

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Date of issue: 05/04/2011 Revision date: 05/07/2022 Supersedes version of: 12/03/2018 Version: 3.2

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Substance  
Trade name : Calcium nitrate tetrahydrate Analytical Grade ACS  
EC-No. : 233-332-1  
CAS-No. : 13477-34-4  
Product code : CANA-04A  
Formula :  $\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.2.1. Relevant identified uses**

Main use category : Laboratory use

**1.2.2. Uses advised against**

No additional information available

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

labbox labware s.l.  
Migjorn, 1  
P.O. Box Barcelona (SPAIN)  
08338 Premia de Dalt – SPAIN  
ES  
T +34 937 07 79 70 - F +34 937 909 532  
[info@labbox.com](mailto:info@labbox.com) - [www.labbox.com](http://www.labbox.com)

**1.4. Emergency telephone number**

Emergency number : +34 937 077 970 (For technical information\_Office Hours) In case of medical emergency phone 112 or to your local emergency number.

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Oxidising Solids, Category 3 H272  
Serious eye damage/eye irritation, Category 2 H319  
Full text of H and EUH 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) :



# Calcium nitrate tetrahydrate Analytical Grade ACS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

	GHS03	GHS07
Signal word (CLP)	: Warning	
Hazard statements (CLP)	: H272 - May intensify fire; oxidiser. H319 - Causes serious eye irritation.	
Precautionary statements (CLP)	: P210 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P243 - Take precautionary measures against static discharge. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P371+P380+P375 - In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.	

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	Product identifier	%
Calcium nitrate tetrahydrate	CAS-No.: 13477-34-4 EC-No.: 233-332-1	≥ 99

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Get medical advice/attention if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash contaminated clothing before reuse. Wash skin with plenty of water.
First-aid measures after eye contact	: In case of eye contact, immediately rinse with clean water for 10-15 minutes. Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Drink plenty of water. Get immediate medical advice/attention.

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

Symptoms/effects after skin contact	: Slight irritation.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: Irritation to throat and respiratory system. nausea, vomiting.

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

Never give anything by mouth to an unconscious person.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Foam. Dry powder. Carbon dioxide. Sand.
Unsuitable extinguishing media	: Strong water jet.

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

Fire hazard	: May cause fire or explosion; strong oxidiser. May intensify fire; oxidiser.
-------------	---

# Calcium nitrate tetrahydrate Analytical Grade ACS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Advice for firefighters

Precautionary measures fire : Stop leak if safe to do so.  
Protection during firefighting : Do not attempt to take action without suitable protective equipment.  
Other information : Combustible.

## SECTION 6: Accidental release measures

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

General measures : Avoid dust formation. Avoid contact with skin and eyes.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Mechanically ventilate the spillage area.  
Measures in case of dust release : Do not breathe dust.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

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

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

For containment : Collect spillage.  
Methods for cleaning up : Large spills: scoop solid spill into closing containers. On land, sweep or shovel into suitable containers.

### 6.4. Reference to other sections

See Heading 8. For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin, eyes and clothing.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Remove contaminated clothes.

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

Storage conditions : Keep in fireproof place.  
Incompatible products : Strong bases. Strong acids.  
Incompatible materials : Heat sources. Sources of ignition. Direct sunlight. Combustible materials.  
Storage area : Store away from heat. Store in a well-ventilated place.  
Special rules on packaging : Keep only in original container. Store in a closed container.

### 7.3. Specific end use(s)

Laboratory chemicals.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

No additional information available

# Calcium nitrate tetrahydrate Analytical Grade ACS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

### 8.2.2. Personal protection equipment

#### Personal protective equipment:

EN 374.

#### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Safety glasses

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses	particulates and dust	With side shields	

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing

##### Hand protection:

protective gloves

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

Dust formation: dust mask

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Other information:

Do not eat, drink or smoke during use. Wash hands with water as a precaution.

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Colour	: Colourless.
Odour	: odourless.

