

# Safety Data Sheet

Issue Date 05-Jun-2014

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Version: 6

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

**Product Name** Osmocote Start 11-11-17+2MgO+TE  
**Product Code:** 87530225EA  
**Pure substance/mixture** Mixture.

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** Fertilizer (PC12). Restricted to professional users.  
**Uses Advised Against:** Consumer use [SU 21].

### 1.3. Details of the supplier of the safety data sheet

Everris International B.V. Nijverheidsweg 1-5; 6422 PD Heerlen (NL); Tel: +31 (0)45-5609100; Fax: +31 (0)45-5609190.

**For further information, please contact:** INFO-MSDS@EVERRIS.COM.

**1.4. Emergency telephone number:** IN CASE OF AN EMERGENCY CALL: +44 1235 239 670 (24h).

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Mixture

Regulation (EC) No 1272/2008 (CLP)

<b>Eye Irritation</b>	Category 1 - (H318)
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### 2.2. Label elements



**Signal Word:** Danger

### Hazard Statements:

H318 - Causes serious eye damage

Contains Ammonium nitrate;  $NH_4NO_3$ , Potassium sulphate;  $K_2SO_4$

### Precautionary Statements:

P280 - Wear eye protection/ face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Chemical Name	EC-No.	CAS No	Weight %	Classification according Regulation (EC) 1272/2008 [CLP]	REACH registration number

Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub>	229-347-8	6484-52-2	25 - 40%	Eye Irrit. 2 (H319) Ox. Sol. 3 (H272)	01-2119490981-27
Potassium sulphate; K <sub>2</sub> SO <sub>4</sub>	231-915-5	7778-80-5	10 - 25%	Eye Dam. 1 (H318)	01-2119489441-34
Iron-EDTA-13; Fe-EDTA	239-802-2	15708-41-5	0.1 - 1%	Not classified	01-2119496228-27
Calcium sulfate anhydrous; CaSO <sub>4</sub>	231-900-3	7778-18-9	0.1 - 1%	Not classified	01-2119444918-26
Magnesium oxide; MgO	215-171-9	1309-48-4	0.1 - 1%	Not classified	Exempt
Copper-EDTA; Cu-EDTA	237-864-5	14025-15-1	0.1 - 1%	Eye Irrit. 2 (H319) Acute Tox. 4 (H302)	01-2119963944-23
Iron sulphate; FeSO <sub>4</sub> +1H <sub>2</sub> O	231-753-5	7720-78-7	0.1 - 1%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302)	01-2119513203-57
Manganese sulphate; MnSO <sub>4</sub> +1H <sub>2</sub> O	232-08-99	7785-87-7	0.1 - 1%	STOT RE 2 (H373) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)	01-2119456624-35
Calcium carbonate; CaCO <sub>3</sub>	207-439-9	471-34-1	0.1 - 1%	Not classified	Exempt
Calcium fluoride; CaF <sub>2</sub>	232-188-7	7789-75-5	0.1 - 1%	Not classified	Exempt
Boric acid; H <sub>3</sub> BO <sub>3</sub>	233-139-2	10043-35-3	< 0.1%	Repr. 1B (H360FD)	01-2119486683-25
Zinc sulphate mono hydrate; ZnSO <sub>4</sub> +1H <sub>2</sub> O	231-793-3	7446-19-7	< 0.1%	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119474684-27
Sodium molybdate; Na <sub>2</sub> MoO <sub>4</sub>	231-551-7	7631-95-0	< 0.1%	Not classified	01-2119489495-21

Component	SVHC candidates
Boric acid; H <sub>3</sub> BO <sub>3</sub> 10043-35-3 (< 0.1%)	Present

Full text of H- and EUH-phrases: see section 16.

## Section 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### General Advice:

First aid measures should be executed by trained personnel only.

#### Inhalation

Dusty conditions are unlikely if product is used as intended. However, if prolonged inhalation of dust occurs, remove casualty 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 eyes with water as a precaution. If eye irritation persists, consult a specialist.

#### Ingestion:

If conscious, drink plenty of water. Do NOT induce vomiting. Rinse mouth. Consult a physician if necessary.

### 4.2. Most important symptoms and effects, both acute and delayed

None under normal processing

### 4.3. Indication of any immediate medical attention and special treatment needed

None under normal processing.

## Section 5: FIRE FIGHTING MEASURES

### 5.1. Extinguishing media

#### Suitable Extinguishing Media:

Coordinate fire extinguishing measures to fire in surrounding area.

