



# 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.:** 8740.02.01  
**Product name:** Osmocote Pro 18+10+11+2MgO  
**Synonyms:** Osmocote Pro 18+4.4+9.1+1.2Mg+TE

### Use of the Substance/Preparation

**Recommended use:** Granulated fertilizer.

### Company/Undertaking Identification

• Scotts International BV  
Nijverheidsweg 1-5  
6422 PD Heerlen (NL)  
Tel: ++31 (0) 45-5609100  
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• +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
Ammoniumnitrate, NH <sub>4</sub> NO <sub>3</sub>	6484-52-2	> 25%	229-347-8	O;R08
Calcium sulphate dihydrate, CaSO <sub>4</sub> +2H <sub>2</sub> O	10101-41-4	< 1%	231-900-3	NE
Copper sulphate, CuSO <sub>4</sub>	7758-98-7	< 1%	231-847-6	N;R50/53 Xi;R36/38 Xn;R22
Ironsulphate, FeSO <sub>4</sub> +1H <sub>2</sub> O	7720-78-7	< 1%	231-753-5	Xn;R22
Magnesiumoxide, MgO	1309-48-4	< 1%	215-171-9	NE
Manganese sulphate, MnSO <sub>4</sub>	7785-87-7	< 1%	232-08-99	N;R51/53 Xn;R48/20/22
Potassium nitrate, KNO <sub>3</sub>	7757-79-1	10 - 25%	231-818-8	O;R08
Sodium molybdate, Na <sub>2</sub> MoO <sub>4</sub> +2H <sub>2</sub> O	7631-95-0	< 1%	231-298-2	NE

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

### 3. HAZARDS IDENTIFICATION

**Classification**

The product is non-dangerous in accordance with Directive 1999/45/EC

**Most important hazards**

None

### 4. FIRST AID MEASURES

<b>General advice:</b>	Possible symptoms are coughing and/or dyspnoea. If symptoms persist, call a physician.
<b>Ingestion:</b>	If conscious, drink plenty of water. Do not induce vomiting. Rinse mouth. Consult a physician if necessary.
<b>Inhalation:</b>	Dusty conditions are unlikely if product is used as intended. However, if prolonged inhalation of dust occurs, remove victim to fresh air. If symptoms persist, call a physician.
<b>Skin contact:</b>	If a person feels unwell or symptoms of skin irritation appear, consult a physician. Rinse with plenty of water.
<b>Eye contact:</b>	Flush eyes with water as a precaution. If eye irritation persists, consult a specialist.
<b>Protection of first-aiders:</b>	Low hazard for usual industrial or commercial handling.

### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media:**

Water.

**Unsuitable extinguishing media:**

Dry powder, Sand, Foam, CO2

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

Burning produces obnoxious and toxic fumes. In case of fire, cool with water or waterspray. In case of fire, the product will smoulder even without the presence of external oxygen. In these conditions the product will show self sustaining decomposition. The best method to extinguish the fire is to cool the decomposition front with water.

**Special protective equipment for firefighters:**

In the event of fire and/or explosion do not breathe fumes. Wear self contained breathing apparatus for fire fighting if necessary.

**Specific methods:**

In case of fire separate from centre of fire .

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:**

Avoid dust formation. Sweep-up to prevent slipping hazard.

**Environmental precautions:**

Do not flush into surface water or sanitary sewer system. Keep away from living quarters.

**Methods for cleaning up:**

Avoid dust formation. Shovel or sweep up. Use up product completely. Packaging material is industrial waste.

## 7. HANDLING AND STORAGE

**Handling:****Technical measures/precautions:**

Avoid dust formation.

**Safe handling advice:**

Keep away from flammable material. When using do not eat or drink.

**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:**

Oxidising and spontaneously flammable products

**Specific use(s):**

Granulated fertilizer.

**Packaging material:**

Bags or Bulk

## 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:**

Not applicable.

