



## SAFETY DATA SHEET CALCIUM CHLORIDE ANHYDROUS

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

#### 1.1. Product identifier

|                           |                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------|
| Product name              | CALCIUM CHLORIDE ANHYDROUS                                                           |
| Product number            | 10522                                                                                |
| Synonyms; trade names     | BRINERS CHOICE, CALCIUM CHLORIDE 94 - 96% GRANULAR, CALCIUM CHLORIDE PRILLS 94 - 97% |
| REACH registration number | 01-2119494219-28-XXXX                                                                |
| CAS number                | 10043-52-4                                                                           |
| EC number                 | 233-140-8                                                                            |

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

|                 |                                            |
|-----------------|--------------------------------------------|
| Identified uses | Food industry Agriculture Process Additive |
|-----------------|--------------------------------------------|

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

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

#### 1.4. Emergency telephone number

|                     |                                |
|---------------------|--------------------------------|
| Emergency telephone | SGS - +32 (0)3 575 55 55 (24h) |
| Sds No.             | 10522                          |

### SECTION 2: Hazards identification

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

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

|                       |                     |
|-----------------------|---------------------|
| Physical hazards      | Not Classified      |
| Health hazards        | Eye Irrit. 2 - H319 |
| Environmental hazards | Not Classified      |

#### 2.2. Label elements

|           |           |
|-----------|-----------|
| EC number | 233-140-8 |
|-----------|-----------|

Pictogram



## CALCIUM CHLORIDE ANHYDROUS

|                                 |                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Signal word</b>              | Warning                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Hazard statements</b>        | H319 Causes serious eye irritation.                                                                                                                                                                                                                                                                                                                                     |
| <b>Precautionary statements</b> | P264 Wash contaminated skin thoroughly after handling.<br>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.<br>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P337+P313 If eye irritation persists: Get medical advice/ attention. |

### 2.3. Other hazards

May be slightly irritating to skin.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

|                                              |                      |                                                  |
|----------------------------------------------|----------------------|--------------------------------------------------|
| <b>CALCIUM CHLORIDE</b>                      |                      | <b>94 - 97%</b>                                  |
| CAS number: 10043-52-4                       | EC number: 233-140-8 | REACH registration number: 01-2119494219-28-XXXX |
| <b>Classification</b><br>Eye Irrit. 2 - H319 |                      |                                                  |
| <b>SODIUM CHLORIDE</b>                       |                      | <b>0 - 2%</b>                                    |
| CAS number: 7647-14-5                        | EC number: 231-598-3 |                                                  |
| <b>Classification</b><br>Not Classified      |                      |                                                  |
| <b>POTASSIUM CHLORIDE</b>                    |                      | <b>0 - 3%</b>                                    |
| CAS number: 7447-40-7                        | EC number: 231-211-8 |                                                  |
| <b>Classification</b><br>Not Classified      |                      |                                                  |
| <b>CALCIUM BROMIDE</b>                       |                      | <b>0 - 2.6%</b>                                  |
| CAS number: 7789-41-5                        | EC number: 232-164-6 |                                                  |
| <b>Classification</b><br>Eye Irrit. 2 - H319 |                      |                                                  |

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

|                                  |                                                                 |
|----------------------------------|-----------------------------------------------------------------|
| <b>Product name</b>              | CALCIUM CHLORIDE ANHYDROUS                                      |
| <b>REACH registration number</b> | 01-2119494219-28-XXXX                                           |
| <b>CAS number</b>                | 10043-52-4                                                      |
| <b>EC number</b>                 | 233-140-8                                                       |
| <b>Composition comments</b>      | The data shown are in accordance with the latest EC Directives. |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

## CALCIUM CHLORIDE ANHYDROUS

|                            |                                                                                                                                                                                                                                                                                           |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General information</b> | First aid personnel should wear appropriate protective equipment during any rescue. Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk.                                   |
| <b>Inhalation</b>          | Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.                                                                                                                                   |
| <b>Ingestion</b>           | Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues. Keep affected person under observation. |
| <b>Skin contact</b>        | Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.                                                                                                                                                   |
| <b>Eye contact</b>         | 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.                                                                                                                          |

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

|                     |                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Dust in high concentrations may irritate the respiratory system.                               |
| <b>Ingestion</b>    | The product irritates mucous membranes and may cause abdominal discomfort if swallowed.        |
| <b>Skin contact</b> | May cause skin irritation.                                                                     |
| <b>Eye contact</b>  | Causes serious eye irritation. May cause permanent damage if eye is not immediately irrigated. |