#### Unsuitable Extinguishing Media:

High volume water jet.

**5.2. Special hazards arising from the substance or mixture**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**5.3. Advice for firefighters**

Use extinguishing agent suitable for type of surrounding fire. In the event of fire and/or explosion do not breathe fumes. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

## Section 6: ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures**

**Personal Precautions:** Avoid dust formation. Sweep-up to prevent slipping hazard.  
**For Emergency Responders:** Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

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

**6.3. Methods and material for containment and cleaning up**

*Methods for Containment:* Prevent further leakage or spillage if safe to do so.  
*Methods for Cleanup:* Shovel or sweep up. Use up product completely. Packaging material is industrial waste.

**6.4. Reference to other sections**

§ 8, 12, 13.

## Section 7: HANDLING AND STORAGE

**7.1. Precautions for safe handling**

General hygiene considerations: Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. When using, do not eat, drink or smoke.

**7.2. Conditions for safe storage, including any incompatibilities**

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 packaging should be closed well. Keep at temperatures between 0 °C and 40 °C.

Packaging Materials: Store in original container. Store in a closed container.  
 LGK (Germany) 13 (S)

**7.3. Specific end use(s)**

Specific use(s): Fertilizer; [www.everris.com](http://www.everris.com); Read and follow label instructions  
 Exposure scenario: Mixture. Not required.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1. Control parameters**

<i>Ammonium nitrate; NH<sub>4</sub>NO<sub>3</sub></i>	
Australia	N.A.
Czech Republic OEL	10.0 mg/m <sup>3</sup> TWA
<i>Potassium sulphate; K<sub>2</sub>SO<sub>4</sub></i>	
Bulgaria - OEL- TWAs	10.0 mg/m <sup>3</sup> TWA
Latvia - OEL - TWAs	10 mg/m <sup>3</sup> TWA
<i>Iron-EDTA-13; Fe-EDTA</i>	
Denmark	TWA: 1 mg/m <sup>3</sup>
Finland	TWA: 1 mg/m <sup>3</sup>
Portugal	TWA: 1 mg/m <sup>3</sup>
Spain - Valores Limite Ambientales - VLE	TWA: 1 mg/m <sup>3</sup>
Switzerland	TWA: 1 mg/m <sup>3</sup>
UK EH40 WEL (8h)	1 mg/m <sup>3</sup> TWA
<i>Calcium sulfate anhydrous; CaSO<sub>4</sub></i>	
Austria	STEL 10 mg/m <sup>3</sup>