**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**

*Ammoniumnitrate, NH<sub>4</sub>NO<sub>3</sub>*

Czech Republic OEL

Listed

*Calcium sulphate dihydrate, CaSO<sub>4</sub>+2H<sub>2</sub>O*

Austria - MAKs

6 mg/m<sup>3</sup> MAK

Belgium - 8 Hr VLE

10 mg/m<sup>3</sup> VLE

France INRS (VME)

10 mg/m<sup>3</sup> VME

Germany TRGS900:

6 mg/m<sup>3</sup> TWA

Germany (DFG) - MAK	1.5 mg/m <sup>3</sup> MAK
	4 mg/m <sup>3</sup> MAK
Netherlands - OEL - MACs:	0.5 mg/m <sup>3</sup> MAC
Portugal - TWAs	10 mg/m <sup>3</sup> TWA
Spain - Valores Limite Ambientales - VLE	10 mg/m <sup>3</sup> VLA-ED
UK EH40 WEL:	10 mg/m <sup>3</sup> TWA
	4 mg/m <sup>3</sup> TWA

*Copper sulphate, CuSO4*

Austria - MAKs	0.1 mg/m <sup>3</sup> MAK
	1 mg/m <sup>3</sup> MAK
Belgium - 8 Hr VLE	0.2 mg/m <sup>3</sup> VLE
	1 mg/m <sup>3</sup> VLE
Czech Republic OEL	Listed
Finland - Occupational Exposure Limits - 8 hour	0.1 mg/m <sup>3</sup> TWA
	1 mg/m <sup>3</sup> TWA
France - Valeurs Limites d'exposition (VLE)	2 mg/m <sup>3</sup> VLCT
France INRS (VME)	0.2 mg/m <sup>3</sup> VME
	1 mg/m <sup>3</sup> VME
Germany (DFG) - MAK	0.1 mg/m <sup>3</sup> MAK
Netherlands - OEL - MACs:	0.2 mg/m <sup>3</sup> MAC
	1 mg/m <sup>3</sup> MAC
Norway - 8 h:	0.1 mg/m <sup>3</sup> TWA
	1 mg/m <sup>3</sup> TWA
Portugal - TWAs	0.2 mg/m <sup>3</sup> TWA
	1 mg/m <sup>3</sup> TWA
Spain - Valores Limite Ambientales - VLE	0.2 mg/m <sup>3</sup> VLA-ED
	1 mg/m <sup>3</sup> VLA-ED
Sweden - OEL - 8 Hour	0.2 mg/m <sup>3</sup> LLV
	1 mg/m <sup>3</sup> LLV

*Ironsulphate, FeSO4+1H2O*

Belgium - 8 Hr VLE	1 mg/m <sup>3</sup>
Czech Republic OEL	Listed
Finland - Occupational Exposure Limits - 8 hour	1 mg/m <sup>3</sup>
Netherlands - OEL - MACs:	1 mg/m <sup>3</sup>
Norway - 8 h:	0.01 mg/m <sup>3</sup>
Portugal - TWAs	1 mg/m <sup>3</sup> TWA
Spain - Valores Limite Ambientales - VLE	1 mg/m <sup>3</sup> VLA-ED
UK EH40 WEL:	LTEL (8 hr TWA) 1 mg/m <sup>3</sup>
	STEL (15 min) 2mg/m <sup>3</sup>

*Magnesiumoxide, MgO*

Austria - MAKs	6 mg/m <sup>3</sup>
Belgium - 8 Hr VLE	10 mg/m <sup>3</sup>
Czech Republic OEL	Listed
France - Valeurs Limites d'exposition (VLE)	10 mg/m <sup>3</sup>
France INRS (VME)	10 mg/m <sup>3</sup> VME
Germany (DFG) - MAK	6 mg/m <sup>3</sup>
Netherlands - OEL - MACs:	10 mg/m <sup>3</sup>
Norway - 8 h:	10 mg/m <sup>3</sup>
Portugal - TWAs	10 mg/m <sup>3</sup> TWA
Spain - Valores Limite Ambientales - VLE	10 mg/m <sup>3</sup> VLA-ED
UK EH40 WEL:	10 mg/m <sup>3</sup>

*Manganese sulphate, MnSO4*

Austria - MAKs	0.5 mg/m <sup>3</sup> MAK
	5 mg/m <sup>3</sup> MAK
Belgium - 8 Hr VLE	0.2 mg/m <sup>3</sup>
Czech Republic OEL	Listed
Finland - Occupational Exposure Limits - 8 hour	0.5 mg/m <sup>3</sup>