# Calcium nitrate tetrahydrate Analytical Grade ACS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Odour threshold	: Not available
Melting point	: 42 °C
Freezing point	: Not available
Boiling point	: 130 °C
Flammability	: Not available
Explosive properties	: Product is not explosive.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: 5 – 7
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Water: 2660 g/l A 20°C
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable
Particle size	: Not available

## 9.2. Other information

### 9.2.1. Information with regard to physical hazard classes

No additional information available

### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

May cause or intensify fire; oxidiser.

### 10.2. Chemical stability

No additional information available

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Heat. heat sources. Direct sunlight. Combustible materials. Overheating.

### 10.5. Incompatible materials

No contact with flammable substances. Oxidizing agent. Organic compounds. Strong reducing agents.

### 10.6. Hazardous decomposition products

Nitrous fumes.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

# Calcium nitrate tetrahydrate Analytical Grade ACS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Calcium nitrate tetrahydrate Analytical Grade ACS (13477-34-4)

LD50 oral rat	3900 mg/kg
---------------	------------

Skin corrosion/irritation	: Not classified pH: 5 – 7
Serious eye damage/irritation	: Causes serious eye irritation. pH: 5 – 7
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

### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

### Calcium nitrate tetrahydrate Analytical Grade ACS (13477-34-4)

LC50 - Fish [1]	> 500 mg/l
-----------------	------------

### 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. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Must follow special treatment according to local regulation.

# Calcium nitrate tetrahydrate Analytical Grade ACS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

HP Code : HP2 - "Oxidising:" waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials.  
HP4 - "Irritant — skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.

### SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

#### 14.1. UN number or ID number

UN-No. (ADR) : UN 1454  
UN-No. (IMDG) : UN 1454  
UN-No. (IATA) : UN 1454  
UN-No. (ADN) : UN 1454  
UN-No. (RID) : UN 1454

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : CALCIUM NITRATE  
Proper Shipping Name (IMDG) : CALCIUM NITRATE  
Proper Shipping Name (IATA) : Calcium nitrate  
Proper Shipping Name (ADN) : CALCIUM NITRATE  
Proper Shipping Name (RID) : CALCIUM NITRATE  
Transport document description (ADR) : UN 1454 CALCIUM NITRATE, 5.1, III, (E)  
Transport document description (IMDG) : UN 1454 CALCIUM NITRATE, 5.1, III  
Transport document description (IATA) : UN 1454 Calcium nitrate, 5.1, III  
Transport document description (ADN) : UN 1454 CALCIUM NITRATE, 5.1, III  
Transport document description (RID) : UN 1454 CALCIUM NITRATE, 5.1, III

#### 14.3. Transport hazard class(es)

##### ADR

Transport hazard class(es) (ADR) : 5.1  
Danger labels (ADR) : 5.1



##### IMDG

Transport hazard class(es) (IMDG) : 5.1  
Danger labels (IMDG) : 5.1



##### IATA

Transport hazard class(es) (IATA) : 5.1  
Danger labels (IATA) : 5.1



##### ADN

Transport hazard class(es) (ADN) : 5.1  
Danger labels (ADN) : 5.1

# Calcium nitrate tetrahydrate Analytical Grade ACS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878



### RID

Transport hazard class(es) (RID) : 5.1  
Danger labels (RID) : 5.1



### 14.4. Packing group

Packing group (ADR) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III  
Packing group (ADN) : III  
Packing group (RID) : III

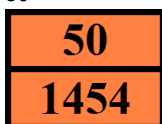
### 14.5. Environmental hazards

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR) : O2  
Special provisions (ADR) : 208  
Limited quantities (ADR) : 5kg  
Excepted quantities (ADR) : E1  
Packing instructions (ADR) : P002, IBC08, LP02, R001  
Special packing provisions (ADR) : B3  
Mixed packing provisions (ADR) : MP10  
Portable tank and bulk container instructions (ADR) : T1, BK1, BK2, BK3  
Portable tank and bulk container special provisions (ADR) : TP33  
Tank code (ADR) : SGAV  
Tank special provisions (ADR) : TU3  
Vehicle for tank carriage : AT  
Transport category (ADR) : 3  
Special provisions for carriage - Bulk (ADR) : VC1, VC2, AP6, AP7  
Special provisions for carriage - Loading, unloading and handling (ADR) : CV24  
Hazard identification number (Kemler No.) : 50  
Orange plates :