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

|                             |                                                     |
|-----------------------------|-----------------------------------------------------|
| <b>Notes for the doctor</b> | No specific recommendations. Treat symptomatically. |
|-----------------------------|-----------------------------------------------------|

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                       |                                                                                                 |
|---------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Suitable extinguishing media</b>   | The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire. |
| <b>Unsuitable extinguishing media</b> | Do not use water jet as an extinguisher, as this will spread the fire.                          |

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

|                                      |                                                                                                                                                           |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Specific hazards</b>              | None known.                                                                                                                                               |
| <b>Hazardous combustion products</b> | Thermal decomposition or combustion products may include the following substances: Hydrogen bromide (HBr). Bromine. Toxic and corrosive gases or vapours. |

### 5.3. Advice for firefighters

|                                                      |                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Protective actions during firefighting</b>        | No action shall be taken without appropriate training or involving any personal risk. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Control run-off water by containing and keeping it out of sewers and watercourses. Contain and collect extinguishing water. |
| <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

## CALCIUM CHLORIDE ANHYDROUS

### Personal precautions

No action shall be taken without appropriate training or involving any personal risk. Follow precautions for safe handling described in this safety data sheet. Keep unnecessary and unprotected personnel away from the spillage. Provide adequate ventilation. Avoid inhalation of dust and contact with skin and eyes. Do not touch or walk into spilled material.

### 6.2. Environmental precautions

#### Environmental precautions

Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

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

#### Methods for cleaning up

Avoid the spillage or runoff entering drains, sewers or watercourses. Remove spillage with vacuum cleaner or collect with a shovel and broom, or similar. Collect and place in suitable waste disposal containers and seal securely. Clean contaminated objects and areas thoroughly, observing environmental regulations.

### 6.4. Reference to other sections

#### Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in Section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Usage precautions

Handle all packages and containers carefully to minimise spills. Wear protective clothing as described in Section 8 of this safety data sheet. The substance is hygroscopic and will absorb water by contact with the moisture in the air. Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid inhalation of dust and contact with skin and eyes.

#### Advice on general occupational hygiene

Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Provide eyewash station and safety shower.

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

#### Storage precautions

Store in tightly-closed, original container in a dry, cool and well-ventilated place. Avoid excessive heat for prolonged periods of time. When exposed to air, this product will absorb moisture.

Store away from the following materials: Acids. Strong oxidising agents. Strong reducing agents.

Unsuitable container materials: Stainless steel.

### 7.3. Specific end use(s)

#### Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

## SECTION 8: Exposure Controls/personal protection

### 8.1. Control parameters

#### CALCIUM CHLORIDE (CAS: 10043-52-4)

#### DNEL

Industry - Inhalation; Long term : 5 mg/m<sup>3</sup>

Industry - Inhalation; Short term : 10 mg/m<sup>3</sup>

Consumer - Inhalation; Long term : 2.5 mg/m<sup>3</sup>

Consumer - Inhalation; Short term : 5 mg/m<sup>3</sup>

## CALCIUM CHLORIDE ANHYDROUS

### SODIUM CHLORIDE (CAS: 7647-14-5)

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ingredient comments</b> | No exposure limits known for ingredient(s).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>DNEL</b>                | <p>Workers - Dermal; Short term systemic effects: 295.52 mg/kg/day</p> <p>Workers - Inhalation; Short term systemic effects: 2068.62 mg/m<sup>3</sup></p> <p>Workers - Dermal; Long term systemic effects: 295.52 mg/kg/day</p> <p>Workers - Inhalation; Long term systemic effects: 2068.62 mg/m<sup>3</sup></p> <p>General population - Dermal; Short term systemic effects: 126.65 mg/kg/day</p> <p>General population - Inhalation; Short term systemic effects: 443.28 mg/m<sup>3</sup></p> <p>General population - Oral; Short term systemic effects: 126.65 mg/kg/day</p> <p>General population - Oral; Long term systemic effects: 126.65 mg/kg/day</p> <p>General population - Inhalation; Long term systemic effects: 443.28 mg/m<sup>3</sup></p> <p>General population - Dermal; Long term systemic effects: 126.65 mg/kg/day</p> |
| <b>PNEC</b>                | <p>Fresh water; 5 mg/l</p> <p>Soil; 4.86 mg/kg</p> <p>STP; 500 mg/l</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### POTASSIUM CHLORIDE (CAS: 7447-40-7)

|                            |                                             |
|----------------------------|---------------------------------------------|
| <b>Ingredient comments</b> | No exposure limits known for ingredient(s). |
|----------------------------|---------------------------------------------|

### CALCIUM BROMIDE (CAS: 7789-41-5)

|                            |                                             |
|----------------------------|---------------------------------------------|
| <b>Ingredient comments</b> | No exposure limits known for ingredient(s). |
|----------------------------|---------------------------------------------|

## 8.2. Exposure controls

### Protective equipment



### Appropriate engineering controls

Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Avoid inhalation of vapours and contact with skin and eyes. Provide eyewash station and safety shower.

### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Chemical splash goggles or face shield.

### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374. 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.

For exposure up to 8 hours, wear gloves made of the following material: Neoprene. Nitrile rubber. Thickness: > 0.5 mm

### Other skin and body protection

Wear appropriate clothing to prevent repeated or prolonged skin contact.

## CALCIUM CHLORIDE ANHYDROUS

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hygiene measures</b>       | Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Care should be taken to avoid contact with contaminants when removing contaminated clothing. Wash contaminated clothing before reuse.                                                                                                                                                                                            |
| <b>Respiratory protection</b> | Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m <sup>3</sup> . Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Particulate filter, type P2. |

### SECTION 9: Physical and Chemical Properties

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

|                                                     |                                                               |
|-----------------------------------------------------|---------------------------------------------------------------|
| <b>Appearance</b>                                   | Solid Pellets. Dusty powder. Flakes.                          |
| <b>Colour</b>                                       | White.                                                        |
| <b>Odour</b>                                        | Odourless.                                                    |
| <b>Odour threshold</b>                              | No information available.                                     |
| <b>pH</b>                                           | pH (diluted solution): 7 - 11 (10% aq)                        |
| <b>Melting point</b>                                | 772°C                                                         |
| <b>Initial boiling point and range</b>              | > 1600°C                                                      |
| <b>Flash point</b>                                  | No information available.                                     |
| <b>Evaporation rate</b>                             | No information available.                                     |
| <b>Flammability (solid, gas)</b>                    | The product is not flammable.                                 |
| <b>Upper/lower flammability or explosive limits</b> | No information available.                                     |
| <b>Vapour pressure</b>                              | 0.1 Pa @ 20°C                                                 |
| <b>Vapour density</b>                               | No information available.                                     |
| <b>Relative density</b>                             | 0.7 @ 25°C 0.7 @ 15°C                                         |
| <b>Bulk density</b>                                 | 600 - 930 kg/m <sup>3</sup>                                   |
| <b>Solubility(ies)</b>                              | Soluble in water. 745 g/l water @ 20°C 1590 g/l water @ 100°C |
| <b>Partition coefficient</b>                        | Not applicable. Substance is inorganic.                       |
| <b>Auto-ignition temperature</b>                    | Not applicable.                                               |
| <b>Decomposition Temperature</b>                    | Not applicable.                                               |
| <b>Viscosity</b>                                    | Not applicable.                                               |
| <b>Explosive properties</b>                         | Not considered to be explosive.                               |
| <b>Oxidising properties</b>                         | Does not meet the criteria for classification as oxidising.   |

#### 9.2. Other information

|                          |                 |
|--------------------------|-----------------|
| <b>Other information</b> | Not determined. |
|--------------------------|-----------------|

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

## CALCIUM CHLORIDE ANHYDROUS

**Reactivity** There are no known reactivity hazards associated with this product.

### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended. The substance is hygroscopic and will absorb water by contact with the moisture in the air.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** The following materials may react strongly with the product: Strong reducing agents. Strong oxidising agents.

### 10.4. Conditions to avoid

**Conditions to avoid** Avoid excessive heat for prolonged periods of time.

### 10.5. Incompatible materials

**Materials to avoid** Avoid contact with the following materials: Strong oxidising agents. Strong reducing agents. Strong acids. Stainless steel.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Hydrogen bromide (HBr). Bromine. Toxic and corrosive gases or vapours.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** LD<sub>50</sub> 2301 mg/kg, Oral, Rat

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** LD<sub>50</sub> > 2000 mg/kg, Dermal, Rabbit

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** No specific test data are available.

#### Skin corrosion/irritation

**Skin corrosion/irritation** Not irritating. Rabbit

#### Serious eye damage/irritation

**Serious eye damage/irritation** Causes serious eye irritation.  
Highly irritating. Rabbit

#### Respiratory sensitisation

**Respiratory sensitisation** Based on available data the classification criteria are not met.

#### Skin sensitisation

**Skin sensitisation** Based on available data the classification criteria are not met.

#### Germ cell mutagenicity

**Genotoxicity - in vitro** This substance has no evidence of mutagenic properties. Bacterial reverse mutation test: Negative. Chromosome aberration: Negative.