	TWA: 5 mg/m <sup>3</sup>
Australia	10 mg/m <sup>3</sup> TWA inhalable dust
Belgium - 8 Hr TWA	10 mg/m <sup>3</sup> TWA
Bulgaria - OEL- TWAs	10.0 mg/m <sup>3</sup> TWA
FR - OEL - 8h VMEs	TWA: 10 mg/m <sup>3</sup>
Hungary - OEL - TWAs	6 mg/m <sup>3</sup> TWA
Ireland	TWA: 10 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup>
Latvia - OEL - TWAs	4 mg/m <sup>3</sup> TWA (hydrogenated, plaster dust)
Malaysia	10 mg/m <sup>3</sup> TWA (particulate matter containing no Asbestos and <1% crystalline Silica)
Poland	TWA: 10 mg/m <sup>3</sup>
Portugal	TWA: 10 mg/m <sup>3</sup>
Slovenia - OEL - TWAs	6 mg/m <sup>3</sup> TWA (respirable fraction)
Spain - Valores Limite Ambientales - VLE	TWA: 10 mg/m <sup>3</sup>
Singapore - OEL:PELs	10 mg/m <sup>3</sup> PEL
Switzerland	TWA: 3 mg/m <sup>3</sup>
<i>Magnesium oxide; MgO</i>	
Austria	STEL 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>
Australia	10 mg/m <sup>3</sup> TWA fume
Belgium - 8 Hr TWA	10 mg/m <sup>3</sup>
Bulgaria - OEL- TWAs	10.0 mg/m <sup>3</sup> TWA
Czech Republic OEL	5 mg/m <sup>3</sup> TWA
Denmark	TWA: 6 mg/m <sup>3</sup>
FR - OEL - 8h VMEs	TWA: 10 mg/m <sup>3</sup>
Hungary - OEL - TWAs	6 mg/m <sup>3</sup> TWA
Iceland - OEL - 8 Hour	6 mg/m <sup>3</sup> TWA Mg
Ireland	TWA: 4 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>
Korea - ISHA - OEL - TWAs	10 mg/m <sup>3</sup> TWA (Serial No. 277)
Malaysia	10 mg/m <sup>3</sup> TWA (fume)
Norway	TWA: 10 mg/m <sup>3</sup> STEL: 20 mg/m <sup>3</sup>
Poland	TWA: 10 mg/m <sup>3</sup>
Portugal	TWA: 10 mg/m <sup>3</sup>
Romania - OEL - TWAs	5 mg/m <sup>3</sup> TWA (fume)
Spain - Valores Limite Ambientales - VLE	TWA: 10 mg/m <sup>3</sup>
Singapore - OEL:PELs	10 mg/m <sup>3</sup> PEL
Switzerland	TWA: 3 mg/m <sup>3</sup>
UK EH40 WEL (8h)	10 mg/m <sup>3</sup>
<i>Copper-EDTA; Cu-EDTA</i>	
Austria	STEL 0.4 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>
Australia	N.A.
Finland	TWA: 0.02 mg/m <sup>3</sup>
<i>Iron sulphate; FeSO<sub>4</sub>+1H<sub>2</sub>O</i>	
Belgium - 8 Hr TWA	1 mg/m <sup>3</sup>
Denmark	TWA: 1 mg/m <sup>3</sup>
Finland	TWA: 1 mg/m <sup>3</sup>
Ireland	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>
Norway	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>
Portugal	TWA: 1 mg/m <sup>3</sup>
Spain - Valores Limite Ambientales - VLE	TWA: 1 mg/m <sup>3</sup>
Switzerland	TWA: 1 mg/m <sup>3</sup>
UK EH40 WEL (8h)	LTEL (8 hr TWA) 1 mg/m <sup>3</sup> STEL (15 min) 2mg/m <sup>3</sup>
<i>Manganese sulphate; MnSO<sub>4</sub>+1H<sub>2</sub>O</i>	
Austria	STEL 2 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>
Australia	0.2 mg/m <sup>3</sup>
Belgium - 8 Hr TWA	0.2 mg/m <sup>3</sup>
Denmark	TWA: 0.2 mg/m <sup>3</sup>
Finland	TWA: 0.02 mg/m <sup>3</sup> TWA: 0.2 mg/m <sup>3</sup>
Ireland	TWA: 0.2 mg/m <sup>3</sup>

