



# Material Safety Data Sheet

According to EC Directive 2001/58/EC

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## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

### Identification of the substance or preparation

**MSDS Ref. No.:** 2181.03.01  
**Product name:** Agrolution 13+5+28+2CaO+2MgO  
**Synonyms:** Agrolution 13+2.2+23.2+1.4Ca+1.2Mg

### Use of the Substance/Preparation

**Recommended use:** Water soluble fertilizer.

### Company/Undertaking Identification

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6422 PD Heerlen (NL)  
Tel: ++31 (0) 45-5609100  
Fax: ++31 (0) 45-5609190  
• +44 (0)208 762 8322

**Emergency telephone number:**

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

### Chemical nature of the preparation

Components	CAS-No	Weight %	EC-No.	Classification
Zinc sulphate mono hydrate, ZnSO <sub>4</sub> +1H <sub>2</sub> O	7446-19-7	< 1%	B0463	N;R50/53 Xi;R36/38
Sodium molybdate, Na <sub>2</sub> MoO <sub>4</sub> +2H <sub>2</sub> O	7631-95-0	< 1%	231-298-2	NE
Copper sulphate, CuSO <sub>4</sub>	7758-98-7	< 1%	B0453	N;R50/53 Xi;R36/38 Xn;R22
Manganese sulphate, MnSO <sub>4</sub>	7785-87-7	< 1%	232-08-99	N;R51/53 Xn;R48/20/22
Ureaphosphate	4861-19-2	10 - 25%	RM1400	C;R34
Calcium nitrate, Ca(NO <sub>3</sub> ) <sub>2</sub>	13477-34-4	5 - 10%	233-332-1	O;R08 Xi;R36
Magnesium nitrate hexahydrate, Mg(NO <sub>3</sub> ) <sub>2</sub> +6H <sub>2</sub> O	13446-18-9	10 - 25%	233-826-7	O;R08
Potassium nitrate, KNO <sub>3</sub>	7757-79-1	> 25%	231-818-8	O;R08

NE = Non-Established

**For the full text of the R phrases mentioned in this Section, see Section 16**

### 3. HAZARDS IDENTIFICATION

**Classification**

O - Oxidizing  
Xi - Irritant

**Most important hazards**

Contact with combustible material may cause fire.  
Risk of serious damage to eyes.

### 4. FIRST AID MEASURES

- General advice:** If you feel unwell, seek medical advice (show the label where possible).
- Ingestion:** Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. In case of respiratory difficulties practice oxygenotherapy. Possible symptoms are nausea and/or vomiting.
- Inhalation:** In case of shortness of breath, give oxygen. Possible symptoms are coughing and/or dyspnoea. Move to fresh air. If symptoms persist, call a physician.
- Skin contact:** If a person feels unwell or symptoms of skin irritation appear, consult a physician.
- Eye contact:** Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.

### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media:**

Coordinate fire extinguishing measures to fire in surrounding area.

**Unsuitable extinguishing media:**

Not applicable

**Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:**

Danger of toxic gases in smoke in case of fire.

**Special protective equipment for firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**Specific methods:**

Dike and collect water used to fight fire.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:**

Ensure adequate ventilation. Avoid dust formation. Use personal protective equipment. Wear personal protective equipment.

**Environmental precautions:**

Prevent product from entering drains. Do not contaminate surface water.

**Methods for cleaning up:**

Shovel or sweep up. Do not create a powder cloud by using a brush or compressed air.

**7. HANDLING AND STORAGE****Handling:****Technical measures/precautions:**

No special technical protective measures required.

**Safe handling advice:**

Keep away from open flames, hot surfaces and sources of ignition.

**Storage:****Technical measures/storage conditions:**

Keep away from heat and sources of ignition. Keep away from food, drink and animal feeding stuffs. For quality reasons: Keep out of reach of direct sunlight, store under dry conditions, partly used bags should be closed well. Keep at temperatures between 0 °C and 40 °C .