**Genotoxicity - in vivo** This substance has no evidence of mutagenic properties.

#### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met.

#### Reproductive toxicity

## CALCIUM CHLORIDE ANHYDROUS

**Reproductive toxicity - fertility** Based on available data the classification criteria are not met.

**Reproductive toxicity - development** No evidence of reproductive toxicity in animal studies.

### Specific target organ toxicity - single exposure

**STOT - single exposure** Based on available data the classification criteria are not met.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Based on available data the classification criteria are not met.

### Aspiration hazard

**Aspiration hazard** Not anticipated to present an aspiration hazard, based on chemical structure.

**Inhalation** Dust in high concentrations may irritate the respiratory system.

**Ingestion** The product irritates mucous membranes and may cause abdominal discomfort if swallowed.

**Skin contact** May cause skin irritation.

**Eye contact** Causes serious eye irritation. May cause permanent damage if eye is not immediately irrigated.

### Toxicological information on ingredients.

#### CALCIUM CHLORIDE

##### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** LD<sub>50</sub> 2301 mg/kg, Oral, Rat

##### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** LD<sub>50</sub> > 5000 mg/kg, Dermal, Rabbit

##### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** No specific test data are available.

##### Skin corrosion/irritation

**Skin corrosion/irritation** Not irritating. Rabbit OECD 404

##### Serious eye damage/irritation

**Serious eye damage/irritation** Causes serious eye irritation. Rabbit OECD 405

##### Respiratory sensitisation

**Respiratory sensitisation** Based on available data the classification criteria are not met.

##### Skin sensitisation

**Skin sensitisation** Based on available data the classification criteria are not met.

##### Germ cell mutagenicity

**Genotoxicity - in vitro** Bacterial reverse mutation test: Negative. Chromosome aberration: Negative.

**Genotoxicity - in vivo** Does not contain any substances known to be mutagenic.

##### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met.

##### Reproductive toxicity



## CALCIUM CHLORIDE ANHYDROUS

**Reproductive toxicity - fertility** No evidence of reproductive toxicity in animal studies.

**Reproductive toxicity - development** No evidence of reproductive toxicity in animal studies.

### Specific target organ toxicity - single exposure

**STOT - single exposure** Based on available data the classification criteria are not met.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Based on available data the classification criteria are not met.

### Aspiration hazard

**Aspiration hazard** Not anticipated to present an aspiration hazard, based on chemical structure.

**Inhalation** Dust in high concentrations may irritate the respiratory system.

**Ingestion** May cause discomfort if swallowed.

**Skin contact** Prolonged skin contact may cause temporary irritation.

**Eye contact** Causes serious eye irritation. May cause permanent damage if eye is not immediately irrigated.

## SECTION 12: Ecological Information

**Ecotoxicity** The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

### Ecological information on ingredients.

#### **CALCIUM CHLORIDE**

**Ecotoxicity** The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

### **12.1. Toxicity**

**Toxicity** Not considered toxic to fish.

#### **Acute aquatic toxicity**

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: >5000 mg/l, Fish

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 759 - 3005 mg/l, Daphnia magna

**Acute toxicity - aquatic plants** IC<sub>50</sub>, 72 hours: >1000 mg/l, Algae

### Ecological information on ingredients.

#### **CALCIUM CHLORIDE**

#### **Acute aquatic toxicity**

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 13 400 mg/l, Fish  
 LC<sub>50</sub>, 96 hour: 4630 mg/l, Pimephales promelas (Fat-head Minnow)  
 LC<sub>50</sub>, 48 hour: > 6560 mg/l, Pimephales promelas (Fat-head Minnow)  
 LC<sub>50</sub>, 24 hour: > 6660 mg/l, Pimephales promelas (Fat-head Minnow)

**Acute toxicity - aquatic invertebrates** LC<sub>50</sub>, 48 hour: 2400 mg/l, Daphnia magna  
 OECD 202

## CALCIUM CHLORIDE ANHYDROUS

### Acute toxicity - aquatic plants

EyC50, 72 hour: 2900 mg/l, Selenastrum capricornutum  
OECD 201  
ErC50, 72 hour: > 4000 mg/l, Selenastrum capricornutum  
OECD 201  
EC<sub>20</sub>, 72 hour: 1000 mg/l, Selenastrum capricornutum  
OECD 201

### Chronic aquatic toxicity

### Chronic toxicity - aquatic invertebrates

EC<sub>50</sub>, 21 day: 610 mg/l, Daphnia magna  
, EC16, 21 day: 320 mg/l, Daphnia magna  
LC<sub>50</sub>, 21 day: 920 mg/l, Daphnia magna

### 12.2. Persistence and degradability

**Persistence and degradability** There are no data on the degradability of this product. Substance is inorganic.

### Ecological information on ingredients.

### CALCIUM CHLORIDE

### Persistence and degradability

The product contains only inorganic substances which are not biodegradable.

