

# Safety Data Sheet

## MAGNESIUM NITRATE

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830



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

#### 1.1. Product identifier

Product form	: Substance
Trade name	: MAGNESIUM NITRATE
Chemical name	: MAGNESIUM NITRATE HEXAHYDRATE
IUPAC name	: MAGNESIUM DINITRATE HEXAHYDRATE
EC no	: 233-826-7
CAS No	: 13446-18-9
REACH registration No	: 01-2119491164-38
Type of product	: Fertilizer
Formula	: $Mg(NO_3)_2 \cdot 6H_2O$
Synonyms	: MAGNISAL 11-0-0-16 / HAIFA-MAG 10,5-0-0-15,5
Product group	: EC FERTILIZER

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

##### 1.2.1. Relevant identified uses

Main use category	: Industrial use, Professional use
Use of the substance/mixture	: Fertilizer
Function or use category	: Fertilisers

##### 1.2.2. Uses advised against

No additional information available

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

Haifa Chemicals North West Europe BVBA  
Generaal de Wittelaan 17, bus 16, B-2800 Mechelen, Belgium  
Mechelen - Belgium  
T +32-15-270811 - F +32-15-270815  
[NorthWestEurope@haifa-group.com](mailto:NorthWestEurope@haifa-group.com) - [www.haifa-group.com](http://www.haifa-group.com)

#### 1.4. Emergency telephone number

No additional information available

### 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

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Substance type	: Mono-constituent
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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
MAGNESIUM NITRATE	(CAS No) 13446-18-9 (EC no) 233-826-7 (REACH-no) 01-2119491164-38	> 98	Not classified

Full text of H-statements: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
- First-aid measures after skin contact : Wash with plenty of soap and water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Immediately rinse with water for a prolonged period while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth out with water. If the person is fully conscious, make him/her drink plenty of water. Never give an unconscious person anything to drink. Do not induce vomiting without medical advice. Consult a doctor/medical service if you feel unwell.

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

- Symptoms/injuries after inhalation : None under normal use.
- Symptoms/injuries after skin contact : Contact during a long period may cause light irritation.
- Symptoms/injuries after eye contact : Direct contact with the eyes is likely to be irritating. Redness of the eye tissue. Lacrimation.
- Symptoms/injuries after ingestion : Nausea. Abdominal pain. Methemoglobinemia. Dizziness. Feeling of weakness. Respiratory difficulties.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray.
- Unsuitable extinguishing media : None to our knowledge. If there is a fire close by, use suitable extinguishing agents.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not combustible.
- Explosion hazard : No direct explosion hazard.
- Hazardous decomposition products in case of fire : Ammonia. Nitrogen oxides.

### 5.3. Advice for firefighters

- Precautionary measures fire : Keep upwind. Evacuate area.
- Firefighting instructions : Prevent fire fighting water from entering the environment. Dilute toxic gases with water spray.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Special protective equipment for fire-fighters. Complete protective clothing. Self-contained breathing apparatus. EN 469.

## SECTION 6: Accidental release measures

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

- General measures : Provide adequate ventilation. Avoid dust formation. Avoid breathing dust, mist or spray. Avoid contact with skin, eyes and clothing. No flames, no sparks. Eliminate all sources of ignition.

#### 6.1.1. For non-emergency personnel

- Protective equipment : For further information refer to section 8: "Exposure controls/personal protection". Wear personal protective equipment.

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- Emergency procedures : Mark the danger area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Keep upwind. Keep containers closed. Wash contaminated clothes.
- Measures in case of dust release : Ventilate spillage area. Avoid breathing dust, mist or spray.

### 6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection". Section. 6.1.1. For non-emergency personnel.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Stop leak without risks if possible.

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

- For containment : Collect all waste in suitable and labelled containers and dispose according to local legislation. Minimize generation of dust.
- Methods for cleaning up : Wash away remainder with plenty of water. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Ensure good ventilation of the work station. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Avoid dust formation. Do not discharge the waste into the drain.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

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

- Storage conditions : Store in original container.
- Incompatible materials : Do not use with copper/aluminium/zinc - risk of corrosion. Keep away from iron.
- Storage temperature : 0 - 30 °C
- Heat and ignition sources : Keep away from heat and direct sunlight.
- Information on mixed storage : Keep away from reducing agents/(strong) acids /(strong) bases. Combustible products. Organic materials. Metals.
- Storage area : Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.
- Special rules on packaging : Meet the legal requirements.
- Packaging materials : Suitable packing materials. Polyethylene. Polypropylene.

