



Material Safety Data Sheet

According to EC Regulation 1907/2006

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

Identification of the substance or preparation

MSDS Ref. No.: 4015.01.08
 Product name: Sierraform® GT 22+5+11+2MgO

Use of the Substance/Preparation

Recommended use: Granulated fertilizer

Company/Undertaking Identification

• Scotts International BV
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Email INFO-MSDS@Scotts.com

2. HAZARDS IDENTIFICATION

Classification

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

Most important hazards

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature of the preparation

Components	CAS-No	Weight %	EC-No.	Classification
Copper sulphate, CuSO ₄	7758-98-7	< 1%	231-847-6	N;R50/53 Xi;R36/38 Xn;R22
Iron sulphate, FeSO ₄ +1H ₂ O	7720-78-7	1 - 5%	231-753-5	Xn;R22 R36/38

Components	CAS-No	Weight %	EC-No.	Classification
Talc	14807-96-6	1 - 5%	NE	NE
Manganese sulphate, MnSO4	7785-87-7	< 1%	232-08-99	N;R51/53 Xn;R48/20/22
Sodium molybdate, Na2MoO4+2H2O	7631-95-0	< 1%	231-298-2	NE

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 you feel unwell, seek medical advice (show the label where possible).
- Ingestion:** 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. In case of respiratory difficulties practice oxygenotherapy. Possible symptoms are nausea and/or vomiting.
- Inhalation:** In case of shortness of breath, give oxygen. Possible symptoms are coughing and/or dyspnoea. Move 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.
- Eye contact:** Rinse thoroughly with plenty of water, also under the eyelids. 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:**
Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions:**
Ensure adequate ventilation. Avoid dust formation. Use personal protective equipment. Wear personal protective equipment.
- Environmental precautions:**
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:**

No special technical protective measures required.

Safe handling advice:

Keep away from open flames, hot surfaces and sources of ignition.

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:

Not applicable

Specific use(s):

Granulated fertilizer.

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:

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 flush into surface water or sanitary sewer system.

Copper sulphate, CuSO₄

Finland - Occupational Exposure Limits - 8 hour
 Germany (DFG) - MAK
 Sweden - OEL - 8 Hour

1 mg/m³ TWA
 0.1 mg/m³ MAK
 0.2 mg/m³ LLV
 1 mg/m³ LLV

Iron sulphate, FeSO₄·1H₂O

Belgium - 8 Hr VLE
 Finland - Occupational Exposure Limits - 8 hour
 Netherlands - OEL - MACs:
 Norway - 8 h:
 Portugal - TWAs
 Spain - Valores Limite Ambientales - VLE

1 mg/m³
 1 mg/m³
 1 mg/m³
 0.01 mg/m³
 1 mg/m³ TWA
 1 mg/m³ VLA-ED

UK EH40 WEL: LTEL (8 hr TWA) 1 mg/m³
STEL (15 min) 2mg/m³

Talc

Belgium - 8 Hr VLE	2 mg/m ³ TWA
Czech Republic OEL	= 10 mg/m ³ TWA = 2.0 mg/m ³ TWA
Finland - Occupational Exposure Limits - 8 hour	0.5 fibers/cm ³ TWA 5 mg/m ³ TWA
Germany TRGS900:	2 A mg/m ³
Netherlands - OEL - MACs:	0.25 mg/m ³ TWA
Portugal - TWAs	2 mg/m ³ TWA
Spain - Valores Limite Ambientales - VLE	2 mg/m ³ VLA-ED
Sweden - OEL - 8 Hour	1 mg/m ³ LLV 2 mg/m ³ LLV
UK EH40 WEL:	1 mg/m ³ TWA

Manganese sulphate, MnSO4

Belgium - 8 Hr VLE	0.2 mg/m ³
Czech Republic OEL	= 1 mg/m ³ TWA
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

Belgium - 8 Hr VLE	5 mg/m ³ TWA
Czech Republic OEL	5 mg/m ³ TWA
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
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:	Granular
Color:	Dark grey, Brownish
Odor:	No information available

Important Health Safety and Environmental Information

Decomposition temperature:	> 150°C
Solubility:	Moderately soluble
Flammability (solid, gas):	Non-flammable

Other information**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.
Hazardous decomposition products:	No decomposition if stored normally. Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION**Component information**

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

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

Product information

LD50/dermal/rat = > 2000 mg/kg

Local effects

Skin effects:	May cause skin irritation in susceptible persons.
Eye effects:	Contact with eyes may cause 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*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

*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:**

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

Germany only
Not applicable

16. OTHER INFORMATION**Text of R Phrases mentioned in Section 3**

R22 - Harmful if swallowed.

R36/38 - Irritating to eyes 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