



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.: 6678.02.04
Product name: Osmocote Exact Tablet 9+11+18 (5g) 8-9M

Use of the Substance/Preparation

Recommended use: Granulated fertilizer.

Company/Undertaking Identification

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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	10 - 25%	229-347-8	O;R08
Calcium sulphate dihydrate, CaSO ₄ +2H ₂ O	10101-41-4	1 - 5%	231-900-3	NE
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%	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	5 - 10%	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

Classification

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

Most important hazards

None

4. FIRST AID MEASURES

- General advice:** If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.
- Ingestion:** Rinse mouth. 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.
- Inhalation:** Not applicable. Dusty conditions are unlikely if product is used as intended and product-coating remains intact. However, if prolonged inhalation of dust occurs, remove victim to fresh air.
- Skin contact:** If a person feels unwell or symptoms of skin irritation appear, consult a physician.
- Eye contact:** 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:

Thermal decomposition can lead to release of irritating gases and vapours.

Special protective equipment for firefighters:

In the event of fire, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

No conditions to be specially mentioned.

Environmental precautions:

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

Methods for cleaning up:

Use up product completely. Packaging material is industrial waste.

7. HANDLING AND STORAGE

Handling:**Technical measures/precautions:**

No special technical protective measures required.

Safe handling advice:

No special precautions required.

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

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):

Granulated fertilizer. Tablet out of resin coated prills.

Packaging material:

Plastic bags, Cardboard box

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:

Not applicable.

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 allow material to contaminate ground water system.

Ammoniumnitrate, NH₄NO₃

Czech Republic OEL

Listed

Calcium sulphate dihydrate, CaSO₄+2H₂O

Austria - MAKs

6 mg/m³ MAK

Belgium - 8 Hr VLE

10 mg/m³ TWA

France INRS (VME)

10 mg/m³ VME

Germany TRGS900:

6 mg/m³ TWA

Germany (DFG) - MAK

1.5 mg/m³ MAK4 mg/m³ MAK

Netherlands - OEL - MACs:

0.5 mg/m³ MAC

Portugal - TWAs

10 mg/m³ TWA

Spain - Valores Limite Ambientales - VLE

10 mg/m³ VLA-ED

UK EH40 WEL:

10 mg/m³ TWA4 mg/m³ TWA

Copper sulphate, CuSO₄

Austria - MAKs	0.1 mg/m ³ MAK
Finland - Occupational Exposure Limits - 8 hour	1 mg/m ³ TWA
Germany (DFG) - MAK	0.1 mg/m ³ MAK
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
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
Belgium - 8 Hr VLE	0.2 mg/m ³
Czech Republic OEL	Listed
Finland - Occupational Exposure Limits - 8 hour	0.5 mg/m ³
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	5 mg/m ³ MAK
Belgium - 8 Hr VLE	5 mg/m ³ TWA
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
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:	Tablet out of resin coated prills
Color:	Brown, Green
Odor:	No information available

Important Health Safety and Environmental Information

Flammability (solid, gas):	Non-flammable
Solubility:	Coating not soluble, release nutrients through coating

Other information

Bulk density:	No data available
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10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Conditions to avoid:	No special storage conditions required.
Materials to avoid:	No information available
Hazardous decomposition products:	No decomposition if stored normally

11. TOXICOLOGICAL INFORMATION

Component information

<i>Ammoniumnitrate, NH₄NO₃</i> LD50/oral/rat =	410 mg/kg
<i>Copper sulphate, CuSO₄</i> LD50/oral/rat =	960 mg/kg
<i>Ironsulphate, FeSO₄+1H₂O</i> LD50/oral/rat =	1389 mg/kg
<i>Manganese sulphate, MnSO₄</i> LD50/oral/rat =	9 g/kg
<i>Potassium nitrate, KNO₃</i> 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****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: Cardboard boxes can be transported/delivered by a registered waste carrier to local recycling facilities..

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

R 8 - Contact with combustible material may cause fire.

R22 - Harmful if swallowed.

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.

16. OTHER INFORMATION

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