

# SAFETY DATA SHEET



according to EC Directive 2001/58/EC

Date of issue: 07-08-2007

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**Trade name: WUXAL<sup>®</sup> Magnesium**  
**Product-No.: 22322**

## 1 Identification of the preparation and Company

Preparation: Fertilizer with Magnesium and micronutrients  
Description: Aqueous suspension of nutrient salts  
Use: Fertilizer, micronutrient preparation for plant nutrition  
Manufacturer/Supplier: AGLUKON Spezialdünger GmbH & Co. KG Telephone: +49 (0)211 5064-0  
Address: Heerdter Landstraße 199 Telefax: +49 (0)211 5064-247  
40549 Düsseldorf, Germany  
Informing department: see chapter 16

**Emergency telephone (D/Berlin): Telephone No.: +49 (0)30 19240 (Day and Night)**

## 2 Composition/Information on Ingredients

### Harmful components

Marking	EC-No.	CAS-No.	Content %	Danger symbol	R-phrases
Manganese(II) sulphate monohydrate	232-089-9	10034-96-5	1 – 5	Xn: Harmful N: Dangerous for the environment	48/20/22 -51/53
Zinc sulphate-monohydrate	231-793-3	7446-20-0	1 – 5	Xi: Irritant N: Dangerous for the environment	22-41-50/53

Additional information: Full text of R-Phrases: see under section 16.

## 3 Hazards Identification

Hazard(s) characteristic(s): None  
Hazard(s) statement(s): Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
Further adverse human health effect(s) and symptom(s): Unknown.

## 4

### First-Aid Measures

General hints: Remove soiled clothes.  
after inhalation: Take out to the fresh air, rest quiet and warm. Medical assistance is necessary in case of difficulty in breathing.  
of vapours/aerosols:  
after skin contact: Immediately wash affected skin regions thoroughly with soap and plenty of water. Summon doctor if necessary.  
after eyes contact: Thoroughly rinse eyes with lids wide apart under running water (protect the uninjured eye, remove contact lenses). Summon eye specialist.  
after ingestion: Immediately rinse the mouth with water, then drink a lot of water. Consult the doctor in case of persistent trouble.

## 5 Fire-Fighting Measures

Suitable extinguishing media: Water, carbon dioxide, dry extinguishing media, foam.  
Unsuitable extinguishing media: Unknown  
Special risks: The material itself is harmless and hardly inflammable. Ambient fire may liberate hazardous vapours. If larger quantities of the product are on fire, the formation of sulphur oxide gases is possible.  
Special equipment to protect firefighters: Do not stay in dangerous zone without suitable protecting clothes and self-contained breathing apparatus.  
Other information: Contain escaping vapours with water.  
Prevent fire-fighting water from entering surface water or groundwater.

## 6 Accidental Release Measures

Personal precautions: Wear suitable protecting clothes. Avoid product contact and formation of vapours/aerosols. Do not inhale vapours/aerosols. In event of vapours/aerosols wear respiratory protection, safety glasses and gloves.  
Environmental precautions: Ensure that the product does not reach the ground-water, water bodies or the drainage system.  
Methods for cleaning up/taking up: Take up with absorption media. Disposal of contaminated material as waste according to section 13.

## 7 Handling and Storage

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## Handling

Advice as to safe handling: Wear suitable protecting clothes. Avoid product contact and formation of vapours/aerosols. Do not inhale vapours/aerosols. In event of vapours/aerosols wear respiratory protection, safety glasses and gloves.  
Remove soiled and soaked clothes and wash hands and face after work (see section 8).

Advice to prevent fire and explosion: No further requirements.

## Storage

Stockrooms and containers required: Protect the product from impurity and drying up. Keep containers densely closed. Do not store in metal containers (corrosion risk). It is recommended to design stockrooms so that the product is well-protected from weather factors, solar radiation, heat up, dry up and impurities. Keep containers densely closed and store in a cool dry place. Ensure high standard of housekeeping in the storage area. Do not store in metal containers (corrosion risk). Temperature in stockrooms not below +5 °C and above +40 °C.

Storage together with other materials: Do not store together with food and luxury food, beverage and animal feed.

## 8 Exposure Controls / Personal Protection

### Specific control parameter

According to the German national regulations, the preparation contains constituents with occupational exposure limits resp. biological occupational exposure limits requiring monitoring.

### Biological occupational exposure limits (TRGS 903 – BAT)

#### **Manganese and its anorganic compounds**

Parameter:	Manganese	Value:	20 µg/l
Test material:	Blood	Sampling, time:	C, b

### Exposure limits (TRGS 900 – MAK)

#### **Manganese and its anorganic compounds**

Values:	0,5 mg/m <sup>3</sup> inhalable fraction.	The limiting value as metal content.
Peak limitation:	4	Exceeding factor 4-times in 15 min.
Pregnancy risk:	Y	Y: a risk of reproductive effects needs not to be feared if the occupational exposure limit value (AGW) and the biological limit value (BGW) is kept.

Respiratory protection: required when vapours/aerosols are generated.  
Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances.

Hand protection:

In full contact:	Glove material:	nitrile rubber
	Layer thickness:	0.11 mm
	Breakthrough time:	> 480 Min.
In splash contact:	Glove material:	nitrile rubber
	Layer thickness:	0.11 mm
	Breakthrough time:	> 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 741 Dermatrix L (full or splash contact). The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

Eye protection: Safety goggles with side protection.  
Skin and body protection: Skin-protective barrier cream and closed working clothes  
Industrial hygiene: Immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working with substance.  
Do not eat and drink at work.