	STEL: 0.6 mg/m <sup>3</sup>
Japan	0.2 mg/m <sup>3</sup> OEL Mn
NL MAC - TWA:	STEL: 0.05 mg/m <sup>3</sup> TWA: 0.2 mg/m <sup>3</sup>
Norway	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.1 ppm
Poland	TWA: 0.05 mg/m <sup>3</sup>
Portugal	TWA: 0.2 mg/m <sup>3</sup>
Spain - Valores Limite Ambientales - VLE	TWA: 0.2 mg/m <sup>3</sup> TWA: 0.05 mg/m <sup>3</sup>
Switzerland	TWA: 0.5 mg/m <sup>3</sup>
UK EH40 WEL (8h)	5 mg/m <sup>3</sup>
<i>Calcium carbonate; CaCO<sub>3</sub></i>	
Australia	10 mg/m <sup>3</sup> TWA inhalable dust
Czech Republic OEL	10.0 mg/m <sup>3</sup> TWA
FR - OEL - 8h VMEs	TWA: 10 mg/m <sup>3</sup>
Korea - ISHA - OEL - TWAs	10 mg/m <sup>3</sup> TWA (Serial No. 572)
Latvia - OEL - TWAs	6 mg/m <sup>3</sup> TWA
Poland	TWA: 10 mg/m <sup>3</sup>
Portugal	TWA: 10 mg/m <sup>3</sup>
Switzerland	TWA: 3 mg/m <sup>3</sup>
UK EH40 WEL (8h)	10 mg/m <sup>3</sup> TWA (inhalable) 4 mg/m <sup>3</sup> TWA (respirable)
<i>Calcium fluoride; CaF<sub>2</sub></i>	
Denmark	TWA: 2.5 mg/m <sup>3</sup>
Ireland	TWA: 2.5 mg/m <sup>3</sup> STEL: 7.5 mg/m <sup>3</sup>
Latvia - OEL - TWAs	0.5 mg/m <sup>3</sup> TWA (as F, listed under Hydrofluoric acid salts)
Poland	TWA: 2 mg/m <sup>3</sup>
Portugal	TWA: 2.5 mg/m <sup>3</sup>
Romania - OEL - TWAs	1 mg/m <sup>3</sup> TWA
Russia TWA	0.5 mg/m <sup>3</sup> TWA 1104
<i>Boric acid; H<sub>3</sub>BO<sub>3</sub></i>	
Australia	12 mg/m <sup>3</sup>
Belgium - 8 Hr TWA	2 mg/m <sup>3</sup> TWA borate
Bulgaria - OEL- TWAs	5.0 mg/m <sup>3</sup> TWA (as B, listed under Boron and its inorganic compounds)
Ireland	TWA: 2 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>
Latvia - OEL - TWAs	10 mg/m <sup>3</sup> TWA
Portugal	STEL: 6 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>
Spain - Valores Limite Ambientales - VLE	STEL: 6 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>
Switzerland	STEL: 1.8 mg/m <sup>3</sup> TWA: 1.8 mg/m <sup>3</sup>
<i>Sodium molybdate; Na<sub>2</sub>MoO<sub>4</sub></i>	
Austria	STEL 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>
Czech Republic OEL	5 mg/m <sup>3</sup> TWA
Denmark	TWA: 5 mg/m <sup>3</sup>
Finland	TWA: 0.5 mg/m <sup>3</sup>
FR - OEL - 8h VMEs	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>
Ireland	TWA: 10 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup>
Norway	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>
Poland	STEL: 10 mg/m <sup>3</sup> TWA: 4 mg/m <sup>3</sup>
Portugal	TWA: 0.5 mg/m <sup>3</sup>
Spain - Valores Limite Ambientales - VLE	TWA: 0.5 mg/m <sup>3</sup>
Switzerland	TWA: 5 mg/m <sup>3</sup>

**Derived No Effect Level (DNEL)**

Component	Oral	Dermal	Inhalation
Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub>	36 mg/m <sup>3</sup>	5.12 mg/kg bw/day	8.9 mg/m <sup>3</sup>

6484-52-2 ( 25 - 40% )			
Potassium sulphate; K <sub>2</sub> SO <sub>4</sub> 7778-80-5 ( 10 - 25% )		21.3 mg/kg bw/day	37.6 mg/m <sup>3</sup>
Manganese sulphate; MnSO <sub>4</sub> +1H <sub>2</sub> O 7785-87-7 ( 0.1 - 1% )	37.6 mg/m <sup>3</sup>	0.004 mg/kg bw/day	0.2 mg/m <sup>3</sup>
Zinc sulphate mono hydrate; ZnSO <sub>4</sub> +1H <sub>2</sub> O 7446-19-7 ( < 0.1% )		8.3 mg/kg bw/day	1 mg/m <sup>3</sup>

**Predicted No Effect Concentration (PNEC)**

No data available

Component	Fresh Water	Freshwater sediment	Sea Water	Sea sediment	Soil	Impact on Sewage Treatment
Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub> 6484-52-2 ( 25 - 40% )						18 mg/l
Potassium sulphate; K <sub>2</sub> SO <sub>4</sub> 7778-80-5 ( 10 - 25% )	0.68 mg/l		0.068 mg/l			10 mg/l
Manganese sulphate; MnSO <sub>4</sub> +1H <sub>2</sub> O 7785-87-7 ( 0.1 - 1% )	0.013 mg/l	0.011 mg/kg	0 mg/l	0.001 mg/kg	25.1 mg/kg	25.1 mg/kg
Zinc sulphate mono hydrate; ZnSO <sub>4</sub> +1H <sub>2</sub> O 7446-19-7 ( < 0.1% )	20.6 µg/l		6.1 µg/l	56.5 mg/kg	35.6 mg/kg	100 µg/l

**8.2. Exposure controls****Personal protective equipment****Eye/Face Protection**

Wear eye/face protection

**Hand protection**

Gloves. Nitrile rubber (0.26 mm). Break through time. &gt; 8 h.

**Respiratory Protection**

Not required; except in case of aerosol formation. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit

**Skin and body protection:**

Lightweight 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.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties****Physical State:**

Solid

**Appearance:**

Granules

**Color:**

brown.

