



Material Safety Data Sheet

According to EC Directive 2001/58/EC

Print date: 13-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.: 8824.02.01
Product name: Osmocote Exact Lo Start 16-18 M
Synonyms: 15+8+11+2.5MgO+TE / 15+3.5+9.1+1.5Mg+TE

Use of the Substance/Preparation

Recommended use: Granulated fertilizer.

Company/Undertaking Identification

- Scotts International BV
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature of the preparation

Components	CAS-No	Weight %	EC-No.	Classification
Ammoniumnitrate, NH ₄ NO ₃ ***	6484-52-2	> 25%	229-347-8	O;R08
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
Manganese sulphate, MnSO ₄ ***	7785-87-7	< 1%	232-08-99	N;R51/53 Xn;R48/20/22
Potassium nitrate, KNO ₃ ***	7757-79-1	10 - 25%	231-818-8	O;R08
Sodium molybdate, Na ₂ MoO ₄ +2H ₂ 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

Revision date: 13-Mar-2007***

Page 1 of 8

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. 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:

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*Ammoniumnitrate, NH₄NO₃*

Czech Republic OEL

Listed

Copper sulphate, CuSO₄

Austria - MAKs

0.1 mg/m³ MAK1 mg/m³ MAK

Belgium - 8 Hr VLE

0.2 mg/m³ VLE1 mg/m³ VLE

Czech Republic OEL

Listed

Finland - Occupational Exposure Limits - 8 hour

0.1 mg/m³ TWA1 mg/m³ 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

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

Sodium molybdate, Na2MoO4·2H2O

Austria - MAKs	15 mg/m ³ MAK
	5 mg/m ³ MAK
Belgium - 8 Hr VLE	5 mg/m ³ VLE
Czech Republic OEL	Listed

Finland - Occupational Exposure Limits - 8 hour	6 mg/m ³
France - Valeurs Limites d'exposition (VLE)	5 mg/m ³
France INRS (VME)	5 mg/m ³ VME
Netherlands - OEL - MACs:	5 mg/m ³ MAC
Norway - 8 h:	5 mg/m ³ TWA
Portugal - TWAs	0.5 mg/m ³ TWA
	10 mg/m ³ TWA
	3 mg/m ³ TWA
Spain - Valores Limite Ambientales - VLE	5 mg/m ³ VLA-ED
Sweden - OEL - 8 Hour	10 mg/m ³ LLV
	5 mg/m ³ LLV

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

Ammoniumnitrate, NH ₄ NO ₃	
LD50/oral/rat =	410 mg/kg

Copper sulphate, CuSO₄
LD50/oral/rat = 960 mg/kg

Ironsulphate, FeSO₄+1H₂O
LD50/oral/rat = 1389 mg/kg

Manganese sulphate, MnSO₄
LD50/oral/rat = 9 g/kg

Potassium nitrate, KNO₃
LD50/oral/rat = 3750mg/kg

Sodium molybdate, Na₂MoO₄+2H₂O
LD50/oral/rat = 4000 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

Ammoniumnitrate, NH₄NO₃

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

Manganese sulphate, MnSO4

Ecotoxicity effects

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

Sodium molybdate, Na2MoO4+2H2O

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

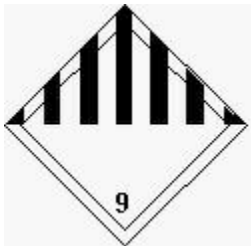
UN-No: Not classified for transport

IATA

UN-No: N.A.

IMO / IMDG

UN-No: 2071
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.

15. REGULATORY INFORMATION

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