

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

#### 1.1. Product identifier

Product form	: Substance
Trade name	: Maganit Flakes
Chemical name	: Mg(NO <sub>3</sub> ) <sub>2</sub> ·6H <sub>2</sub> O
IUPAC name	: Magnesium dinitrate hexahydrate
EC-No.	: 233-826-7
CAS-No.	: 13446-18-9
REACH registration No	: 01-2119491164-38
Type of product	: Fertilisers
Synonyms	: Maganit
Product group	: Raw material

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

##### 1.2.1. Relevant identified uses

Main use category	: Professional use
Industrial/Professional use spec	: Fertilisers
Use of the substance/mixture	: Agriculture, forestry, fishery
Function or use category	: Fertilisers

##### 1.2.2. Uses advised against

Restrictions on use	: None known
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#### 1.3. Details of the supplier of the safety data sheet

Anorel NV N.V.  
 Lintsesteenweg 632  
 2540 Hove – Belgium  
 T +3234880233  
[anorel@anorel.net](mailto:anorel@anorel.net) - [www.anorel.net](http://www.anorel.net)

#### 1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Israel	Israel Poison Information Center Rambam Health Care Campus	6 Ha'Aliya Street 31096	+972 4 854 1900	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD 2090	+356 2545 6508	
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Not classified

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According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)

### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

### 2.2. Label elements

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

No labelling applicable

### 2.3. Other hazards

PBT: not relevant – no registration required

vPvB: not relevant – no registration required

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
Magnesium Nitrate Hexahydrate	CAS-No.: 13446-18-9 EC-No.: 233-826-7 REACH-no: 01-2119491164-38	> 90

### 3.2. Mixtures

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.  
First-aid measures after skin contact : Wash skin with plenty of water.  
First-aid measures after eye contact : Rinse eyes with water as a precaution.  
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation : May cause respiratory irritation.  
Symptoms/effects after skin contact : May cause moderate irritation.  
Symptoms/effects after ingestion : None known.  
Symptoms/effects upon intravenous administration : Not expected to be a primary route of exposure.  
Chronic symptoms : None known.

### 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. Dry powder. Foam.  
Unsuitable extinguishing media : None known.

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

Fire hazard : No fire hazard.

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Explosion hazard	: No direct explosion hazard.
Reactivity in case of fire	: Stable in use and storage conditions as recommended in item 7.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

### 5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to heat: have neighbourhood close doors and windows.
Firefighting instructions	: Dilute toxic gases with water spray.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: On exposure to high temperature, may decompose, releasing toxic gases. Collect leaking and spilled liquid in sealable containers as far as possible.

## SECTION 6: Accidental release measures

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

General measures	: Do not eat, drink or smoke in areas where product is used. Avoid all eye and skin contact and do not breathe vapour and mist. Eliminate every possible source of ignition. Use appropriate ventilation.
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#### 6.1.1. For non-emergency personnel

Protective equipment	: Protective clothing.
Emergency procedures	: Ventilate spillage area.

#### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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### 6.2. Environmental precautions

Avoid release to the environment.

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

For containment	: Contain leaking substance, pump over in suitable containers.
Methods for cleaning up	: Mechanically recover the product.
Other information	: Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Wear personal protective equipment. Keep only in the original container in a cool well ventilated place away from acids. Protect material from direct sunlight.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Storage conditions	: Store in original container. Store in a well-ventilated place. Keep cool.
Incompatible products	: Iron.
Storage temperature	: 0 – 30 °C
Heat and ignition sources	: Keep away from ignition sources.
Information on mixed storage	: Strong acids, strong bases and oxidation agents.
Storage area	: Store at ambient temperature. Store in a well-ventilated place.
Special rules on packaging	: watertight. Store in a closed container. correctly labelled. meet the legal requirements.
Packaging materials	: Polyethylene. polypropylene.

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### 7.3. Specific end use(s)

Fertilizer.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

No additional information available

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

Maganit (13446-18-9)	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	20,8 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	36,7 mg/m <sup>3</sup>
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	0,45 mg/l
PNEC aqua (marine water)	0,045 mg/l
PNEC aqua (intermittent, freshwater)	4,5 mg/l
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	18 mg/l

#### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

##### Appropriate engineering controls:

Ensure good ventilation of the work station.

#### 8.2.2. Personal protection equipment

##### Personal protective equipment:

EN 374. Safety glasses.

##### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Safety glasses

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing

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### Hand protection:

Protective gloves

### 8.2.2.3. Respiratory protection

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Local exhaust and general ventilation must be adequate to meet exposure standards. Avoid release to the environment.

