

# Lightburn MagChem Magnesium Oxide

## Safety Data Sheet

according to GHS

Date of issue: 18/04/2014

Version: 1.0

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

#### 1.1. Product identifier

Product form : Substance  
Trade name : MagChem 30  
MagChem 35  
MagChem 40  
MagChem 50  
Chemical name : magnesium oxide  
EC no : 215-171-9  
CAS No : 1309-48-4  
Formula : MgO  
Product group : Trade product  
Other means of identification : calcined brucite magnesia, calcined magnesia, calcined magnesite, magnesite burnt deadburned refractory, periclase, sea-water magnesia, oxomagnesia

#### 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 : Lightburn magnesia products (MagChem 30, 35, 40, 50) have a combination of moderate reactivity and fine particle size. Lightburn magnesia products find applications in the preparation of magnesium salts, motor oil detergents such as overbased magnesium sulfonates, fuel oil additives, rubber compounds, air scrubbing and oil well additives.

##### 1.2.2. Uses advised against

No additional information available

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

Martin Marietta Magnesia Specialties  
1800 Eastlake Road  
Manistee, Michigan 49660, USA  
Tel: +001 410 780 5500

#### 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 GHS

Not classified

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labelling according to GHS

No labelling applicable

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Substance type : Mono-constituent  
Name : Lightburn MagChem Magnesium Oxide  
CAS No : 1309-48-4  
EC no : 215-171-9

Name	Product identifier	%	Classification according to GHS
Magnesium oxide	(CAS No) 1309-48-4 (EC no) 215-171-9	98	Not classified
Oxides of silicon, iron, aluminum, and calcium	(CAS No) mixture	2	Not classified

#### 3.2. Mixture

Not applicable

# Lightburn MagChem Magnesium Oxide

## Safety Data Sheet

according to GHS

### 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 breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : 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 persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use. Do not breathe dust.
- Symptoms/injuries after inhalation : Inhalation may cause: irritation, coughing, shortness of breath.
- Symptoms/injuries after skin contact : Effects of skin contact may include: skin irritation.
- Symptoms/injuries after eye contact : May cause eye irritation.
- Symptoms/injuries after ingestion : Ingestion generally causes purging of the bowels. Swallowing large amounts may cause bowel obstruction.

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

No additional medical information found. If you feel unwell, seek medical advice.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Not combustible. If there is a fire nearby, 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 heated to decomposition, 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 : Ventilate area. If a major spill occurs, all personnel should be immediately evacuated and the area ventilated.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

- For containment : Do not allow minor leaks or spills to accumulate on walking surfaces. Contain and collect as any solid.
- Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

# Lightburn MagChem Magnesium Oxide

## Safety Data Sheet

according to GHS

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of dust.
- Hygiene measures : Smoking, eating and drinking should be prohibited in areas of storage and use. Always wash your hands immediately after handling this product, and once again before leaving the workplace.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Incompatible materials. Keep container closed when not in use.
- Incompatible materials : ACID (Strong) - vigorous reaction, heat generated; Chlorine Trifluoride reacts violently, producing flame; Phosphorous Pentachloride - incandesces brilliantly. NOTE: Exposure to water may cause this product to slowly hydrate, during which heat may be generated (exothermic reaction).

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Magnesium oxide (1309-48-4)		
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (inhalable dust) 4 mg/m <sup>3</sup> (fume and respirable dust)
USA - ACGIH	Local name	Magnesium oxide
USA - ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA - ACGIH	Remark (ACGIH)	(inhalable fraction)
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>

#### 8.2. Exposure controls

- Appropriate engineering controls : Avoid dispersal of dust in the air (ie, clearing dust surfaces with compressed air). Provide local exhaust ventilation of closed transfer systems to minimize exposures.
- Hand protection : Wear protective gloves. Dust impervious gloves.
- Eye protection : Chemical goggles or safety glasses
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.;Use air-purifying respirator equipped with particulate filtering cartridges.
- Other information : Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

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

- Physical state : Solid
- Appearance : Powder.
- Molecular mass : 40.3 g/mol
- Colour : white.
- Odour : odourless.
- Odour threshold : No data available
- pH : No data available
- pH solution : 10.3 saturated aqueous solution
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : 2827 (2797 - 2857) °C
- Freezing point : No data available
- Boiling point : 3600 °C
- Flash point : Product does not sustain combustion
- Auto-ignition temperature : No data available
- Decomposition temperature : > 1700 °C
- Flammability (solid, gas) : Non flammable
- Vapour pressure : No data available
- Vapour pressure at 50 °C : 0 hPa
- Relative vapour density at 20 °C : 0
- Relative density : No data available
- Density : 3.58 g/cm<sup>3</sup>

# Lightburn MagChem Magnesium Oxide

## Safety Data Sheet

according to GHS

Solubility	: In water, material is partially soluble.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
Oxidising properties	: No data available
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

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified (Based on available data, the classification criteria are not met)

#### Magnesium oxide (1309-48-4)

LD50 oral rat	3990 mg/kg
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Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

Specific target organ toxicity (single exposure) : Not classified (Based on available data, the classification criteria are not met)

Specific target organ toxicity (repeated exposure) : Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

#### Magnesium oxide (1309-48-4)

Persistence and degradability	Not established.
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### 12.3. Bioaccumulative potential

#### Magnesium oxide (1309-48-4)

Bioaccumulative potential	Not established.
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### 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

# Lightburn MagChem Magnesium Oxide

## Safety Data Sheet

according to GHS

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Waste treatment methods : Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Dispose in a safe manner in accordance with local/national regulations.
- Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
- Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

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

#### 14.1. UN number

Not considered a dangerous good for transport regulations

#### 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

##### 14.6.1. Overland transport

##### 14.6.2. Transport by sea

##### 14.6.3. Air transport

##### 14.6.4. Inland waterway transport

Not subject to ADN : No

##### 14.6.5. Rail transport

Carriage prohibited (RID) : No

#### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 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
- Lightburn MagChem Magnesium Oxide is not on the REACH Candidate List
- Contains no substance on the REACH candidate list

# Lightburn MagChem Magnesium Oxide

## Safety Data Sheet

according to GHS

Lightburn MagChem Magnesium Oxide is not on the REACH Annex XIV List

Contains no REACH Annex XIV substances

### 15.1.2. National regulations

Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on KECI (Korean Existing Chemicals Inventory)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on the Canadian DSL (Domestic Substances List) inventory.  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on the United States TSCA (Toxic Substances Control Act) inventory

### Germany

Water hazard class (WGK) : 1 - low hazard to waters

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

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 Weight Average

Indication of changes : Original Document.

Data sources : ACGIH 2000.  
Chemical Inspection & Regulation Service; accessed at: [http://www.cirs-reach.com/Inventory/Global\\_Chemical\\_Inventories.html](http://www.cirs-reach.com/Inventory/Global_Chemical_Inventories.html).  
Ind. Exposure & Control Techn. for OSHA Regulated Substances - MgO (fume), March, 1989, pp. 1181-1184.  
Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth 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.  
RTECS, June 1998.  
Sax - 8th Ed. TSCA Chemical Substance Inventory. Accessed at <http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>.  
US National Library of Medicine National Institutes of Health Haz-Map. Accessed at <http://hazmap.nlm.nih.gov>

Other information : None.

SDS EU (REACH Annex II)

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*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*