



Material Safety Data Sheet

According to EC Directive 1907/2006

Print date: 07-Feb-2008

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.: 8901.02.01
Product name: Micromax

Use of the Substance/Preparation

Recommended use: Fertilizer.

Company/Undertaking Identification

- Scotts International BV
Nijverheidsweg 1-5
6422 PD Heerlen (NL)
Tel: ++31 (0) 45-5609100
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Emergency telephone number: • +44 (0)208 762 8322

Email: INFO-MSDS@Scotts.com

2. HAZARDS IDENTIFICATION

Classification

The product is classified and labelled in accordance with Directive 1999/45/EC
Xn - Harmful
N - Dangerous for the environment

Most important hazards

Harmful if swallowed.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature of the preparation

Components	CAS-No	Weight %	EC-No.	Classification
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Zinc sulphate mono hydrate, ZnSO ₄ +1H ₂ O	7446-19-7	1 - 5%	231-793-3	N;R50/53 Xi;R36/38
Sodium molybdate, Na ₂ MoO ₄ +2H ₂ O	7631-95-0	< 1%	231-298-2	NE
Copper sulphate, CuSO ₄	7758-98-7	1 - 5%	231-847-6	N;R50/53 Xi;R36/38 Xn;R22
Iron sulphate, FeSO ₄ +1H ₂ O	7720-78-7	> 25%	231-753-5	Xn;R22
Manganese sulphate, MnSO ₄	7785-87-7	5 - 10%	232-08-99	N;R51/53 Xn;R48/20/22

NE = Non-Established

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

4. FIRST AID MEASURES

General advice:	If symptoms persist, call a physician.
Ingestion:	If swallowed, seek medical advice immediately and show this container or label.
Inhalation:	Move to fresh air. Possible symptoms are nausea and/or vomiting.
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.

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:

does not flash .

Special protective equipment for firefighters:

No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Avoid dust formation. Use personal protective equipment.

Environmental precautions:

Should not be released into the environment. Prevent product from entering drains. Do not contaminate surface water.

Methods for cleaning up:

Shovel or sweep up. Do not create a powder cloud by using a brush or compressed air.

7. HANDLING AND STORAGE

Handling:**Technical measures/precautions:**

Provide for appropriate exhaust ventilation and dust collection at machinery. Use only in area provided with appropriate exhaust ventilation.

Safe handling advice:

Avoid contact with skin and eyes. Do not empty into drains.

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

Keep at temperatures between 0 °C and 40 °C . For quality reasons: Keep out of reach of direct sunlight, store under dry conditions, partly used bags should be closed well.

Incompatible products:

No information available

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:**

Effective dust mask.

Hand protection:

Rubber gloves.

Eye/face protection

Safety glasses.

Skin and body protection:

Wear suitable protective clothing.

Hygiene measures

When using, do not eat, drink or smoke.

Exposure limit values**Environmental exposure controls**

Prevent product from entering drains. Avoid dust formation.

Sodium molybdate, Na₂MoO₄·2H₂O

Finland - Occupational Exposure Limits - 8 hour
France - Valeurs Limites d'exposition (VLE)

6 mg/m³
5 mg/m³

Copper sulphate, CuSO₄

Finland - Occupational Exposure Limits - 8 hour

1 mg/m³ TWA

Iron sulphate, FeSO₄·1H₂O

Belgium - 8 Hr VLE
Finland - Occupational Exposure Limits - 8 hour
Netherlands - OEL - MACs:
Norway - 8 h:
UK EH40 WEL:

1 mg/m³
1 mg/m³
1 mg/m³
0.01 mg/m³
LTEL (8 hr TWA) 1 mg/m³
STEL (15 min) 2mg/m³

Manganese sulphate, MnSO₄

Belgium - 8 Hr VLE
Finland - Occupational Exposure Limits - 8 hour

0.2 mg/m³
0.5 mg/m³

Netherlands - OEL - MACs:	1 mg/m ³
Norway - 8 h:	2.5 mg/m ³
UK EH40 WEL:	5 mg/m ³

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical State:	Solid
Appearance:	Powder
Color:	White
Odor:	Not applicable

Important Health Safety and Environmental Information

Bulk density:	1200 kg/m ³
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Other information

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

Component information

Zinc sulphate mono hydrate, ZnSO₄+1H₂O

LD₅₀/oral/rat = 2949 mg/kg

Sodium molybdate, Na₂MoO₄+2H₂O

LD₅₀/oral/rat = 4000 mg/kg

Copper sulphate, CuSO₄

LD₅₀/oral/rat = 960 mg/kg

Iron sulphate, FeSO₄+1H₂O

LD₅₀/oral/rat = 1389 mg/kg

Manganese sulphate, MnSO₄

LD₅₀/oral/rat = 9 g/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**

Zinc sulphate mono hydrate, ZnSO₄+1H₂O

Ecotoxicity effects

EC50/48h/daphnia =1.7 mg/l

Sodium molybdate, Na₂MoO₄+2H₂O

Ecotoxicity effects

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

Copper sulphate, CuSO₄

Ecotoxicity effects

EC50/48h/daphnia =0.8 mg/l

Iron sulphate, 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

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods:	Use up product completely. Packaging material is industrial waste
Contaminated packaging:	Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION**Product information**

14. TRANSPORT INFORMATION**Physical State:** Solid**ADR/RID**

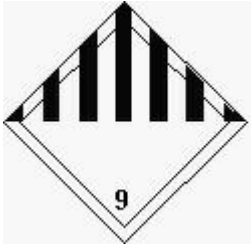
UN-No: 3077
Proper shipping name: Environmentally Hazardous Substance Solid N.O.S.(Iron sulfate, Manganese sulfate).
Hazard Class: 9
Packing group: III

IATA

UN-No: 3077
Proper shipping name: Environmentally Hazardous Substance Solid N.O.S.(Iron sulfate, Manganese sulfate)
Hazard Class: 9
Packing group: III

IMO / IMDG

UN-No: 3077
Proper shipping name: Environmentally Hazardous Substance Solid N.O.S.(Iron sulfate, Manganese sulfate)
Hazard Class: 9
Packing group: III

**15. REGULATORY INFORMATION****Indication of danger:**

Xn - Harmful.

N - Dangerous for the environment.

**R -phrase(s)**

R22 - Harmful if swallowed.

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

15. REGULATORY INFORMATION

S -phrase(s)

S60 - This material and its container must be disposed of as hazardous waste.
S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

ICPE (FR): Classified installation : article 1173

16. OTHER INFORMATION

Text of R Phrases mentioned in Section 3

R22 - Harmful if swallowed.

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.

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