



# Material Safety Data Sheet

According to EC Directive 2001/58/EC

Print date: 21-Jun-2007

Revision Number: 4

Revision date: 21-Jun-2007

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

### Identification of the substance or preparation

MSDS Ref. No.: 3706.02.02  
Product name: Osmosol 215R  
Synonyms: Osmosol 13+5+25+3CaO+3MgO/13+2.2+20.8+2.1Ca+1.8Mg

### Use of the Substance/Preparation

#### Company/Undertaking Identification

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- +44 (0)208 762 8322

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

### Chemical nature of the preparation

Components	CAS-No	Weight %	EC-No.	Classification
Calcium nitrate, Ca(NO <sub>3</sub> ) <sub>2</sub>	13477-34-4	10 - 25%	233-332-1	O;R08 Xi;R36
Magnesiumnitrate hexahydrate, Mg(NO <sub>3</sub> ) <sub>2</sub> +6H <sub>2</sub> O	13446-18-9	10 - 25%	233-826-7	O;R08
Ureaphosphate	4861-19-2	10 - 25%	225-464-3	C;R34
Copper sulphate, CuSO <sub>4</sub>	7758-98-7	< 1%	231-847-6	N;R50/53 Xi;R36/38 Xn;R22
Iron-EDTA	239-8002-2	1 - 5%	239-802-2	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	> 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**

Xi - Irritant

**Most important hazards**

Risk of serious damage to eyes.

### 4. FIRST AID MEASURES

- General advice:** Check the victim's state of consciousness, breathing and pulse; put in emergency position or revive.
- Ingestion:** Possible symptoms are nausea and/or vomiting. Clean mouth with water and drink afterwards plenty of water. If a person vomits when lying on his back, place him in the recovery position. Do not induce vomiting without medical advice. Consult a physician if necessary.
- Inhalation:** In the case of inhalation of aerosol/mist consult a physician if necessary. Possible symptoms are coughing and/or dyspnoea. If breathing is difficult, give oxygen. Move to fresh air.
- Skin contact:** If skin irritation persists, call a physician.
- Eye contact:** In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Protection of first-aiders:** Avoid contact with eyes. Use personal protective equipment.

### 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:**

The product is not flammable. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area and fight fire from a safe distance.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:**

Sweep-up to prevent slipping hazard. Use personal protective equipment.

**Environmental precautions:**

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

**Methods for cleaning up:**

Shovel or sweep up.

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

Provide appropriate exhaust ventilation at places where dust is formed.

**Safe handling advice:**

Avoid dust formation. Avoid contact with skin and eyes.

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

Keep containers dry and tightly closed to avoid moisture absorption and contamination. 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:**

No information available

**Specific use(s):**

Water soluble fertilizer.

**Packaging material:**

Plastic bags

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Engineering measures to reduce exposure:**

Ensure adequate ventilation.

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

In case of insufficient ventilation wear suitable respiratory equipment. Effective dust mask.

**Hand protection:**

PVC or other plastic material gloves. Rubber gloves.

**Eye/face protection:**

Tightly fitting safety goggles.

**Skin and body protection:**

Wear suitable protective clothing.

**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**

Avoid dust formation.

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

Austria - MAKs

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

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> LLV1 mg/m<sup>3</sup> LLV*Manganese sulphate, MnSO<sub>4</sub>*

Austria - MAKs	0.5 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>
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	5 mg/m <sup>3</sup> MAK
Belgium - 8 Hr VLE	5 mg/m <sup>3</sup> TWA
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
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>	Prills, flakes and powder
<b>Color:</b>	Off-white
<b>Odor:</b>	No information available

**Important Health Safety and Environmental Information**

<b>Solubility:</b>	Completely soluble
<b>Water solubility:</b>	Max: 15 kg/100L

**Other information**

<b>Bulk density:</b>	800 - 1200 kg/m <sup>3</sup>
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## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under recommended storage conditions.
<b>Conditions to avoid:</b>	No special storage conditions required.
<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

*Ureaphosphate*  
**LD50/oral/rat =** 5840 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

*Potassium nitrate, KNO<sub>3</sub>*  
**LD50/oral/rat =** 3750mg/kg

*Sodium molybdate, Na<sub>2</sub>MoO<sub>4</sub>+2H<sub>2</sub>O*  
**LD50/oral/rat =** 4000 mg/kg

### Product information

#### Local effects

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

**Eye effects:** Severe eye irritation.

**Inhalation:** May cause sensitization by inhalation

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

## 12. ECOLOGICAL INFORMATION

### Product information

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

### Component information

*Calcium nitrate, Ca(NO<sub>3</sub>)<sub>2</sub>*  
**Ecotoxicity effects** LC50/96h/rainbow trout =2400 mg/l

*Copper sulphate, CuSO<sub>4</sub>*  
**Ecotoxicity effects** EC50/48h/daphnia =0.8 mg/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 =&gt; 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:** Not classified for transport**IMO / IMDG****UN-No:** Not classified for transport**15. REGULATORY INFORMATION****Indication of danger:**

Xi - Irritant.

Xi

**R -phrase(s)**

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 1230**16. OTHER INFORMATION****Text of R Phrases mentioned in Section 2**

**16. OTHER INFORMATION**

R 8 - Contact with combustible material may cause fire.

R36 - Irritating to eyes.

R41 - Risk of serious damage to eyes.

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.

**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**