	UK WEL (EH40/2011)
Inhalable Dust	10	Not assigned	UK WEL (EH40/2011)

8.2 Exposure controls

The material is classified as non-hazardous.

8.2.1 Appropriate engineering controls

Keep storage vessels and transport containment properly maintained and avoid leaks.

Ensure adequate ventilation. Where possible, avoid formation of aerosol.

8.2.2 Individual protection measures, such as personal protective equipment**8.2.2.1 Eye/face protection**

No specific requirement but it is recommended to wear safety goggles or glasses with side protection.

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No specific requirement, but it is good practice to minimise contact with skin by wearing clean body cover clothing and shoes. It is good practice to wear appropriate gloves when handling material.

8.2.2.3 Respiratory protection

Not required for normal operations when product is handled as an aqueous suspension.

8.2.2.4 Thermal hazards

The substance does not represent a thermal hazard, thus special consideration is not required.

8.2.3 Environmental exposure controls

Avoid releasing to the environment. In the event of accidental release into surface or groundwater systems or the public sewerage system, appropriate control measures should be put in place. If necessary, the relevant local authority or competent body should be consulted before control measures are set up. Disposal should comply with local disposal and waste regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Form	Suspension of Magnesium Hydroxide in water
Colour	Off-white to light brown or grey
Odour	Slight marine odour
pH Value	10.5 – 11.0 (Method: 10% in water)
Boiling Point	100 deg. C (water component)
Melting Point	Not applicable
Flash Point	Not applicable
Flammability	Product not flammable
Explosive Properties	Product not explosive
Oxidising Properties	Product is not an oxidising agent
Bulk Density	1.4 kg/litre approx.
Vapour Pressure	15.5mm Hg @ 18 deg. C (water component)
Vapour Density	Not applicable
Solubility	Water: 0.8×10^{-2} g/litre Fat: Not applicable
Viscosity, dynamic	<1000 cPs

9.2 Other information

Thermal decomposition: The Magnesium Hydroxide solid ($Mg(OH)_2$) begins to decompose at approximately 350 deg.C to Magnesium Oxide (MgO) and water (H_2O). No hazardous decomposition products are formed.

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Magnesium Hydroxide reacts with strong acids, generating heat

10.2 Chemical stability

Product is stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

Magnesium Hydroxide reacts with strong acids, generating heat.

10.4 Conditions to avoidSolid decomposes at approximately 350 °C to MgO & H₂O.**10.5 Incompatible materials**

Magnesium Hydroxide reacts with acids.

10.6 Hazardous decomposition products

No known hazardous decomposition products exist.

11. TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****a. Acute toxicity**

Magnesium Hydroxide is not classified in Annex I of Directive 67/548/EEC or in Council Regulation 1272/2008/EC and is not listed in a priority list (as foreseen under Council Regulation (EEC) No. 793/93 on the evaluation and control of the risks of existing substances).

LD ₅₀ oral	Rat Oral LD50: >2000 mg/kg
LC ₅₀ inhalation	LC50/inhalation/4h/rat: >2.1 mg/L
Oral Route	Repeated dose (28 days) toxicity (oral) (rat): NOAEL (No Observed Adverse Effect level): >1000 mg/kg bw/day

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b. Skin corrosion/irritation

Skin contact: *in vitro*: not irritating

c. Serious eye damage/irritation

Rabbit: not sufficient for classification

d. Respiratory or skin sensitisation

Skin sensitization: not expected to be a sensitizer

e. Germ cell mutagenicity

In vitro mutagenicity test: not genotoxic in bacteria and mammalian cell systems. Chromosome aberration test in vitro: negative

f. Carcinogenicity

Substance not classified as carcinogenic under ACGIH, NIOSH, IARC, NTP or OSHA. Information given is based on data obtained from similar substances (MgCl₂): did not show carcinogenic effects in animal experiments (mice)

g. Reproductive toxicity

Magnesium oxide is not known to adversely affect fertility or the unborn child. NOAEL (No Observed Adverse Effect Level) for developmental effects: 1000 mg/kg bw/day

h. Specific target organ toxicity -single exposure**i. Specific target organ toxicity repeated exposure****j. Aspiration hazard**

Magnesium Hydroxide is not known to present an aspiration hazard.