**Incompatible products:**Keep away from:  
Flammable materials**Specific use(s):**

Water soluble fertilizer.

**Packaging material:****VCI (Germany)**Plastic bags  
5.1B**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Engineering measures to reduce exposure:**

Ensure adequate ventilation.

**Occupational exposure controls****Personal protective equipment****Respiratory protection:**

Not applicable.

**Hand protection:**

PVC or other plastic material gloves.

**Eye/face protection:**

Safety glasses.

**Skin and body protection:**

Usual safety precautions while handling the product will provide adequate protection against this potential effect.

**Hygiene measures**

Follow good housekeeping practices. When using, do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs.

**Exposure limit values****Environmental exposure controls**

Do not flush into surface water or sanitary sewer system.

*Sodium molybdate, Na<sub>2</sub>MoO<sub>4</sub>·2H<sub>2</sub>O*

Belgium - 8 Hr VLE

Czech Republic OEL

Finland - Occupational Exposure Limits - 8 hour

5 mg/m<sup>3</sup> TWA= 5 mg/m<sup>3</sup> TWA6 mg/m<sup>3</sup>

France - Valeurs Limites d'exposition (VLE)	5 mg/m <sup>3</sup>
France INRS (VME)	5 mg/m <sup>3</sup> VME
Netherlands - OEL - MACs:	5 mg/m <sup>3</sup> MAC
Norway - 8 h:	5 mg/m <sup>3</sup> TWA
Portugal - TWAs	0.5 mg/m <sup>3</sup> TWA
Spain - Valores Limite Ambientales - VLE	5 mg/m <sup>3</sup> VLA-ED
Sweden - OEL - 8 Hour	10 mg/m <sup>3</sup> LLV 5 mg/m <sup>3</sup> LLV

*Copper sulphate, CuSO<sub>4</sub>*

Finland - Occupational Exposure Limits - 8 hour	1 mg/m <sup>3</sup> TWA
Germany (DFG) - MAK	0.1 mg/m <sup>3</sup> MAK
Sweden - OEL - 8 Hour	0.2 mg/m <sup>3</sup> LLV 1 mg/m <sup>3</sup> LLV

*Manganese sulphate, MnSO<sub>4</sub>*

Belgium - 8 Hr VLE	0.2 mg/m <sup>3</sup>
Czech Republic OEL	= 1 mg/m <sup>3</sup> TWA
Finland - Occupational Exposure Limits - 8 hour	0.5 mg/m <sup>3</sup>
Germany TRGS900:	0.5 mg/m <sup>3</sup> TWA
Germany (DFG) - MAK	0.5 mg/m <sup>3</sup> MAK
Netherlands - OEL - MACs:	1 mg/m <sup>3</sup>
Norway - 8 h:	2.5 mg/m <sup>3</sup>
Portugal - TWAs	0.2 mg/m <sup>3</sup> TWA
Spain - Valores Limite Ambientales - VLE	0.2 mg/m <sup>3</sup> VLA-ED
Sweden - OEL - 8 Hour	0.1 mg/m <sup>3</sup> LLV 0.2 mg/m <sup>3</sup> LLV
UK EH40 WEL:	5 mg/m <sup>3</sup>

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**General Information**

<b>Physical State:</b>	Solid
<b>Appearance:</b>	Prills, flakes and powder
<b>Color:</b>	Off-white
<b>Odor:</b>	Not significant

**Important Health Safety and Environmental Information**

<b>Decomposition temperature:</b>	> 150°C
<b>Bulk density:</b>	800 - 1100 kg/m <sup>3</sup>
<b>Solubility:</b>	Moderately soluble
<b>Flammability (solid, gas):</b>	Non-flammable

**Other information**

<b>pH:</b>	2 - 3 (1 % solution in water.)
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## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under recommended storage conditions.
<b>Conditions to avoid:</b>	Keep away from open flames, hot surfaces and sources of ignition.

