

# Calcium nitrate tetrahydrate

## Safety Data Sheet

**C0505**

according to Regulation (EU) 2015/830

Version: 2.0

Date of issue: 05/10/2010    Revision date 16/02/2017  
Supersedes 01/05/2015

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

#### 1.1. Product identifier

Product form : Substance  
Trade name : Calcium nitrate tetrahydrate  
EC-No. : 233-332-1  
CAS-No. : 13477-34-4  
REACH registration No : 01-2119495093-35  
Product code : C0505  
Formula :  $\text{CaN}_2\text{O}_6 \cdot 4\text{H}_2\text{O}$   
Product group : Raw material

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

##### 1.2.1. Relevant identified uses

Main use category : Professional use  
Industrial/Professional use spec : For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

##### 1.2.2. Uses advised against

No additional information available

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

##### Supplier

Duchefa Biochemie B.V.  
A. Hofmanweg 71  
2031 BH Haarlem - The Netherlands  
T +31(0)23-5319093 - F +31(0)23-5318027  
[info@duchefa.nl](mailto:info@duchefa.nl)

#### 1.4. Emergency telephone number

Emergency number : Supplier contact information:  
+31(0)23-5319093 (M-F 09:00-17:00)  
+31(0)6-30109355 (outside office hours)

Organisation/Company	Address	Comment
World Health Organization world directory of poison centres	<a href="http://apps.who.int/poisoncentres/">http://apps.who.int/poisoncentres/</a>	Consult website for a local poison centre

### SECTION 2: Hazards identification

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

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, Category 1 H318  
Acute toxicity (oral), Category 4 H302

Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS07

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H302 - Harmful if swallowed.  
H318 - Causes serious eye damage.

Precautionary statements (CLP) :

P280 - Wear eye protection, face protection, protective clothing, protective gloves.  
P305+P351 - IF IN EYES: Rinse cautiously with water for several minutes.  
P310 - Immediately call a POISON CENTER/doctor

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : Calcium nitrate tetrahydrate

CAS-No. : 13477-34-4

EC-No. : 233-332-1

Name	Product identifier	%
Calcium nitrate tetrahydrate	(CAS-No.) 13477-34-4 (EC-No.) 233-332-1	>= 99

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures after inhalation : Assure fresh air breathing  
If you feel unwell, seek medical advice.
- First-aid measures after skin contact : Wash skin with mild soap and water  
Seek medical attention if ill effect or irritation develops.
- First-aid measures after eye contact : Rinse immediately with plenty of water  
Seek medical advice.
- First-aid measures after ingestion : Rinse mouth  
Seek medical attention if ill effect develops.

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

No additional information available

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray  
Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).

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

Hazardous decomposition products in case of fire : When exposed to heat, may decompose liberating hazardous gases  
- NO<sub>x</sub>.

### 5.3. Advice for firefighters

Precautionary measures fire : Do not enter fire area without proper protective equipment, including respiratory protection.

Firefighting instructions : Use water spray or fog for cooling exposed containers.

## SECTION 6: Accidental release measures

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

General measures : Avoid raising powdered materials into airborne dust.

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

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

Methods for cleaning up : On land, sweep or shovel into suitable containers.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid dust formation.

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

Storage conditions : Store at room temperature  
Store in a well-ventilated place. Keep container tightly closed.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 7.3. Specific end use(s)

For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Additional information : Provide local exhaust or general room ventilation

### 8.2. Exposure controls

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### Hand protection:

Type	Material	Permeation	Thickness (mm)	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,11	EN 374

### Eye protection:

Safety glasses

### Skin and body protection:

Avoid repeated or prolonged skin contact. If skin contact or contamination of clothing is likely, protective clothing should be worn.

### Respiratory protection:

Dust production: dust mask with filter type P2

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Crystalline powder.
Molecular mass	: 236,2 g/mol
Colour	: Colourless.
Odour	: odourless.
Odour threshold	: No data available
pH	: 5 - 7,5
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: $\approx 45$ °C
Freezing point	: No data available
Boiling point	: $> 225$ °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1,82 g/cm <sup>3</sup>
Solubility	: Water: $\approx 2600$ g/l
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Stable under normal conditions.

### 10.4. Conditions to avoid

Open flame

Overheating

Moisture.

### 10.5. Incompatible materials

Combustible materials

Strong acids

Strong oxidizers.

### 10.6. Hazardous decomposition products

According to process conditions, hazardous decomposition products may be generated.

- NO<sub>x</sub>.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Calcium nitrate tetrahydrate (13477-34-4)	
LD50 oral rat	3900 mg/kg
Skin corrosion/irritation	: Not classified pH: 5 - 7,5
Serious eye damage/irritation	: Causes serious eye damage. pH: 5 - 7,5
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Other information	: See actual entry in RTECS for complete information: . EW3000000.

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

## 12.2. Persistence and degradability

No additional information available

## 12.3. Bioaccumulative potential

No additional information available

## 12.4. Mobility in soil

No additional information available

## 12.5. Results of PBT and vPvB assessment

No additional information available

## 12.6. Other adverse effects

Additional information : Avoid release to the environment.. Prevent entry to sewers and public waters

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of this material and its container to hazardous or special waste collection point. Dispose in a safe manner in accordance with local/national regulations.

## SECTION 14: Transport information

In accordance with ADN / ADR / IATA / IMDG

ADR	IMDG	IATA	ADN
<b>14.1. UN number</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>			
Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>			
Not applicable	Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>			
Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available			

### 14.6. Special precautions for user

#### . Overland transport

Not applicable

#### - Transport by sea

Not applicable

#### - Air transport

Not applicable

### - Inland waterway transport

Not applicable

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Calcium nitrate tetrahydrate is not on the REACH Candidate List

Calcium nitrate tetrahydrate is not on the REACH Annex XIV List

#### 15.1.2. National regulations

Ensure all national/local regulations are observed.

#### Germany

Reference to AwSV

: Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 1 or 2; ID No. 321)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV

: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen

: The substance is not listed

SZW-lijst van mutagene stoffen

: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding

: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid

: The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling

: The substance is not listed

#### Denmark

Recommendations Danish Regulation

: Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Indication of changes:

1.4	Emergency telephone number	Modified	Added additional information
2	Classification (DSD/DPD) (SDS)	Removed	Obsolete
2.2	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Removed	Removed GHS03 pictogram, H272 & P210 sentences in accordance with new information provided by supplier.
8.2	Hand protection	Modified	Specified material, thickness, et cetera of gloves
14	UN number	Removed	Obsolete

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### Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet

Data sources : Manufacturer.

### Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Ox. Sol. 3	Oxidising Solids, Category 3
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

SDS Biochemicals version 2018

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*