### 7.3. Specific end use(s)

Fertilizers.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

MAGNESIUM NITRATE (13446-18-9)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	20.8 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	147 mg/m <sup>3</sup>
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	12.5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	43.5 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	12.5 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.45 mg/l
PNEC aqua (marine water)	0.045 mg/l
PNEC aqua (intermittent, freshwater)	4.5 mg/l
PNEC (STP)	
PNEC sewage treatment plant	18 mg/l

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### 8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.
- Personal protective equipment : Dust production: dust mask with filter type P1. Dustproof clothing.
- Hand protection : In case of repeated or prolonged contact wear gloves

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Chemically resistant protective gloves					EN 374

- Eye protection : In case of dust production: protective goggles
- Skin and body protection : Wear suitable protective clothing
- Respiratory protection : In case of inadequate ventilation wear respiratory protection. Dust production: dust mask with filter type P1

Device	Filter type	Condition	Standard
Dust formation: dust mask	Type P2	Dust production: dust mask with filter type P2	



- Environmental exposure controls : Assure that emissions are compliant with all applicable air pollution control regulations.

## SECTION 9: Physical and chemical properties

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

- Physical state : Solid
- Molecular mass : 256.41 g/mol
- Colour : white to slightly yellow.
- Odour : odourless.
- Odour threshold : No data available
- pH : 7
- pH solution : 5 %
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : > 129 °C ANHYDROUS FORM
- Freezing point : No data available
- Boiling point : No data available
- Flash point : Not applicable
- Auto-ignition temperature : No data available
- Decomposition temperature : 330 °C
- Flammability (solid, gas) : No data available
- Vapour pressure : < 0.00001 Pa
- Vapour pressure at 50 °C : No data available
- Relative vapour density at 20 °C : No data available
- Relative density : No data available
- Density : 1.46 kg/l @25°C
- Solubility : Soluble in water. Soluble in ethanol.  
Water: 40 g/100ml
- Log Pow : -0.61 (estimated value)
- Viscosity, kinematic : No data available
- Viscosity, dynamic : No data available
- Explosive properties : Product is not explosive.

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Oxidising properties : Not applicable.  
Explosive limits : No data available

### 9.2. Other information

VOC content : Not applicable

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

None under recommended storage and handling conditions (see section 7).

### 10.4. Conditions to avoid

Heat. Combustible products.

### 10.5. Incompatible materials

Organic materials. Strong bases. Strong acids. Oxidizing agents and reducing agents. Combustible materials. May be corrosive to metals.

### 10.6. Hazardous decomposition products

On heating or during combustion : Nitrous fumes. Magnesium oxide fumes.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

MAGNESIUM NITRATE (13446-18-9)	
LD50 oral rat	> 2000 ml/kg
LD50 dermal rat	> 5000 ml/kg POTASSIUM NITRATE
Skin corrosion/irritation	: Not classified pH: 7
Serious eye damage/irritation	: Not classified pH: 7
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

MAGNESIUM NITRATE (13446-18-9)	
LC50 fish 1	1378 mg/l (OECD 203, POTASSIUM NITRATE)
EC50 Daphnia 1	490 mg/l POTASSIUM NITRATE
ErC50 (algae)	> 1700 mg/l POTASSIUM NITRATE
NOEC (acute)	180 mg/l (OECD 209, SODIUM NITRATE)

### 12.2. Persistence and degradability

MAGNESIUM NITRATE (13446-18-9)	
Persistence and degradability	easily degradable in the soil.

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### 12.3. Bioaccumulative potential

MAGNESIUM NITRATE (13446-18-9)	
Log Pow	-0.61 (estimated value)
Bioaccumulative potential	Bioaccumulation unlikely.

### 12.4. Mobility in soil

MAGNESIUM NITRATE (13446-18-9)	
Ecology - soil	Soluble in water.

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Other adverse effects : None known.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

- Regional legislation (waste) : Disposal must be done according to official regulations.
- Waste treatment methods : Recycle or dispose of in compliance with current legislation.
- Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Discharging into rivers and drains is forbidden. Avoid release to the environment.
- European List of Waste (LoW) code : 06 03 14 - solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13

## 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
- 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

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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

Not applicable

#### - Transport by sea

Not applicable

#### - Air transport

Not applicable

#### - Inland waterway transport

Not applicable

#### - Rail transport

Not applicable

### 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

MAGNESIUM NITRATE is not on the REACH Candidate List

MAGNESIUM NITRATE is not on the REACH Annex XIV List

VOC content : Not applicable

Other information, restriction and prohibition regulations : Subject to Regulation (EU) No 98/2013 of the European Parliament and of the Council of 15 January 2013 on the marketing and use of explosives precursors. (ANNEX II: Substances on their own or in mixtures or in substances for which suspicious transactions shall be reported.).

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Indication of changes:

	Supersedes	Added	
	Revision date	Modified	
1	Synonyms	Added	
1.2	Main use category	Removed	

Revision date:17/07/2017

Version:1.1

HAIFA NORTH WEST EUROPE

Version: 1.1

EN (English)

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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*