



# Material Safety Data Sheet

According to EC Directive 2001/58/EC

Print date: 06-Mar-2007

Revision Number: 0

Revision date:

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

### Identification of the substance or preparation

MSDS Ref. No.: 4102.01.08 XU/W50  
Product name: Sierraform K-Step  
6+0+27+2MgO+Te  
Synonyms: NPK 6+0+27 / 6+0+22.4

### Use of the Substance/Preparation

Recommended use: Granulated 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
Sand	14808-60-7	5 - 10%	238-878-4	NE
Ironsulphate, FeSO <sub>4</sub> +1H <sub>2</sub> O	7720-78-7	1 - 5%	231-753-5	Xn;R22
Talc	14807-96-6	1 - 5%	238-877-9	NE
Potassium sulphate, K <sub>2</sub> SO <sub>4</sub>	7778-80-5	> 25%	231-915-5	NE

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

## 3. HAZARDS IDENTIFICATION

Revision date:

Page 1 of 7

### 3. HAZARDS IDENTIFICATION

**Classification**

The product is classified and labelled in accordance with Directive 1999/45/EC

**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:**

Use dry chemical, CO<sub>2</sub>, water spray or "alcohol" foam.

**Unsuitable extinguishing media:**

No information available

**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. Thermal decomposition can lead to release of irritating gases and vapours.

**Special protective equipment for firefighters:**

In the event of fire and/or explosion do not breathe fumes. Wear self contained breathing apparatus for fire fighting if necessary. Evacuate area and fight fire from a safe distance.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:**

Avoid dust formation. Ensure adequate ventilation.

**Environmental precautions:**

Prevent product from entering drains. Do not contaminate surface water.

**Methods for cleaning up:**

Shovel or sweep up. Use up product completely. Packaging material is industrial waste.

## 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.

**Sand**

Austria - MAKs	4 mg/m <sup>3</sup> MAK
Belgium - 8 Hr VLE	0.1 mg/m <sup>3</sup> VLE
Finland - Occupational Exposure Limits - 8 hour	0.2 mg/m <sup>3</sup> TWA
France INRS (VME)	0.1 mg/m <sup>3</sup> VME
Netherlands - OEL - MACs:	0.075 mg/m <sup>3</sup> MAC
Norway - 8 h:	0.1 mg/m <sup>3</sup> TWA
	0.3 mg/m <sup>3</sup> TWA
Portugal - TWAs	0.05 mg/m <sup>3</sup> TWA
Spain - Valores Limite Ambientales - VLE	0.1 mg/m <sup>3</sup> VLA-ED
Sweden - OEL - 8 Hour	0.1 mg/m <sup>3</sup> LLV
UK EH40 WEL:	LTEL (8 Hr) 6 mg/m <sup>3</sup> (total inhalable dust)
	STEL (15 min) 2.4 mg/m <sup>3</sup> (total respirable dust)

*Ironsulphate, FeSO4+1H2O*

Belgium - 8 Hr VLE	1 mg/m <sup>3</sup>
Czech Republic OEL	Listed
Finland - Occupational Exposure Limits - 8 hour	1 mg/m <sup>3</sup>
Netherlands - OEL - MACs:	1 mg/m <sup>3</sup>
Norway - 8 h:	0.01 mg/m <sup>3</sup>
Portugal - TWAs	1 mg/m <sup>3</sup> TWA
Spain - Valores Limite Ambientales - VLE	1 mg/m <sup>3</sup> VLA-ED
UK EH40 WEL:	LTEL (8 hr TWA) 1 mg/m <sup>3</sup> STEL (15 min) 2mg/m <sup>3</sup>

*Talc*

Austria - MAKs	5 mg/m <sup>3</sup> MAK
Belgium - 8 Hr VLE	2 mg/m <sup>3</sup> VLE
Czech Republic OEL	Listed
Finland - Occupational Exposure Limits - 8 hour	0.5 fibers/cm <sup>3</sup> TWA 5 mg/m <sup>3</sup> TWA
Germany TRGS900:	2 A mg/m <sup>3</sup>
Netherlands - OEL - MACs:	1 mg/m <sup>3</sup> MAC
Portugal - TWAs	2 mg/m <sup>3</sup> TWA
Spain - Valores Limite Ambientales - VLE	2 mg/m <sup>3</sup> VLA-ED
Sweden - OEL - 8 Hour	1 mg/m <sup>3</sup> LLV 2 mg/m <sup>3</sup> LLV
UK EH40 WEL:	1 mg/m <sup>3</sup> TWA

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**General Information**

<b>Physical State:</b>	Solid
<b>Appearance:</b>	Granular
<b>Color:</b>	Dark grey, Brownish
<b>Odor:</b>	No information available

**Important Health Safety and Environmental Information**

<b>Flammability (solid, gas):</b>	Non-flammable
<b>Solubility:</b>	Moderately soluble

**Other information**

<b>Bulk density:</b>	800 - 1100 kg/m <sup>3</sup>
<b>Decomposition temperature:</b>	> 150°C

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under recommended storage conditions.
<b>Conditions to avoid:</b>	Keep away from open flames, hot surfaces and sources of ignition.
<b>Materials to avoid:</b>	Oxidising agents.

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

## 11. TOXICOLOGICAL INFORMATION

### Component information

*Sand*

**LD50/oral/rat =** N.A.

*Ironsulphate, FeSO<sub>4</sub>+1H<sub>2</sub>O*

**LD50/oral/rat =** 1389 mg/kg

*Potassium sulphate, K<sub>2</sub>SO<sub>4</sub>*

**LD50/oral/rat =** 6600 mg/kg

**Other information on acute toxicity:** No information available

### 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

#### Component information

*Ironsulphate, FeSO<sub>4</sub>+1H<sub>2</sub>O*

#### **Ecotoxicity effects**

EC50/48h/daphnia = >100mg/l  
LC50/96h/rainbow trout = >72.5mg/l (6d)  
EC50/72h/algae = 22mg/l

*Potassium sulphate, K<sub>2</sub>SO<sub>4</sub>*

#### **Ecotoxicity effects**

LC50/96h/rainbow trout =890 mg/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:

The product is classified and labelled in accordance with Directive 1999/45/EC.

### 16. OTHER INFORMATION

#### Text of R Phrases mentioned in Section 2

R22 - Harmful if swallowed.

#### Reason for revision:

\*\*\* Indicates changes since the last revision. This version replaces all previous versions

#### Prepared by:

Regulatory Affairs Department.

This information contained herein is, to the best of Scott's knowledge and belief, accurate and reliable as of the date of preparation of this document. However, no warranty or guarantee, express or implied, is made as to the accuracy or reliability, and Scotts shall not be liable for any loss or damage arising out of the use thereof. No authorization is given or implied to use any patented invention without a license. In addition, Scotts shall not be liable for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product

**End of Safety Data Sheet**