Tunnel restriction code (ADR) : E  
EAC code : 1Z

#### Transport by sea

Special provisions (IMDG) : 208, 967  
Limited quantities (IMDG) : 5 kg  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P002, LP02  
IBC packing instructions (IMDG) : IBC08  
IBC special provisions (IMDG) : B3



# Calcium nitrate tetrahydrate Analytical Grade ACS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Tank instructions (IMDG)	: T1, BK2, BK3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-Q
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW23
Properties and observations (IMDG)	: White deliquescent solid, soluble in water. Mixtures with combustible material are readily ignited and may burn fiercely. Harmful if swallowed.

### Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y546
PCA limited quantity max net quantity (IATA)	: 10kg
PCA packing instructions (IATA)	: 559
PCA max net quantity (IATA)	: 25kg
CAO packing instructions (IATA)	: 563
CAO max net quantity (IATA)	: 100kg
Special provisions (IATA)	: A83, A803
ERG code (IATA)	: 5L

### Inland waterway transport

Classification code (ADN)	: O2
Special provisions (ADN)	: 208
Limited quantities (ADN)	: 5 kg
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: B
Equipment required (ADN)	: PP
Provisions prior to loading (ADN)	: LO04
Provisions for carriage in bulk (ADN)	: CO02
Number of blue cones/lights (ADN)	: 0
Additional requirements/Remarks (ADN)	: CO02 and LO04 apply only when this substance is carried in bulk or without packaging

### Rail transport

Classification code (RID)	: O2
Special provisions (RID)	: 208
Limited quantities (RID)	: 5kg
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P002, IBC08, LP02, R001
Special packing provisions (RID)	: B3
Mixed packing provisions (RID)	: MP10
Portable tank and bulk container instructions (RID)	: T1, BK1, BK2, BK3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAV
Special provisions for RID tanks (RID)	: TU3
Transport category (RID)	: 3
Special provisions for carriage – Bulk (RID)	: VC1, VC2, AP6, AP7
Special provisions for carriage - Loading, unloading and handling (RID)	: CW24
Colis express (express parcels) (RID)	: CE11
Hazard identification number (RID)	: 50

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

# Calcium nitrate tetrahydrate Analytical Grade ACS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### SECTION 15: Regulatory information

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

##### 15.1.1. EU-Regulations

###### REACH Annex XVII (Restriction List)

No REACH Annex XVII restrictions

###### REACH Annex XIV (Authorisation List)

Calcium nitrate tetrahydrate Analytical Grade ACS is not on the REACH Annex XIV List

###### REACH Candidate List (SVHC)

Calcium nitrate tetrahydrate Analytical Grade ACS is not on the REACH Candidate List

###### PIC Regulation (Prior Informed Consent)

Calcium nitrate tetrahydrate Analytical Grade ACS is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

###### POP Regulation (Persistent Organic Pollutants)

Calcium nitrate tetrahydrate Analytical Grade ACS is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

###### Ozone Regulation (1005/2009)

Calcium nitrate tetrahydrate is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

###### Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

###### Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

##### 15.1.2. National regulations

###### Germany

- Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 321).
- Chemicals Prohibition Ordinance (ChemVerbotsV) : This product is subject to ChemVerbotsV Annex 2 Entry 2. The following requirement must be observed: Basic requirements for the implementation of the submission (according to § 8 paragraph 1, 3 and 4).
- Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

###### 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

#### 15.2. Chemical safety assessment

No additional information available

### SECTION 16: Other information

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

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
--------------	---

# Calcium nitrate tetrahydrate Analytical Grade ACS

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:	
H272	May intensify fire; oxidiser.
H319	Causes serious eye irritation.
Ox. Sol. 3	Oxidising Solids, Category 3

Safety Data Sheet (SDS), EU

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.