#### Consumer exposure controls:

Do not eat, drink or smoke in areas where product is used.

#### Other information:

Use good personal hygiene practices.

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Colour	: White.
Appearance	: Flakes
Odour	: odourless.
Odour threshold	: Not available
Melting point	: 95 °C at 1013hPa
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive properties	: Not explosive.
Oxidising properties	: ANHYDROUS FORM. May intensify fire; oxidiser.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: 7 5% solution
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Water: 225 g/100ml
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: -0,61
Vapour pressure	: < 0,00001 Pa
Vapour pressure at 50 °C	: Not available
Density	: 1,46 g/cm <sup>3</sup>
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable
Particle size	: Not available

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

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

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

#### Maganit (13446-18-9)

LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 5000 mg/kg

Skin corrosion/irritation : Not classified  
pH: 7 5% solution  
Serious eye damage/irritation : Not classified  
pH: 7 5% solution  
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

#### Maganit (13446-18-9)

NOAEL (oral, rat, 90 days)	> 1500 mg/kg bodyweight/day
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Aspiration hazard : Not classified

#### Maganit (13446-18-9)

Viscosity, kinematic	Not applicable
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#### 11.2. Information on other hazards

No additional information available

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## Safety Data Sheet

According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)

### SECTION 12: Ecological information

#### 12.1. Toxicity

- Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
- Ecology - water : there is no direct test for magnesium nitrate, the data were based on studies of similar substances.
- Hazardous to the aquatic environment, short-term (acute) : Not classified
- Hazardous to the aquatic environment, long-term (chronic) : Not classified

Maganit (13446-18-9)	
LC50 - Fish [1]	1378 mg/l
EC50 - Crustacea [1]	490 mg/l
EC50 72h - Algae [1]	1700 mg/l
ErC50 algae	> 1700 mg/l 10 d
NOEC (acute)	> 180 mg/l

#### 12.2. Persistence and degradability

Maganit (13446-18-9)	
Persistence and degradability	degradable in water in anaerobic conditions.

#### 12.3. Bioaccumulative potential

Maganit (13446-18-9)	
Partition coefficient n-octanol/water (Log Pow)	-0,61
Bioaccumulative potential	Low bioaccumulation potential.

#### 12.4. Mobility in soil

Maganit (13446-18-9)	
Ecology - soil	soluble in water.

#### 12.5. Results of PBT and vPvB assessment

Maganit (13446-18-9)	
PBT: not relevant – no registration required	
vPvB: not relevant – no registration required	

#### 12.6. Endocrine disrupting properties

No additional information available

#### 12.7. Other adverse effects

- Other adverse effects : No other effects known.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- Additional information : Non-hazardous waste.

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## Safety Data Sheet

According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)

### SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
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. Maritime transport in bulk according to IMO instruments

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

###### REACH Annex XVII (Restriction List)

No REACH Annex XVII restrictions

###### REACH Annex XIV (Authorisation List)

Maganit is not on the REACH Annex XIV List

###### REACH Candidate List (SVHC)

Maganit is not on the REACH Candidate List

###### PIC Regulation (Prior Informed Consent)

Maganit is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

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## Safety Data Sheet

According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)

### POP Regulation (Persistent Organic Pollutants)

Maganit is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

### Ozone Regulation (1005/2009)

Magnesium Nitrate Hexahydrate is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

### Explosives Precursors Regulation (2019/1148)

Contains substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

#### ANNEX II REPORTABLE EXPLOSIVES PRECURSORS

List of substances on their own or in mixtures or in substances for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

Name	CAS-No.	Combined Nomenclature code (CN)	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Magnesium nitrate hexahydrate	13446-18-9	ex 2834 29 80	ex 3824 99 96

Please see [https://ec.europa.eu/home-affairs/system/files/2021-11/list\\_of\\_competent\\_authorities\\_and\\_national\\_contact\\_points\\_en.pdf](https://ec.europa.eu/home-affairs/system/files/2021-11/list_of_competent_authorities_and_national_contact_points_en.pdf)

### Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

#### 15.1.2. National regulations

##### Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 363).  
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed  
SZW-lijst van mutagene stoffen : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

##### Switzerland

Storage class (LK) : NG - Non-hazardous

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Supersedes	Added	
	Revision date	Modified	
4.1	First-aid measures after eye contact	Modified	
5.1	Suitable extinguishing media	Modified	
7.1	Precautions for safe handling	Modified	
7.2	Storage conditions	Modified	
8.2	Environmental exposure controls	Modified	

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## Safety Data Sheet

According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Safety Data Sheet (SDS), EU

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.