



Material Safety Data Sheet

According to EC Directive 2001/58/EC

Print date: 12-Mar-2007***

Revision Number: 1***

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

Identification of the substance or preparation

MSDS Ref. No.: 8802.02.01
Product name: Osmocote Exact Standard 3-4 M
Synonyms: 16+9+12+2.5MgO+TE / 16+3.9+10.0+1.5Mg+TE

Use of the Substance/Preparation

Recommended use: Granulated fertilizer.

Company/Undertaking Identification

- Scotts International BV
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Emergency telephone number:

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature of the preparation

Components	CAS-No	Weight %	EC-No.	Classification
Sodium molybdate, Na ₂ MoO ₄ +2H ₂ O***	7631-95-0	< 1%	231-298-2	NE
Manganese sulphate, MnSO ₄ ***	7785-87-7	< 1%	232-08-99	N;R51/53 Xn;R48/20/22
Copper sulphate, CuSO ₄ ***	7758-98-7	< 1%	231-847-6	N;R50/53 Xi;R36/38 Xn;R22
Ironsulphate, FeSO ₄ +1H ₂ O***	7720-78-7	< 1%	231-753-5	Xn;R22
Magnesiumoxide, MgO***	1309-48-4	1 - 5%	215-171-9	NE
Potassium nitrate, KNO ₃ ***	7757-79-1	10 - 25%	231-818-8	O;R08
Ammoniumnitrate, NH ₄ NO ₃ ***	6484-52-2	> 25%	229-347-8	O;R08

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

3. HAZARDS IDENTIFICATION

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3. HAZARDS IDENTIFICATION

Classification

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

Most important hazards

None

4. FIRST AID MEASURES

General advice:	Possible symptoms are coughing and/or dyspnoea. If symptoms persist, call a physician.
Ingestion:	If conscious, drink plenty of water. Do not induce vomiting. Rinse mouth. Consult a physician if necessary.
Inhalation:	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.
Skin contact:	If a person feels unwell or symptoms of skin irritation appear, consult a physician. Rinse with plenty of water.
Eye contact:	Flush eyes with water as a precaution. If eye irritation persists, consult a specialist.
Protection of first-aiders:	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.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

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

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:**

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*Sodium molybdate, Na₂MoO₄·2H₂O***Austria - MAKs**15 mg/m³ MAK5 mg/m³ MAK**Belgium - 8 Hr VLE**5 mg/m³ VLE**Czech Republic OEL**

Listed

Finland - Occupational Exposure Limits - 8 hour6 mg/m³**France - Valeurs Limites d'exposition (VLE)**5 mg/m³**France INRS (VME)**5 mg/m³ VME**Netherlands - OEL - MACs:**5 mg/m³ MAC**Norway - 8 h:**5 mg/m³ TWA**Portugal - TWAs**0.5 mg/m³ TWA10 mg/m³ TWA3 mg/m³ TWA**Spain - Valores Limite Ambientales - VLE**5 mg/m³ VLA-ED**Sweden - OEL - 8 Hour**10 mg/m³ LLV5 mg/m³ LLV

Manganese sulphate, MnSO4

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

Copper sulphate, CuSO4

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

Ironsulphate, FeSO4+1H2O

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

Magnesiumoxide, MgO

Austria - MAKs	6 mg/m ³
Belgium - 8 Hr VLE	10 mg/m ³
Czech Republic OEL	Listed
France - Valeurs Limites d'exposition (VLE)	10 mg/m ³
France INRS (VME)	10 mg/m ³ VME
Germany (DFG) - MAK	6 mg/m ³
Netherlands - OEL - MACs:	10 mg/m ³
Norway - 8 h:	10 mg/m ³

Portugal - TWAs	10 mg/m ³ TWA
Spain - Valores Limite Ambientales - VLE	10 mg/m ³ VLA-ED
UK EH40 WEL:	10 mg/m ³

Ammoniumnitrate, NH₄NO₃

Czech Republic OEL

Listed

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical State:	Solid
Appearance:	Resin Coated Granules
Color:	Brown, Greenish
Odor:	No information available

Important Health Safety and Environmental Information

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

Other information

Bulk density:	990 - 1036 kg/m ³
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10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Conditions to avoid:	Keep away from open flames, hot surfaces and sources of ignition.
Materials to avoid:	Combustible material. Oxidising agents.
Hazardous decomposition products:	No decomposition if stored normally Hazardous decomposition products: Poisonous gasses/vapours

11. TOXICOLOGICAL INFORMATION

Component information

Sodium molybdate, Na₂MoO₄·2H₂OLD₅₀/oral/rat = 4000 mg/kgManganese sulphate, MnSO₄LD₅₀/oral/rat = 9 g/kgCopper sulphate, CuSO₄

LD50/oral/rat = 960 mg/kg

Ironsulphate, FeSO₄·1H₂O

LD50/oral/rat = 1389 mg/kg

Potassium nitrate, KNO₃

LD50/oral/rat = 3750mg/kg

Ammoniumnitrate, NH₄NO₃

LD50/oral/rat = 410 mg/kg

Product information

LD50/oral/rat = > 10 gr/kg

Local effects

Skin effects: May cause skin irritation in susceptible persons

Eye effects: May cause eye irritation with susceptible persons

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

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

Component information

Sodium molybdate, Na₂MoO₄·2H₂O

Ecotoxicity effects

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

Manganese sulphate, MnSO₄

Ecotoxicity effects

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

Copper sulphate, CuSO₄

Ecotoxicity effects

EC50/48h/daphnia =0.8 mg/l

Ironsulphate, FeSO₄·1H₂O

Ecotoxicity effects

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

Ammoniumnitrate, NH₄NO₃

Ecotoxicity effects

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

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****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