12. ECOLOGICAL INFORMATION**12.1 Toxicity****12.1.1 Acute/Prolonged toxicity to fish**

LC50/96h/fish: 776 mg/L

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12.1.2 Acute/Prolonged toxicity to aquatic invertebrates

LC50/96h/daphnia: 170.86 mg/L

12.1.3 Acute/Prolonged toxicity to aquatic plants

EC50/72h/algae: >100 mg/L

12.1.4 Toxicity to micro-organisms e.g. bacteria

No data, believed to be of low toxicity.

12.1.5 Chronic toxicity to aquatic organisms

No data, believed to be of low toxicity.

12.1.6 Toxicity to soil dwelling organisms

No data, believed to be of low toxicity.

12.1.7 Toxicity to terrestrial plants

No data, believed to be of low toxicity.

12.1.8 General effect

Magnesium Hydroxide is made from naturally occurring substances that are low in toxicity. It should present no unusual hazards to the environment. Accidental spillage may be dangerous if the substance comes in contact with incompatible materials such as those outlined in Section 10.

12.1.9 Further information

None available

12.2 Persistence and degradability

Inorganic substance. Not readily biodegradable.

12.3 Bioaccumulative potential

The substance is not considered to be a bioaccumulative risk.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Not classified as PBT or vPvB substance.

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12.6 Other adverse effects

None known.

13. DISPOSAL CONSIDERATIONS

Dispose of the substance in accordance with local, regional, national or international regulations at an approved disposal site. Do not dispose into water systems. Disposal to authorised landfill may be acceptable.

Waste code according to EWC/AVV: 060316 (European Waste Code)

14. TRANSPORT CONSIDERATIONS

No restrictions. Magnesium Hydroxide is not classified as hazardous for conveyance or supply under EU or UN regulations.

14.1 UN Number

Not listed

14.2 UN proper shipping name

Not regulated

14.3 Transport hazard class

None

14.4 Packing group

None

14.5 Environmental hazards

None

14.6 Special precautions for user

Avoid any release of during transportation by using sealed containers

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG (sea)	Not applicable
ADR (goods by road)	Not applicable
RID (goods by rail)	Not applicable
ICAO / IATA (air)	Not applicable

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This SDS is issued in accordance with the Safety, Health and Welfare at Work Regulations (Chemical Agents) Regulations 2001, SI 619 of 2001.

The material is not classified as hazardous according to Council Directives 67/548/EEC and 1272/2008/EC.

Other relevant legislation: 1999/45/EC, 2001/58/EC, 2006/58/EC (30ATP) and 2006/8/EC

No authorisations are required for use and there are no restrictions on use.

Magnesium Hydroxide is not a SEVESO substance, not an ozone depleting substance and not a persistent organic pollutant.

Hazard symbol

None

15.2 Chemical Safety Assessment

As this Magnesium Hydroxide is not classified, no exposure scenarios and no e-SDS have been developed. This safety data sheet does not constitute the user's own assessment of workplace risk. A full risk assessment, as required by the regulations listed in this section, should be carried out before working with this substance.

16. OTHER INFORMATION**16.1 Hazard Statements**

None

16.2 Precautionary Statements

None – recommended that substance is handled in accordance with good industrial hygiene and safety practice

16.3 Risk Phrases

None

16.4 Safety Phrases

None – recommended that substance is handled in accordance with good industrial hygiene and safety practice

It is recommended that users ensure that the information contained in the safety data sheet (SDS) is brought to the attention of their employees and others handling this product. Distributors of the product are advised to forward this SDS to their customers.

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The information contained in this safety data sheet is believed to be reliable. No guarantee is implied or expressed regarding the accuracy of the information or the use of the product since conditions of use are beyond our control.

16.5 Abbreviations

EC₅₀: median effective concentration
LC₅₀: median lethal concentration
LD₅₀: median lethal dose
NOEC: no observable effect concentration
OEL: occupational exposure limit
PBT: persistent, bioaccumulative, toxic chemical
PNEC: predicted no-effect concentration
STEL: short-term exposure limit
TWA: time weighted average
vPvB: very persistent, very bioaccumulative chemical

16.6 References

16.7 Revision

Version: 3
Date of Issue: September 2013
Date of Previous Issue: November 2011

Changes made in version 3: SDS reformatted, fax number, telephone number, e-mail contact added.

Disclaimer

This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation (EC 1907/2006; article 31 and Annex II), as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship. This version of the SDS supersedes all previous versions.

End of the Safety Data Sheet