**Odor:**

None

**Bulk density:**846 - 996 kg/m<sup>3</sup>**Melting Point/Freezing Point:**

No data available

**Boiling Point/Range:**

Solid. Not applicable.

**Flash Point:**

Solid. Not applicable.

**Evaporation Rate:**

Solid. Not applicable.

**Flammability (solid, gas):**

Not flammable

**Vapor Pressure:**

Solid. Not applicable.

**Vapour density**

Solid. Not applicable.

**Relative density**

No data available

**Water Solubility:**

No data available

**Solubility(ies)**

No data available

**Partition Coefficient:**

Solid. Not applicable.

**Autoignition Temperature:**

No data available

**Decomposition temperature:**

No data available

**Explosive Properties:**

Doesn't present explosion hazard.

**9.2. Other information**

VOC Content (%):

Solid. Not applicable.

## Section 10: STABILITY AND REACTIVITY

**10.1. Reactivity**

Not reactive.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

None under normal processing. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**10.4. Conditions to avoid**

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

**10.5. Incompatible materials**

Keep away from catalysts like derivatives of hexavalent chromium and metal halides. Keep away from flammable products (fuels) like charcoal, wood, flour, soot etc.

**10.6. Hazardous decomposition products**

None under normal processing. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

## Section 11: TOXICOLOGICAL INFORMATION

**11.1. Information on toxicological effects****Product Information**

If this product is a mixture, the classification is not based on toxicology studies for this product, but is based solely on toxicology studies for ingredients found within this product. More detailed substance and/or ingredient information may be provided in the other sections of this SDS

**Information on the Likely Routes of Exposure (inhalation, ingestion, skin and eye contact):**

<b>Inhalation</b>	Inhalation of dust in high concentration may cause irritation of respiratory system.
<b>Eye contact</b>	May cause slight irritation.
<b>Skin Contact</b>	May cause irritation.
<b>Ingestion</b>	May cause gastrointestinal discomfort if consumed in large amounts.

**Information on Toxicological Effects**

None known

**Acute Toxicity**

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral): 29,024.00 mg/kg

**Unknown Acute Toxicity:** 0% of the mixture consists of ingredient(s) of unknown toxicity.Potassium sulphate; K<sub>2</sub>SO<sub>4</sub> (7778-80-5)

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub>	= 2217 mg/kg ( Rat )	> 5000 mg/kg	> 88.8 mg/L ( Rat ) 4 h
Potassium sulphate; K <sub>2</sub> SO <sub>4</sub>	= 6600 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	N.E.
Iron-EDTA-13; Fe-EDTA	= 5 g/kg ( Rat ) > 5000 mg/kg ( Rat )	> 5000 mg/kg ( Rat )	> 2.05 g/m <sup>3</sup> ( Rat ) 4 h
Calcium sulfate anhydrous; CaSO <sub>4</sub>	> 3000 mg/kg ( Rat )		
Magnesium oxide; MgO	= 3870 mg/kg ( Rat ) = 3990 mg/kg ( Rat )		
Iron sulphate; FeSO <sub>4</sub> +1H <sub>2</sub> O	= 500 mg/kg ( Rat )	= 155 mg/kg ( Rat )	
Manganese sulphate; MnSO <sub>4</sub> +1H <sub>2</sub> O	= 2125 mg/kg ( Rat )		> 4.98 mg/L (Rat) 4h
Calcium carbonate; CaCO <sub>3</sub>	= 6450 mg/kg ( Rat )		

Calcium fluoride; CaF <sub>2</sub>	= 4250 mg/kg ( Rat )		
Boric acid; H <sub>3</sub> BO <sub>3</sub>	= 2660 mg/kg ( Rat )	> 2000 mg/kg	> 0.16 mg/L ( Rat ) 4 h
Sodium molybdate; Na <sub>2</sub> MoO <sub>4</sub>	= 4233 mg/kg ( Rat )	> 2000 mg/kg (Rat)	> 2080 mg/m <sup>3</sup> ( Rat ) 4 h

#### **Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure:**

If this product is a mixture, the classification is not based on toxicology studies for this product, but is based solely on toxicology studies for ingredients found within this product. More detailed substance and/or ingredient information may be provided in the other sections of this SDS

<b>Serious eye damage/eye irritation</b>	Classification based on individual ingredients of the mixture.
<b>Respiratory or skin sensitization</b>	Classification based on individual ingredients of the mixture.
<b>Germ Cell Mutagenicity</b>	Classification based on individual ingredients of the mixture.
<b>Carcinogenicity</b>	Classification based on individual ingredients of the mixture.
<b>Reproductive Toxicity</b>	Classification based on individual ingredients of the mixture.
<b>STOT - Single Exposure</b>	Classification based on individual ingredients of the mixture.
<b>STOT - Repeated Exposure</b>	Classification based on individual ingredients of the mixture.
<b>Aspiration Hazard</b>	Classification based on individual ingredients of the mixture.

