



Material Safety Data Sheet

According to EC Directive 2001/58/EC

Print date: 13-Feb-2007

Revision Number: 2

Revision date: 09-Dec-2005

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

Identification of the substance or preparation

MSDS Ref. No.: 2050.02.01
Product name: Universol Orange
Synonyms: Universol 16+5+25+3MgO

Use of the Substance/Preparation

Recommended use: Water soluble fertilizer.

Company/Undertaking Identification

- Scotts International BV
Nijverheidsweg 1-5
6422 PD Heerlen (NL)
Tel: ++31 (0) 45-5609100
Fax: ++31 (0) 45-5609190

Emergency telephone number:

- +44 (0)208 762 8322

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature of the preparation

Components	CAS-No	Weight %	EC-No.	Classification
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
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

Classification

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

Most important hazards

None

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. Never give anything by mouth to an unconscious person. Consult a physician if necessary.
Inhalation:	Possible symptoms are coughing and/or dyspnoea. If not breathing, give artificial respiration. If symptoms persist, call a physician.
Skin contact:	If skin irritation persists, call a physician.
Eye contact:	Rinse thoroughly with plenty of water, also under the eyelids. 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:

Use dry chemical, CO₂, water spray or "alcohol" foam.

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:

Product smoulders! In case of fire, cool with water or waterspray. Danger of toxic gases in smoke in case of fire. Nitrogen dioxides, carbon dioxides, ammoniac and hydrogen chloride.

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:

Sweep up and shovel.

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.
Hand protection:	Pvc disposable gloves.
Eye/face protection:	Safety glasses.
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

Prevent product from entering drains.

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

Ammoniumnitrate, NH₄NO₃

Czech Republic OEL	Listed
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9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical State:	Solid
Appearance:	Powder
Color:	Light orange, Off-white
Odor:	No information available

Important Health Safety and Environmental Information

Solubility:	Completely soluble in water
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Other information

Bulk density:	1126 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.
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

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

Sodium molybdate, Na₂MoO₄·2H₂O
LD₅₀/oral/rat = 4000 mg/kg

Ammoniumnitrate, NH₄NO₃
LD₅₀/oral/rat = 410 mg/kg

Product information

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

Component information

Sodium molybdate, Na₂MoO₄·2H₂O

Ecotoxicity effects

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

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.

R36/37/38 - Irritating to eyes, respiratory system and skin.

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