



## SAFETY DATA SHEET CALCIUM NITRATE SOL

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name                    CALCIUM NITRATE SOL  
Product number                58271  
Synonyms; trade names        FERTIGRO CN

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

Identified uses                 Agriculture, Horticulture Feed Additive

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

Supplier                         Univar  
                                      Aquarius House  
                                      6 Mid Point Business Park  
                                      Bradford  
                                      BD3 7AY  
                                      +44 1274 267300  
                                      +44 1274 267306  
                                      sds@univar.com

#### 1.4. Emergency telephone number

Emergency telephone         SGS - +32 (0)3 575 55 55 (24h)

Sds No.                         58271

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (EC 1272/2008)

Physical hazards                Not Classified  
Health hazards                 Acute Tox. 4 - H302 Eye Dam. 1 - H318  
Environmental hazards         Not Classified

#### 2.2. Label elements

##### Hazard pictograms



Signal word                    Danger

Hazard statements             H302 Harmful if swallowed.  
                                      H318 Causes serious eye damage.

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**Precautionary statements**

P270 Do not eat, drink or smoke when using this product.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P330 Rinse mouth.  
 P501 Dispose of contents/ container in accordance with national regulations.

**Contains** CALCIUM NITRATE

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>CALCIUM NITRATE</b>	<b>45 - 51,2%</b>
CAS number: 10124-37-5	EC number: 233-332-1
<b>Classification</b>	
Ox. Liq. 2 - H272	
Acute Tox. 4 - H302	
Eye Dam. 1 - H318	

The full text for all hazard statements is displayed in Section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**Inhalation** Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

**Ingestion** Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues.

**Skin contact** Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.

**Eye contact** Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

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

**Ingestion** May cause discomfort if swallowed. May cause nausea, headache, dizziness and intoxication.

**Eye contact** Causes serious eye damage. Redness.

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

**Notes for the doctor** Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

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

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<b>Specific hazards</b>	Oxides of the following substances: Nitrogen.
<b>Hazardous combustion products</b>	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.
<b><u>5.3. Advice for firefighters</u></b>	
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

### SECTION 6: Accidental release measures

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

<b>Personal precautions</b>	Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation.
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#### **6.2. Environmental precautions**

<b>Environmental precautions</b>	Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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#### **6.3. Methods and material for containment and cleaning up**

<b>Methods for cleaning up</b>	Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water.
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#### **6.4. Reference to other sections**

<b>Reference to other sections</b>	For personal protection, see Section 8. For waste disposal, see Section 13.
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### SECTION 7: Handling and storage

#### **7.1. Precautions for safe handling**

<b>Usage precautions</b>	Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation.
<b>Advice on general occupational hygiene</b>	Do not eat, drink or smoke when using this product.

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

<b>Storage precautions</b>	Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store at temperatures between -10°C and 30°C. Do not store near heat sources or expose to high temperatures. Keep away from combustible materials. Avoid contact with strong reducing agents. Avoid contact with acids and alkalis. Avoid contact with oxidising agents.
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#### **7.3. Specific end use(s)**

<b>Specific end use(s)</b>	The identified uses for this product are detailed in Section 1.2.
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### SECTION 8: Exposure controls/Personal protection

#### **8.1. Control parameters**

<b>DNEL</b>	Professional - Dermal; Long term systemic effects: 13,9 mg/kg/day Professional - Inhalation; Long term systemic effects: 98 mg/m <sup>3</sup> General population - Oral; Long term systemic effects: 8,33 mg/kg/day General population - Inhalation; Long term systemic effects: 29 mg/m <sup>3</sup> General population - Dermal; Long term systemic effects: 8,33 mg/kg/day
<b>PNEC</b>	- Fresh water; 0,45 mg/l - marine water; 0,045 mg/l - Intermittent release, Fresh water; 4,5 mg/l - STP; 18 mg/l

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### 8.2. Exposure controls

#### Protective equipment



#### Appropriate engineering controls

Provide adequate ventilation.

#### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. EN 166

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. EN 374

#### Other skin and body protection

Wear suitable protective clothing as protection against splashing or contamination.