## Section 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### **Ecotoxicity**

Should not be released into the environment

#### **Unknown Aquatic Toxicity**

8% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub>	-	65 - 85: 48 h Cyprinus carpio mg/L LC50 semi-static	-	-
Potassium sulphate; K <sub>2</sub> SO <sub>4</sub>	2900: 72 h Desmodesmus subspicatus mg/L EC50	653: 96 h Lepomis macrochirus mg/L LC50 3550: 96 h Lepomis macrochirus mg/L LC50 static 510 - 880: 96 h Pimephales promelas mg/L LC50 static	-	890: 48 h Daphnia magna mg/L EC50
Calcium sulfate anhydrous; CaSO <sub>4</sub>	-	2980: 96 h Lepomis macrochirus mg/L LC50 static 1970: 96 h Pimephales promelas mg/L LC50 static	-	3200: 120 h Nitscheria linearis mg/L EC50
Iron sulphate; FeSO <sub>4</sub> +1H <sub>2</sub> O	-	925: 96 h Poecilia reticulata mg/L LC50 static 0.56: 96 h Cyprinus carpio mg/L LC50 semi-static	-	152: 48 h Daphnia magna mg/L EC50 6.15 - 9.26: 48 h Daphnia magna mg/L EC50 Static
Boric acid; H <sub>3</sub> BO <sub>3</sub>	-	1020: 72 h Carassius auratus mg/L LC50 flow-through	-	115 - 153: 48 h Daphnia magna mg/L EC50

### 12.2. Persistence and degradability

#### **Persistence and Degradability:**

No persistent or cumulative effects were observed.

### 12.3. Bioaccumulative potential



**Bioaccumulation:** Does not bioaccumulate.

Chemical Name	LOGPOW
Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub>	-3.1
Boric acid; H <sub>3</sub> BO <sub>3</sub>	-0.757

**12.4. Mobility in soil** No data available.

**12.5. PBT and vPvB assessment** No data available.

**12.6. Other adverse effects** No data available.

## Section 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Disposal of Wastes:** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging:** Do not reuse container.

**Other Information** Use up product completely. Packaging material is industrial waste.

## Section 14: TRANSPORT INFORMATION

### IMO / IMDG

**14.1 UN-No:** Not regulated

**14.2 Proper shipping name:** Not regulated

**14.3 Hazard Class:** Not regulated

**14.4 Packing group:** Not regulated

**14.5 Marine Pollutant:** No information available

**14.6 Special Provisions** None

**14.7 Bulk transport according Annex II of MARPOL and IBC Code** No data available

### ADR/RID

**14.1 UN-No:** Not regulated

**14.2 Proper shipping name:** Not regulated

**14.3 Hazard Class:** Not regulated

**14.4 Packing group:** Not regulated

**14.5 Environmental Hazard** Not regulated

**14.6 Special Provisions** None

### IATA

**14.1 UN-No:** Not regulated

**14.2 Proper shipping name:** Not regulated

**14.3 Hazard Class:** Not regulated

**14.4**

<b>Packing group:</b>	Not regulated
<b>14.5 Environmental Hazard</b>	Not regulated
<b>14.6 Special Provisions</b>	None

## Section 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Belgium

Component	Belgium - Major Accidents - Qualifying Quantities for Safety Reporting	Belgium - Major Accidents - Qualifying Quantities for Accident Prevention
Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub> 6484-52-2 ( 25 - 40% )	2500 tonne (technical grade; (a) this applies to Ammonium nitrate in which the Nitrogen content as a result of Ammonium nitrate is (i) between 24.5% and 28% by weight and which contain ≤0.4% total combustible or (ii) >28% by weight and which contain ≤0.2% combustible substances (b) aqueous Ammonium nitrate solutions in which the concentration of Ammonium nitrate is >80% by weight)	350 tonne

#### Denmark

Denmark No data available

#### France

ICPE Classified installation: article 1331 (Type III)