### 12.3. Bioaccumulative potential

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

**Partition coefficient** Not applicable. Substance is inorganic.

### Ecological information on ingredients.

### CALCIUM CHLORIDE

### Bioaccumulative potential

The product is not bioaccumulating.

### Partition coefficient

No information available.

### 12.4. Mobility in soil

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

### Ecological information on ingredients.

### CALCIUM CHLORIDE

### Mobility

The product is soluble in water. The product contains substances which are bound to particulate matter and are retained in soil.

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** Not applicable. Substance is inorganic.

### Ecological information on ingredients.

### CALCIUM CHLORIDE

### Results of PBT and vPvB assessment

Not applicable. Substance is inorganic.

### 12.6. Other adverse effects

**Other adverse effects** Not determined.

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## Ecological information on ingredients.

### CALCIUM CHLORIDE

Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### General information

Waste is classified as hazardous waste. Do not puncture or incinerate, even when empty. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

#### 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

## CALCIUM CHLORIDE ANHYDROUS

A chemical safety assessment has been carried out.

### SECTION 16: Other information

#### Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.  
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.  
 CAS: Chemical Abstracts Service.  
 DNEL: Derived No Effect Level.  
 IATA: International Air Transport Association.  
 IMDG: International Maritime Dangerous Goods.  
 Kow: Octanol-water partition coefficient.  
 LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.  
 LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).  
 PBT: Persistent, Bioaccumulative and Toxic substance.  
 PNEC: Predicted No Effect Concentration.  
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.  
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.  
 vPvB: Very Persistent and Very Bioaccumulative.  
 IARC: International Agency for Research on Cancer.  
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.  
 cATpE: Converted Acute Toxicity Point Estimate.  
 BCF: Bioconcentration Factor.  
 BOD: Biochemical Oxygen Demand.  
 EC<sub>50</sub>: 50% of maximal Effective Concentration.  
 LOAEC: Lowest Observed Adverse Effect Concentration.  
 LOAEL: Lowest Observed Adverse Effect Level.  
 NOAEC: No Observed Adverse Effect Concentration.  
 NOAEL: No Observed Adverse Effect Level.  
 NOEC: No Observed Effect Concentration.  
 LOEC: Lowest Observed Effect Concentration.  
 DMEL: Derived Minimal Effect Level.  
 EL50: Exposure Limit 50  
 hPa: Hectopascal  
 LL50: Lethal Loading fifty  
 OECD: Organisation for Economic Co-operation and Development  
 POW: Octanol-water partition coefficient  
 SCBA: self-contained breathing apparatus  
 STP: Sewage Treatment Plant  
 VOC: Volatile Organic Compounds

#### Classification abbreviations and acronyms

Acute Tox. = Acute toxicity  
 Aquatic Acute = Hazardous to the aquatic environment (acute)  
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

#### Key literature references and sources for data

Supplier's information.

#### Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

#### Revision date

12/07/2018

## CALCIUM CHLORIDE ANHYDROUS

|                                  |                                     |
|----------------------------------|-------------------------------------|
| <b>Version number</b>            | 2.000                               |
| <b>Supersedes date</b>           | 17/08/2016                          |
| <b>SDS number</b>                | 10522                               |
| <b>SDS status</b>                | Approved.                           |
| <b>Hazard statements in full</b> | H319 Causes serious eye irritation. |
| <b>Signature</b>                 | Jacq Pattinson                      |



## Exposure scenario

### Handling of aqueous Calcium Chloride solutions

#### Identification

|                           |                                                                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Product name              | Calcium Chloride                                                                                                                     |
| REACH registration number | 01-2119494219-28-XXXX                                                                                                                |
| CAS number                | 10043-52-4                                                                                                                           |
| EC number                 | 233-140-8                                                                                                                            |
| EU index number           | 017-013-00-2                                                                                                                         |
| Supplier                  | Univar<br>Aquarius House<br>6 Mid Point Business Park<br>Bradford<br>BD3 7AY<br>+44 1274 267300<br>+44 1274 267306<br>sds@univar.com |