## 9 Physical and Chemical Properties

### Appearance

Form/physical state:	Aqueous crystal suspension
Colour:	Green
Odour:	Product-specific

### Data relevant to safety

pH (original state):	Approx. 5	
pH at 16 g/l H <sub>2</sub> O and 20°C:	Approx. 8	
Change in physical state:	> 100° C evaporation of water	
Boiling point/-range:	Not determined	°C
Melting point/-range:	Not determined	°C
Flash point:	Not applicable	°C
Inflammability:	Not determined	

Method:

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Ignition temperature:	Not determined	°C
Self-ignition:	The product is not spontaneously inflammable.	
Fire-promotive properties:	The product is not fire-promotive.	
Explosion hazard:	The product has no explosion hazardous properties.	
Vapor pressure (at °C):	Not determined	hPa
Density (at 20°C):	approx. 1,5	g/cm <sup>3</sup>
Solubility in water (at 20°C):	To a very high degree.	mg/l

## 10 Stability and Reactivity

Conditions to avoid: Direct solar radiation, heat up and dry up.  
Temperatures above +40°C.

Materials to avoid: Strong alkaline materials, strong acid materials, strong oxidizer.

Hazardous decomposition products: Unknown.

Thermic decomposition products: Water.  
If larger quantities of the product are on fire, the formation of sulphur oxide gases possible.

Further information: No decomposition if correctly used.  
The product is stable under normal conditions.

## 11 Toxicological Information

### Toxicological tests

Acute toxicity Toxicological data are not available.  
Toxicological effects are unknown.  
Property that must be anticipated on the basis with comparable preparations:  
LD50 (oral, rat): >10.000 mg/kg  
The following applies to manganese sulphate: LD50 (oral, rat): >2150 mg/kg

### Further toxicological information

After inhalation of vapours/aerosol and wet fog: Irritations of the mucous membranes, nausea.

After skin contact: Irritations.

After eye contact: Irritations.

After swallowing: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Nausea, pain, vomiting, diarrhoea. Disturbed electrolyte balance.

After uptake of large quantities: Drop in blood pressure.

Other notes: Manganese compounds are generally only very slightly absorbable via the gastrointestinal tract.

### Further data

Further hazardous properties cannot be excluded.  
The product should be handled with the care usual when dealing with chemicals.  
No toxicological effects are to be expected when the product is handled and used with due care and attention.

## 12 Ecological Information

### Ecotoxic effects

Quantitative data on the ecological effect of this product are not available.

Biological effects: Harmful for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

### Further ecologic data

The following applies to manganese ions in general: Interference threshold for turbellarian worms (*Polycelis nigra*) 660 mg/l.  
EC0 (microregma) 31 mg/l.

#### Fish toxicity:

LC50 (orfe) 2490 mg/l;  
LC50 (trout) 2.91 mg/l (28 days).  
Daphnia toxicity: LC50 (*daphnia magna*) 50 mg/l.

#### Acute toxicity:

*Pseudomonas putida* 10.6 mg/l;  
*Photobacterium phosphoreum* 14.7 mg/l.  
Biological effects: fish: toxic as from 7 g/l ;  
bacteria: toxic as from 2,5 g/l .

The following applies to sulfate in general:

Water pollution class: WGK 1 – slightly water polluting preparation (own classification)  
Do not allow to enter waters, waste water, sewerage, or soil!

## 13 Disposal Considerations

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## Product

Recommendation: Disposal of product rests in accordance with the official local disposal regulations.  
According to european waste regulations:  
Waste Code (EWC-No.): 061002  
Waste Name: Wastes from the manufacture, formulation, supply and use of nitrogen chemicals, nitrogen chemical processes and fertilizer manufacture.  
Wastes containing dangerous substances

## Contaminated packaging

Recommendation: Disposal of contaminated packages in accordance with the local official disposal regulations.  
Cleaners: Water

## 14 **Transport Information** No hazardous good

### Surface transport

### River transport

### Sea navigation transport

### Air transport

### Further information

The transport regulations are cited according to international regulations and in the form applicable in Germany (GGVS/GGVE). Possible national deviations in other countries are not considered.

## 15 **Regulatory Information**

### EC Directives

Directive 67/548/EEC

Danger symbol and designation: None

contains R-phrases: 52/53

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

contains S-phrases 61

Avoid release to the environment. Refer to special instructions/Safety data sheets.

Directive 96/82/EC and Directive 2003/105/EC (Seveso II)

None

### National regulations Germany

Particular labelling of certain preparations:

None

Employment limitations:

None

Interference regulations - BImSchV

None

Classification according to VbF:

None

Technical Regulations Air:

None

Technical Regulations

TRGS 900 – Exposure limits in the air at working place, „Air Limit Values“

Hazardous Materials:

TRGS 903 – Biological working place tolerance values, –BAT-Werte–

Storage class according to VCI-concept:

12 Liquid product with no fire risk.

Water pollution class:

WGK 1 - Slightly water polluting preparation (own classification)

Further regulations, limitations and prohibition regulations:

None

Data sheet of the Chemical

M053

Safety provisions for dealing with hazardous substances.

Professional Association:

## 16 **Other information**

### Relevant R-Phrases (Number and full text)

For section 2: 48/20/22

Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

51/53

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

22

Harmful if swallowed

41

Risk of serious damage to eyes

50/53

Very Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Further information

Contact persons:

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*The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.*