#### Germany

LGK (Germany) 13 (S)  
Water Endangering Class (WGK): 1 (Everris classification)  
Gefahrstoffverordnung (Germany) TRGS 511 C III

Component	German WGK Section
Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub> 6484-52-2 ( 25 - 40% )	1
Potassium sulphate; K <sub>2</sub> SO <sub>4</sub> 7778-80-5 ( 10 - 25% )	1
Iron-EDTA-13; Fe-EDTA 15708-41-5 ( 0.1 - 1% )	2
Calcium sulfate anhydrous; CaSO <sub>4</sub> 7778-18-9 ( 0.1 - 1% )	class 1
Magnesium oxide; MgO 1309-48-4 ( 0.1 - 1% )	1
Copper-EDTA; Cu-EDTA 14025-15-1 ( 0.1 - 1% )	2
Iron sulphate; FeSO <sub>4</sub> +1H <sub>2</sub> O 7720-78-7 ( 0.1 - 1% )	1
Manganese sulphate; MnSO <sub>4</sub> +1H <sub>2</sub> O 7785-87-7 ( 0.1 - 1% )	2
Calcium carbonate; CaCO <sub>3</sub> 471-34-1 ( 0.1 - 1% )	NWG
Calcium fluoride; CaF <sub>2</sub> 7789-75-5 ( 0.1 - 1% )	1
Boric acid; H <sub>3</sub> BO <sub>3</sub> 10043-35-3 ( < 0.1% )	1
Zinc sulphate mono hydrate; ZnSO <sub>4</sub> +1H <sub>2</sub> O 7446-19-7 ( < 0.1% )	3
Sodium molybdate; Na <sub>2</sub> MoO <sub>4</sub> 7631-95-0 ( < 0.1% )	1

Component	EU - Explosives Precursors Marketing and Use (98/2013) - Substances Subject to	EU - REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous

	Suspicious Transactions Reporting	Substances
Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub> 6484-52-2 ( 25 - 40% )	Present (in concentration of 16% by weight of Nitrogen in relation to Ammonium nitrate or higher)	Use restricted. See item 58. (Conditions of restrictions 27 June 2010)
Boric acid; H <sub>3</sub> BO <sub>3</sub> 10043-35-3 ( < 0.1% )		Use restricted. See item 30.

Component	EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances for Eventual Inclusion in Annex XIV
Boric acid; H <sub>3</sub> BO <sub>3</sub> 10043-35-3 ( < 0.1% )	Reason for inclusion Toxic for reproduction, Article 57c (233-139-2)

### 15.2 Chemical safety assessment

Substance(s) usage is covered according to Reach regulation 1907/2006

Take note of Dir. 98/24/EC on the protection of the health and safety of workers from risks related to chemical agents at work

Chemical Name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub>	Use restricted. See item 58.	
Boric acid; H <sub>3</sub> BO <sub>3</sub>	Use restricted. See item 30.	

Chemical Name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
Ammonium nitrate; NH <sub>4</sub> NO <sub>3</sub>	350	2500

## Section 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

- H302 - Harmful if swallowed
- H319 - Causes serious eye irritation
- H272 - May intensify fire; oxidizer
- H318 - Causes serious eye damage
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects
- H315 - Causes skin irritation
- H373 - May cause damage to the kidneys/ liver/ eyes/ brain/ respiratory system/ central nervous system through prolonged or repeated exposure in contact with skin
- H411 - Toxic to aquatic life with long lasting effects
- H360FD - May damage fertility. May damage the unborn child

### Key or legend to abbreviations and acronyms used in the safety data sheet

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail

ICAO: International Civil Aviation Organization

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PNEC: Predicted No Effect Concentration

DNEL: Derived No-Effect Level

REACH: Registration, Evaluation, Authorization of Chemicals

CLP: EU-GHS; Classification, Labelling and Packaging

OEL: Occupational Exposure Limit

TWA: Time Weighted Average

ATE: Acute Toxicity Estimate

EUH phrase: CLP (EU) specific hazard statement

LD50: Lethal dose, 50%.

LC50: Lethal concentration, 50%.

SVHC: Substance of Very High Concern.

### Classification procedure

- Calculation method
- Expert judgment and weight of evidence determination

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<b>Key literature references and sources for data</b>	According to EC Regulation 1907/2006 (Reach), Regulation EU No. 2015/830. Regulation (EC) No 1272/2008 (CLP).
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