France INRS (VME)	1 mg/m <sup>3</sup> VME
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>

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

Austria - MAKs	15 mg/m <sup>3</sup> MAK
	5 mg/m <sup>3</sup> MAK
Belgium - 8 Hr VLE	5 mg/m <sup>3</sup> VLE
Czech Republic OEL	Listed
Finland - Occupational Exposure Limits - 8 hour	6 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
	10 mg/m <sup>3</sup> TWA
	3 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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### General Information

<b>Physical State:</b>	Solid
<b>Appearance:</b>	Resin Coated Granules
<b>Color:</b>	Brown, Blue, Greenish
<b>Odor:</b>	No information available

### Important Health Safety and Environmental Information

<b>Flammability (solid, gas):</b>	Non-flammable
<b>Explosive properties:</b>	Doesn't present explosion hazard
<b>Oxidising properties:</b>	Not oxidizing . Incompatible with oxidising agents.
<b>Solubility:</b>	Coating not soluble, release nutrients through coating

### Other information

## 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. Oxidising agents.

**Hazardous decomposition products:** No decomposition if stored normally  
Hazardous decomposition products:  
Poisonous gasses/vapours

## 11. TOXICOLOGICAL INFORMATION

### Component information

*Ammoniumnitrate, NH<sub>4</sub>NO<sub>3</sub>*

**LD<sub>50</sub>/oral/rat =** 410 mg/kg

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

**LD<sub>50</sub>/oral/rat =** 960 mg/kg

*Ironsulphate, FeSO<sub>4</sub>+1H<sub>2</sub>O*

**LD<sub>50</sub>/oral/rat =** 1389 mg/kg

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

**LD<sub>50</sub>/oral/rat =** 9 g/kg

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

**LD<sub>50</sub>/oral/rat =** 3750mg/kg

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

**LD<sub>50</sub>/oral/rat =** 4000 mg/kg

### Product information

**LD<sub>50</sub>/oral/rat =** > 10 gr/kg

### Local effects

**Skin effects:** May cause skin irritation in susceptible persons.

**Eye effects:** Contact with eyes may cause irritation.

**Inhalation:** May cause sensitization by inhalation.

**Ingestion:** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea .

## 12. ECOLOGICAL INFORMATION

### Product information

#### **Aquatic toxicity:**

No ecological information is known on the product

### Component information

*Ammoniumnitrate, NH<sub>4</sub>NO<sub>3</sub>***Ecotoxicity effects**

EC50/48h/daphnia = 100 µg/l  
 LC50/96h/rainbow trout = 10 µg/l  
 EC50/72h/algae = 74000 µg/l

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

EC50/48h/daphnia = 0.8 mg/l

*Ironsulphate, FeSO<sub>4</sub>+1H<sub>2</sub>O***Ecotoxicity effects**

EC50/48h/daphnia = >100mg/l  
 LC50/96h/rainbow trout = >72.5mg/l (6d)  
 EC50/72h/algae = 22mg/l

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

EC50/48h/daphnia => 100 mg/l

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

LC50/96h/rainbow trout => 2800 g/l

### 13. DISPOSAL CONSIDERATIONS

**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

### 14. TRANSPORT INFORMATION

**Product information**

**Physical State:** Solid

**ADR/RID**

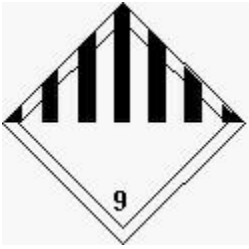
**UN-No:** Not classified for transport

**IATA**

**UN-No:** N.A.

**IMO / IMDG**

**UN-No:** Not classified for transport  
**Proper shipping name:** AMMONIUM NITRATE BASED FERTILIZER  
**Hazard Class:** 9  
**Packing group:** III



## 15. REGULATORY INFORMATION

**Indication of danger:**

This product does not have to be classified according to the EU regulations.

**ICPE (FR):** Classified installation : article 1331, 1230

## 16. OTHER INFORMATION

**Text of R Phrases mentioned in Section 2**

R 8 - Contact with combustible material may cause fire.

R22 - Harmful if swallowed.

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.

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53 - Toxic 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**