<b>Materials to avoid:</b>	Combustible material.
<b>Hazardous decomposition products:</b>	No decomposition if stored normally Thermal decomposition can lead to release of irritating gases and vapours

## 11. TOXICOLOGICAL INFORMATION

### Component information

*Zinc sulphate mono hydrate, ZnSO<sub>4</sub>+1H<sub>2</sub>O*

**LD50/oral/rat =** 2949 mg/kg

*Sodium molybdate, Na<sub>2</sub>MoO<sub>4</sub>+2H<sub>2</sub>O*

**LD50/oral/rat =** 4000 mg/kg

*Copper sulphate, CuSO<sub>4</sub>*

**LD50/oral/rat =** 960 mg/kg

*Manganese sulphate, MnSO<sub>4</sub>*

**LD50/oral/rat =** 9 g/kg

*Ureaphosphate*

**LD50/oral/rat =** 5840 mg/kg

*Potassium nitrate, KNO<sub>3</sub>*

**LD50/oral/rat =** 3750mg/kg

**Other information on acute toxicity:** No information available

### Product information

#### Local effects

<b>Skin effects:</b>	May cause skin irritation in susceptible persons.
<b>Eye effects:</b>	Contact with eyes may cause irritation.
<b>Inhalation:</b>	May cause sensitization by inhalation.
<b>Ingestion:</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea .

## 12. ECOLOGICAL INFORMATION

### Product information

**Water Endangering Class (WGK):** 1 (Scotts classification )

### Component information

*Zinc sulphate mono hydrate, ZnSO4+1H2O***Ecotoxicity effects**

EC50/48h/daphnia =1.7 mg/l

*Sodium molybdate, Na2MoO4+2H2O***Ecotoxicity effects**

LC50/96h/rainbow trout =&gt; 2800 g/l

*Copper sulphate, CuSO4***Ecotoxicity effects**

EC50/48h/daphnia =0.8 mg/l

*Manganese sulphate, MnSO4***Ecotoxicity effects**

EC50/48h/daphnia =&gt; 100 mg/l

*Calcium nitrate, Ca(NO3)2***Ecotoxicity effects**

LC50/96h/rainbow trout =2400 mg/l

<b>13. DISPOSAL CONSIDERATIONS</b>
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**Waste Disposal Methods:** Use up product completely. Packaging material is industrial waste**Contaminated packaging:** Empty containers can be landfilled, when in compliance with the local regulations

<b>14. TRANSPORT INFORMATION</b>
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**Product information****Physical State:** Solid**ADR/RID**

**UN-No:** 1479  
**Proper shipping name:** Oxidizing solid, N.O.S..  
**Hazard Class:** 5.1  
**Packing group:** PG II  
**Description:** Ammoniumnitrate, Potassiumnitrate

**IATA****UN-No:** N.A.**IMO / IMDG**

**UN-No:** 1479  
**Proper shipping name:** Oxidizing solid, N.O.S..  
**Hazard Class:** 5.1  
**Packing group:** PG II  
**Description:** Ammoniumnitrate, Potassiumnitrate



## 15. REGULATORY INFORMATION

### Indication of danger:

O - Oxidizing.

Xi - Irritant.



### R -phrase(s)

R 8 - Contact with combustible material may cause fire.

R41 - Risk of serious damage to eyes.

### S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S39 - Wear eye/face protection.

ICPE (FR): Classified installation : article 1331

## 16. OTHER INFORMATION

### Text of R Phrases mentioned in Section 2

R 8 - Contact with combustible material may cause fire.

R22 - Harmful if swallowed.

R34 - Causes burns.

R36/38 - Irritating to eyes and skin.

R36/37/38 - Irritating to eyes, respiratory system and skin.

R48/20/22 - Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Reason for revision:

\*\*\* Indicates changes since the last revision. This version replaces all previous versions

### Prepared by:

Regulatory Affairs Department.

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**End of Safety Data Sheet**