#### 1. Title of exposure scenario

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main title    | Handling of aqueous Calcium Chloride solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Main sector   | SU3 Industrial uses<br>SU22 Professional uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Sector of use | SU1 Agriculture, forestry, fishery<br>SU2a Mining (without offshore industries)<br>SU4 Manufacture of food products<br>SU5 Manufacture of textiles, leather, fur<br>SU6b Manufacture of pulp, paper and paper products<br>SU8 Manufacture of bulk, large-scale chemicals (including petroleum products)<br>SU9 Manufacture of fine chemicals<br>SU10 Formulation [mixing] of preparations and/or re-packaging<br>SU11 Manufacture of rubber products<br>SU12 Manufacture of plastics products, including compounding and conversion<br>SU13 Manufacture of other non-metallic mineral products<br>SU14 Manufacture of basic metals, including alloys<br>SU15 Manufacture of fabricated metal products, except machinery and equipment<br>SU19 Building and construction work<br>SU20 Health services |

#### Environment

## Handling of aqueous Calcium Chloride solutions

### Environmental release category

ERC1 Manufacture of substances.  
 ERC2 Formulation of preparations.  
 ERC4 Industrial use of processing aids in processes and products, not becoming part of articles.  
 ERC6a Industrial use resulting in manufacture of another substance (use of intermediates).  
 ERC8a Wide dispersive indoor use of processing aids in open systems.  
 ERC8d Wide dispersive outdoor use of processing aids in open systems.

### Worker

### Process category

PROC1 Use in closed process, no likelihood of exposure.  
 PROC2 Use in closed, continuous process with occasional controlled exposure  
 PROC3 Use in closed batch process (synthesis or formulation).  
 PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises.  
 PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact).  
 PROC7 Spraying in industrial settings and applications.  
 PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities.  
 PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.  
 PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing).  
 PROC10 Roller application or brushing of adhesive and other coating.  
 PROC11 Spraying outside industrial settings and/or applications.  
 PROC13 Treatment of articles by dipping and pouring.  
 PROC14 Production of preparations or articles by tableting, compression, extrusion, pelletisation.  
 PROC15 Use as laboratory reagent.

## 2. Conditions of use affecting exposure (Industrial - Environment 1)

### Product characteristics

Not regarded as dangerous for the environment. No exposure scenario required.

## 2. Conditions of use affecting exposure (Workers - Health 1)

### Product characteristics

**Physical state** Liquid, vapour pressure < 10 Pa (STP)

**Concentration details** Covers concentrations up to 100 %. Unless otherwise stated.

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

**Temperature** Assumes use at not more than 20°C above ambient temperature, unless stated differently.

### Risk management measures

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Use suitable eye protection.

Assumes a good basic standard of occupational hygiene is implemented.

## 3. Exposure estimation (Environment 1)

## Handling of aqueous Calcium Chloride solutions

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

### 3. Exposure estimation (Health 1)

#### Exposure

Worker - inhalation, long-term - local and systemic: Exposure 1 mg/m<sup>3</sup>, DNEL 5 mg/m<sup>3</sup>, RCR 0.2

Worker - inhalation, short-term - local and systemic: Exposure 2 mg/m<sup>3</sup>, DNEL 10 mg/m<sup>3</sup>, RCR 0.2

Worst case assumption

### 4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.





## Exposure scenario

### Industrial outdoor use of Calcium Chloride

#### Identification

|                           |                                                                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Product name              | Calcium Chloride                                                                                                                     |
| REACH registration number | 01-2119494219-28-XXXX                                                                                                                |
| CAS number                | 10043-52-4                                                                                                                           |
| EC number                 | 233-140-8                                                                                                                            |
| EU index number           | 017-013-00-2                                                                                                                         |
| Supplier                  | Univar<br>Aquarius House<br>6 Mid Point Business Park<br>Bradford<br>BD3 7AY<br>+44 1274 267300<br>+44 1274 267306<br>sds@univar.com |

#### 1. Title of exposure scenario

|               |                                                                                 |
|---------------|---------------------------------------------------------------------------------|
| Main title    | Industrial outdoor use of Calcium Chloride                                      |
| Main sector   | SU3 Industrial uses                                                             |
| Sector of use | SU1 Agriculture, forestry, fishery<br>SU2a Mining (without offshore industries) |

#### Environment

|                                |                                                                                                  |
|--------------------------------|--------------------------------------------------------------------------------------------------|
| Environmental release category | ERC4 Industrial use of processing aids in processes and products, not becoming part of articles. |
|--------------------------------|--------------------------------------------------------------------------------------------------|