#### Hygiene measures

Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

#### Respiratory protection

Respiratory protection may be required if excessive airborne contamination occurs. Use respiratory equipment with particle filter, type P2.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Odourless.
Odour threshold	Data lacking.
pH	pH (concentrated solution): 2,5 - 5
Melting point	-15°C
Initial boiling point and range	Not applicable.
Flash point	Not applicable.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	2300 hPa @ 20°C
Vapour density	No information available.
Relative density	1.41 - 1.51 @ °C
Bulk density	No information available.

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<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient</b>	Data lacking.
<b>Auto-ignition temperature</b>	No information available.
<b>Decomposition Temperature</b>	Data lacking.
<b>Viscosity</b>	6.5 mPa s @ °C
<b>Explosive properties</b>	Not considered to be explosive.
<b>Explosive under the influence of a flame</b>	Not considered to be explosive.
<b>Oxidising properties</b>	Does not meet the criteria for classification as oxidising. The product contains a substance classified as oxidising.

### 9.2. Other information

<b>Other information</b>	Not determined.
<b>Refractive index</b>	No information available.
<b>Particle size</b>	No information available.
<b>Molecular weight</b>	No information available.
<b>Volatility</b>	No information available.
<b>Saturation concentration</b>	No information available.
<b>Critical temperature</b>	No information available.
<b>Volatile organic compound</b>	Not applicable.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
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### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures.
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### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	Take any precaution to avoid mixing with combustibles and reducing agents. Hazardous decomposition products will be formed at elevated temperatures. Oxides of nitrogen.
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### 10.4. Conditions to avoid

<b>Conditions to avoid</b>	Avoid excessive heat for prolonged periods of time.
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### 10.5. Incompatible materials

<b>Materials to avoid</b>	Take any precaution to avoid mixing with combustibles and reducing agents. May be corrosive to metals.
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### 10.6. Hazardous decomposition products

<b>Hazardous decomposition products</b>	Oxides of carbon. When heated and in case of fire, very toxic nitrogen oxides are formed.
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## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

<b>Acute toxicity - oral</b>	
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<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	300.0
<b>Species</b>	Rat
<b>ATE oral (mg/kg)</b>	980.39215686
<b><u>Acute toxicity - dermal</u></b>	
<b>Acute toxicity dermal (LD<sub>50</sub> mg/kg)</b>	2,000.0
<b>Species</b>	Rat
<b><u>Skin corrosion/irritation</u></b>	
<b>Skin corrosion/irritation</b>	Based on available data the classification criteria are not met.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Risk of serious damage to eyes.
<b><u>Respiratory sensitisation</u></b>	
<b>Respiratory sensitisation</b>	Based on available data the classification criteria are not met.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Based on available data the classification criteria are not met.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	Based on available data the classification criteria are not met.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Based on available data the classification criteria are not met.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Based on available data the classification criteria are not met.
<b>Inhalation</b>	May cause respiratory system irritation.
<b>Ingestion</b>	Gastrointestinal symptoms, including upset stomach.
<b>Skin contact</b>	May be slightly irritating to skin.
<b>Eye contact</b>	Causes serious eye damage.
<b><u>Toxicological information on ingredients.</u></b>	

**CALCIUM NITRATE****Acute toxicity - oral**

<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	423.0
<b>Species</b>	Rat

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ATE oral (mg/kg)	423.0
<b><u>Acute toxicity - dermal</u></b>	
Notes (dermal LD <sub>50</sub> )	LD <sub>50</sub> >2000 mg/kg, Dermal, Rat
<b><u>Serious eye damage/irritation</u></b>	
Serious eye damage/irritation	Causes serious eye damage. Rabbit OECD 405
<b><u>Respiratory sensitisation</u></b>	
Respiratory sensitisation	Not sensitising.
<b><u>Skin sensitisation</u></b>	
Skin sensitisation	Not sensitising.
<b><u>Reproductive toxicity</u></b>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.

