



Material Safety Data Sheet

According to EC Directive 2001/58/EC

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Revision Number: 2

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

Identification of the substance or preparation

MSDS Ref. No.: 4196.01.01
Product name: Sierrablen Plus 15+5+22+2MgO

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
Manganese sulphate, MnSO ₄	7785-87-7	< 1%	232-08-99	N;R51/53 Xn;R48/20/22
Ironsulphate, FeSO ₄ +1H ₂ O	7720-78-7	< 1%	231-753-5	Xn;R22
Calcium sulphate dihydrate, CaSO ₄ +2H ₂ O	10101-41-4	1 - 5%	231-900-3	NE
Magnesiumoxide, MgO	1309-48-4	1 - 5%	215-171-9	NE
Sulphur, S	7704-34-9	1 - 5%	231-722-6	F; R11 Xi;R36/37/38
Ammoniumnitrate, NH ₄ NO ₃	6484-52-2	10 - 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

3. HAZARDS IDENTIFICATION

Most important hazards

None

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.
- Protection of first-aiders:** Low hazard for usual industrial or commercial handling.

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. Prevent product from entering drains.

7. HANDLING AND STORAGE

Handling:

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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	
<i>Manganese sulphate, MnSO4</i>	
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
<i>Ironsulphate, FeSO4+1H2O</i>	
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

Calcium sulphate dihydrate, CaSO4+2H2O

Austria - MAKs	6 mg/m ³ MAK
Belgium - 8 Hr VLE	10 mg/m ³ TWA
France INRS (VME)	10 mg/m ³ VME
Germany TRGS900:	6 mg/m ³ TWA
Germany (DFG) - MAK	1.5 mg/m ³ MAK 4 mg/m ³ MAK
Netherlands - OEL - MACs:	0.5 mg/m ³ MAC
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 TWA 4 mg/m ³ TWA

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

Ammoniumnitrate, NH4NO3

Czech Republic OEL	Listed
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9. PHYSICAL AND CHEMICAL PROPERTIES**General Information**

Physical State:	Solid
Appearance:	Granular
Color:	Brown, Pink, Greenish
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:	800 - 1100 kg/m ³
Decomposition temperature:	> 150°C

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

Manganese sulphate, MnSO4

LD50/oral/rat = 9 g/kg

Ironsulphate, FeSO4+1H2O

LD50/oral/rat = 1389 mg/kg

Sulphur, S

LD50/oral/rat = > 2200 mg/kg

LD50/dermal/rat = > 2000 mg/kg

LC50/inhalation/4h/rat = > 5,4 mg/l

Ammoniumnitrate, NH4NO3

LD50/oral/rat = 410 mg/kg

Product information

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

Manganese sulphate, MnSO4

Ecotoxicity effects

EC50/48h/daphnia => 100 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*Ammoniumnitrate, NH₄NO₃***Ecotoxicity effects**EC50/48h/daphnia =100 µg/l
LC50/96h/rainbow trout =10 µg/l
EC50/72h/algae = 74000 µg/l

No ecological information is known on the product nor on any of its ingredients

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.

R11 - Highly flammable.

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.

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