#### Worker

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category | PROC1 Use in closed process, no likelihood of exposure.<br>PROC2 Use in closed, continuous process with occasional controlled exposure<br>PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact).<br>PROC7 Spraying in industrial settings and applications.<br>PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities.<br>PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.<br>PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing).<br>PROC13 Treatment of articles by dipping and pouring.<br>PROC19 Hand-mixing with intimate contact and only PPE available. |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

## Industrial outdoor use of Calcium Chloride

### Product characteristics

|                       |                                                                     |
|-----------------------|---------------------------------------------------------------------|
| Physical state        | Solid, medium dustiness , or: Liquid, vapour pressure < 10 Pa (STP) |
| Concentration details | Covers concentrations up to 100 %.                                  |
|                       | Not regarded as dangerous for the environment.                      |

### Frequency and duration of use

Emission days: 25 days/year  
Dispersive use.

### Other given operational conditions affecting environmental exposure

|                         |                                                                               |
|-------------------------|-------------------------------------------------------------------------------|
| Emission factor - air   | Release fraction to air from process (initial release prior to RMM): 0        |
| Emission factor - water | Release fraction to wastewater from process (initial release prior to RMM): 0 |
| Emission factor - soil  | Release fraction to soil from process (initial release prior to RMM): 1       |

### Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

|       |                                                      |
|-------|------------------------------------------------------|
| Water | Not applicable as there is no release to wastewater. |
|-------|------------------------------------------------------|

## 2. Conditions of use affecting exposure (Workers - Health 1)

### Product characteristics

|                       |                                                             |
|-----------------------|-------------------------------------------------------------|
| Physical state        | Solid, medium dustiness                                     |
| Concentration details | Covers concentrations up to 100 %. Unless otherwise stated. |

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

|             |                                                                                         |
|-------------|-----------------------------------------------------------------------------------------|
| Setting     | Outdoor.                                                                                |
| Temperature | Assumes use at not more than 20°C above ambient temperature, unless stated differently. |

### Technical conditions and measures at process level (source) to prevent release

|                               |                                                                                                                                                                                                                                                        |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical protective measures | PROC7 Spraying in industrial settings and applications. Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. , or: Wear a respirator conforming to EN140 with Type A/P2 filter or better. |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Organisational measures to prevent/limit releases, dispersion and exposure

|                         |                                                                                                                                                                                         |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Organisational measures | PROC7 Spraying in industrial settings and applications. Avoid carrying out operation for more than 1 hour. , or: Wear a respirator conforming to EN140 with Type A/P2 filter or better. |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Risk management measures

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Use suitable eye protection.

Assumes a good basic standard of occupational hygiene is implemented.

## 3. Exposure estimation (Environment 1)

## Industrial outdoor use of Calcium Chloride

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented. The use is assessed to be safe.

### 3. Exposure estimation (Health 1)

#### Exposure

PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact).

PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities.

PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.

PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing).

PROC19 Hand-mixing with intimate contact and only PPE available.

Worker - inhalation, long-term - local and systemic: Exposure 3.5 mg/m<sup>3</sup>, DNEL 5 mg/m<sup>3</sup>, RCR 0.7

Worker - inhalation, short-term - local and systemic: Exposure 7 mg/m<sup>3</sup>, DNEL 10 mg/m<sup>3</sup>, RCR 0.7

PROC7 Spraying in industrial settings and applications.

Worker - inhalation, long-term - local and systemic: Exposure 2.8 mg/m<sup>3</sup>, DNEL 5 mg/m<sup>3</sup>, RCR 0.56

Worker - inhalation, short-term - local and systemic: Exposure 5.6 mg/m<sup>3</sup>, DNEL 10 mg/m<sup>3</sup>, RCR 0.56

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 0.7 mg/m<sup>3</sup>, DNEL 5 mg/m<sup>3</sup>, RCR 0.14

Worker - inhalation, short-term - local and systemic: Exposure 1.4 mg/m<sup>3</sup>, DNEL 10 mg/m<sup>3</sup>, RCR 0.14

PROC1 Use in closed process, no likelihood of exposure.