### SECTION 12: Ecological information

**Ecotoxicity** The product is not expected to be hazardous to the environment.

#### **12.1. Toxicity**

**Toxicity** Not considered toxic to fish.

#### **Acute aquatic toxicity**

**Acute toxicity - fish** LC<sub>50</sub>, 1378 hours: 96 mg/l, Fish

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 490 hours: 48 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** ErC50, 10 days: >1700 mg/l, Algae

#### **Ecological information on ingredients.**

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#### **Acute aquatic toxicity**

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 1378 mg/l, Fish

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 490 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 10 days: 1700 mg/l, Algae

#### **12.2. Persistence and degradability**

**Persistence and degradability** The product is readily biodegradable.

#### **12.3. Bioaccumulative potential**

**Bioaccumulative potential** The product is not bioaccumulating.

**Partition coefficient** Data lacking.

#### **12.4. Mobility in soil**

**Mobility** The product is soluble in water.

#### **12.5. Results of PBT and vPvB assessment**

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**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

### 12.6. Other adverse effects

**Other adverse effects** No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** Do not puncture or incinerate, even when empty. Waste should be treated as controlled waste.

**Disposal methods** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

## SECTION 14: Transport information

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

### 14.1. UN number

Not applicable.

### 14.2. UN proper shipping name

Not applicable.

### 14.3. Transport hazard class(es)

No transport warning sign required.

### 14.4. Packing group

Not applicable.

### 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**

No.

### 14.6. Special precautions for user

Not applicable.

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

**Transport in bulk according to** Not applicable.

**Annex II of MARPOL 73/78 and the IBC Code**

## SECTION 15: Regulatory information

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

**EU legislation** Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Commission Regulation (EU) No 2015/830 of 28 May 2015.

### 15.2. Chemical safety assessment



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A chemical safety assessment has been carried out.

### SECTION 16: Other information

<b>Abbreviations and acronyms used in the safety data sheet</b>	<p>ATE: Acute Toxicity Estimate.</p> <p>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</p> <p>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</p> <p>CAS: Chemical Abstracts Service.</p> <p>DNEL: Derived No Effect Level.</p> <p>IATA: International Air Transport Association.</p> <p>IMDG: International Maritime Dangerous Goods.</p> <p>Kow: Octanol-water partition coefficient.</p> <p>LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.</p> <p>LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).</p> <p>PBT: Persistent, Bioaccumulative and Toxic substance.</p> <p>PNEC: Predicted No Effect Concentration.</p> <p>REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.</p> <p>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</p> <p>vPvB: Very Persistent and Very Bioaccumulative.</p> <p>IARC: International Agency for Research on Cancer.</p> <p>MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.</p> <p>cATpE: Converted Acute Toxicity Point Estimate.</p> <p>BCF: Bioconcentration Factor.</p> <p>BOD: Biochemical Oxygen Demand.</p> <p>EC<sub>50</sub>: 50% of maximal Effective Concentration.</p> <p>LOAEC: Lowest Observed Adverse Effect Concentration.</p> <p>LOAEL: Lowest Observed Adverse Effect Level.</p> <p>NOAEC: No Observed Adverse Effect Concentration.</p> <p>NOAEL: No Observed Adverse Effect Level.</p> <p>NOEC: No Observed Effect Concentration.</p> <p>LOEC: Lowest Observed Effect Concentration.</p> <p>DMEL: Derived Minimal Effect Level.</p> <p>EL50: Exposure Limit 50</p> <p>hPa: Hectopascal</p> <p>LL50: Lethal Loading fifty</p> <p>OECD: Organisation for Economic Co-operation and Development</p> <p>POW: Octanol-water partition coefficient</p> <p>SCBA: self-contained breathing apparatus</p> <p>STP: Sewage Treatment Plant</p> <p>VOC: Volatile Organic Compounds</p> <p>UN: United Nations</p>
<b>Classification abbreviations and acronyms</b>	<p>Acute Tox. = Acute toxicity</p> <p>Aquatic Acute = Hazardous to the aquatic environment (acute)</p> <p>Aquatic Chronic = Hazardous to the aquatic environment (chronic)</p>
<b>Revision comments</b>	NOTE: Lines within the margin indicate significant changes from the previous revision.
<b>Revision date</b>	20/09/2016
<b>Version number</b>	1.000

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<b>SDS number</b>	58271
<b>SDS status</b>	Approved.
<b>Hazard statements in full</b>	H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H318 Causes serious eye damage.
<b>Signature</b>	I. Kwakernaat