



Material Safety Data Sheet

According to EC Directive 2001/58/EC

Print date: 21-Jun-2007

Revision Number: 4

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

Identification of the substance or preparation

MSDS Ref. No.: 3705.02.02
Product name: Osmosol 614R
Synonyms: Osmosol 19+5+12+6CaO+2MgO/19+2.2+10.0+4.3Ca+1.3Mg

Use of the Substance/Preparation

Recommended use: Water soluble fertilizer.

Company/Undertaking Identification

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Emergency telephone number:

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 nitrate, Ca(NO ₃) ₂	13477-34-4	10 - 25%	233-332-1	O;R08 Xi;R36
Magnesiumnitrate hexahydrate, Mg(NO ₃) ₂ +6H ₂ 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 ₄	7758-98-7	< 1%	231-847-6	N;R50/53 Xi;R36/38 Xn;R22
Iron-EDTA	239-8002-2	< 1%	239-802-2	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	> 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

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3. HAZARDS IDENTIFICATION

Classification

O - Oxidizing
Xi - Irritant

Most important hazards

Contact with combustible material may cause fire.
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.

Incompatible products:

Keep away from:
Combustible material
Flammable materials

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.

Ammoniumnitrate, NH₄NO₃

Czech Republic OEL

Listed

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

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:	Prills, flakes and powder
Color:	Off-white
Odor:	No information available

Important Health Safety and Environmental Information

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

Other information

Bulk density:	800 - 1100 kg/m ³
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10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Conditions to avoid:	No special storage conditions required. Direct sources of heat. Keep away from flammable materials.
Materials to avoid:	Combustible material.
Hazardous decomposition products:	No decomposition if stored normally Thermal decomposition can lead to release of irritating gases and vapours

11. TOXICOLOGICAL INFORMATION

Component information

Ammoniumnitrate, NH₄NO₃

LD50/oral/rat = 410 mg/kg

Ureaphosphate

LD50/oral/rat = 5840 mg/kg

Copper sulphate, CuSO₄

LD50/oral/rat = 960 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

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

Ammoniumnitrate, NH₄NO₃

Ecotoxicity effects

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

Calcium nitrate, Ca(NO₃)₂

Ecotoxicity effects

LC50/96h/rainbow trout =2400 mg/l

Copper sulphate, CuSO₄

Ecotoxicity effects

EC50/48h/daphnia =0.8 mg/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: 1486
Proper shipping name: Potassium nitrate.
Hazard Class: 5.1
Packing group: PG III
Description: Potassiumnitrate

IATA

UN-No: N.A.

IMO / IMDG

UN-No: 1486
Proper shipping name: Potassium nitrate
Hazard Class: 5.1
Packing group: PG III
Description: Potassiumnitrate



15. REGULATORY INFORMATION

Indication of danger:

Xi - Irritant.

O - Oxidizing.

Xi



R -phrase(s)

R 8 - Contact with combustible material may cause fire.

R41 - Risk of serious damage to eyes.

S -phrase(s)

S17 - Keep away from combustible material.

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 1331, 1230

16. OTHER INFORMATION

Text of R Phrases mentioned in Section 2

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