PROC2 Use in closed, continuous process with occasional controlled exposure

Worker - inhalation, long-term - local and systemic: Exposure <0.01 mg/m<sup>3</sup>, DNEL 5 mg/m<sup>3</sup>, RCR <0.01

Worker - inhalation, short-term - local and systemic: Exposure <0.01 mg/m<sup>3</sup>, DNEL 10 mg/m<sup>3</sup>, RCR <0.01

Worst case assumption

### 4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



## Exposure scenario

### Consumer use of Calcium Chloride and Calcium Chloride containing products

#### Identification

|                           |                                                                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Product name              | Calcium Chloride                                                                                                                     |
| REACH registration number | 01-2119494219-28-XXXX                                                                                                                |
| CAS number                | 10043-52-4                                                                                                                           |
| EC number                 | 233-140-8                                                                                                                            |
| EU index number           | 017-013-00-2                                                                                                                         |
| Supplier                  | Univar<br>Aquarius House<br>6 Mid Point Business Park<br>Bradford<br>BD3 7AY<br>+44 1274 267300<br>+44 1274 267306<br>sds@univar.com |

#### 1. Title of exposure scenario

|                  |                                                                                                                                                                                                                                                                                               |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main title       | Consumer use of Calcium Chloride and Calcium Chloride containing products                                                                                                                                                                                                                     |
| Product category | PC2 Adsorbents.<br>PC4 Anti-freeze and de-icing products.<br>PC12 Lawn and garden preparations (- fertilizers).<br>PC16 Heat transfer fluids.<br>PC27 Plant protection products.<br>PC35 Washing and cleaning products (including solvent-based products).<br>PC37 Water treatment chemicals. |
| Main sector      | SU21 Consumer uses                                                                                                                                                                                                                                                                            |

#### Environment

|                                |                                                                                                                                               |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental release category | ERC8a Wide dispersive indoor use of processing aids in open systems.<br>ERC8d Wide dispersive outdoor use of processing aids in open systems. |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|

#### 2. Conditions of use affecting exposure (Workers - Health 1)

##### Product characteristics

|                       |                                                             |
|-----------------------|-------------------------------------------------------------|
| Physical state        | Liquid, vapour pressure < 10 Pa (STP)                       |
| Concentration details | Covers concentrations up to 100 %. Unless otherwise stated. |

##### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

##### Other given operational conditions affecting workers exposure

|             |                                                                                         |
|-------------|-----------------------------------------------------------------------------------------|
| Temperature | Assumes use at not more than 20°C above ambient temperature, unless stated differently. |
|-------------|-----------------------------------------------------------------------------------------|

## Consumer use of Calcium Chloride and Calcium Chloride containing products

### Risk management measures

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Use suitable eye protection.

Assumes a good basic standard of occupational hygiene is implemented.

### 2. Conditions of use affecting exposure (Non-industrial - Environment 1)

#### Product characteristics

Not regarded as dangerous for the environment. No exposure scenario required.

### 2. Conditions of use affecting exposure (Non-industrial - Health 1)

#### Product characteristics

**Concentration details** Covers concentrations up to 100 %. Unless otherwise stated. Spraying Covers concentrations up to 45 %.

#### Amounts used

For each use event, covers use amounts up to 50 kg.  
Unless otherwise stated.

#### Frequency and duration of use

Covers use up to 365 day(s)/year.  
Unless otherwise stated.  
Covers exposure up to 24 hours per event.  
Unless otherwise stated.  
Spraying  
Application duration: 10 minutes

#### Other given operational conditions affecting Non-industrial exposure

**Temperature** Assumes activities are at ambient temperature (unless stated differently).

**Room size** Spraying Covers use in room size of 58 m<sup>3</sup>.

#### Other given operational conditions affecting Non-industrial exposure

**Consumer information** Avoid direct eye contact with product, also via contamination on hands.

### 3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

### 3. Exposure estimation (Health 1)

## Consumer use of Calcium Chloride and Calcium Chloride containing products

### Exposure

PC2 Adsorbents.

PC4 Anti-freeze and de-icing products.

PC9b Fillers, putties, plasters, modelling clay.

PC16 Heat transfer fluids.

PC35 Washing and cleaning products (including solvent-based products).

PC37 Water treatment chemicals.

Consumer - inhalation, short-term - local and systemic: Exposure  $<0.01 \text{ mg/m}^3$ , DNEL  $5 \text{ mg/m}^3$ , RCR  $<0.01$

Consumer - inhalation, long-term - local and systemic: Exposure  $0.005 \text{ mg/m}^3$ , DNEL  $2.5 \text{ mg/m}^3$ , RCR  $<0.01$

PC12 Lawn and garden preparations (- fertilizers).

PC27 Plant protection products.

Consumer - inhalation, short-term - local and systemic: Exposure  $0.70 \text{ mg/m}^3$ , DNEL  $5 \text{ mg/m}^3$ , RCR 0.14

Consumer - inhalation, long-term - local and systemic: Exposure  $0.692 \text{ mg/m}^3$ , DNEL  $2.5 \text{ mg/m}^3$ , RCR 0.28

Worst case assumption

### 4. Guidance to check compliance with the exposure scenario (Health 1)

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.