Calcium nitrate tetrahydrate AGR ACS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 05/04/2011 Revision date: 11/05/2026 Supersedes version of: 05/07/2022 Version: 3.3

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

1.1. Product identifier

Product form	:	Substance
Trade name	:	Calcium nitrate tetrahydrate AGR ACS
EC-No.	:	233-332-1
CAS-No.	:	13477-34-4
Product code	:	CANA-04A
Formula	:	Ca(NO3)2 · 4H2O

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

Relevant identified uses

Main use category : Laboratory use

1.3. Details of the supplier of the safety data sheet

Labbox Labware S.L.
Migjorn, 1
08338 Premia de Dalt, Barcelona
España
T +34 937 07 79 70, F +34 937 909 532
info@labbox.com, 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. 24 hours a day, 7 days a week

Country/Area	Organisation	Emergency number
United Kingdom	National Poisons Information Service (Belfast Centre). Royal Victoria Hospital. Grosvenor Road BT12 6BA Belfast.	0344 892 0111 Only for healthcare professionals

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) :



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

Other hazards which do not result in classification : Does not contain PBT and/or vPvB substances ≥ 0.1% evaluated according to Annex XIII of REACH.

PBT: not relevant – no registration required

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	100

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Making extinguishing agents environment-friendly.

5.2. Special hazards arising from the substance or mixture

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

For non-emergency personnel

Emergency procedures : Mechanically ventilate the spillage area.

Measures in case of dust release : Do not breathe dust.

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 Section 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

No additional information available

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:
ISO 374-1.
Personal protective equipment symbol(s):



Eye and face protection

Eye protection:
Safety glasses

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

Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
protective gloves

Other skin protection
Materials for protective clothing:
Wear foot protection

Respiratory protection

Respiratory protection:
Dust formation: dust mask

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.
Molecular mass	:	236,15 g/mol
Odour	:	odourless.
Odour threshold	:	Not available
Melting point	:	42 °C
Freezing point	:	Not available
Boiling point	:	130 °C
Flammability	:	Not available
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 20ºC
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

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 AGR 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 AGR ACS (13477-34-4)	
LC50 - Fish [1]	> 500 mg/l

12.2. Persistence and degradability

Calcium nitrate tetrahydrate AGR ACS (13477-34-4)	
Persistence and degradability	Rapidly degradable

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

Calcium nitrate tetrahydrate AGR ACS (13477-34-4)
PBT: not relevant – no registration required

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

Waste treatment methods : Must follow special treatment according to local regulation.

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) (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
:



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

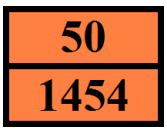
Packing group (IATA)	:	III
Packing group (ADN)	:	III
Packing group (RID)	:	III

14.5. Environmental hazards

Dangerous for the environment	:	No
Marine pollutant	:	No
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-Q
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
Tank instructions (IMDG)	:	T1, BK2, BK3
Tank special provisions (IMDG)	:	TP33
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

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Not listed on the COUNCIL REGULATION (EC) of dual-use items.

Explosives Precursors Regulation (EU 2019/1148)

Not listed on the Explosives Precursors list (EU)

Drug Precursors Regulation (EC 273/2004)

Not listed on the Drug Precursors list (EU)

National regulations

Germany

Water hazard class (WGK)	:	WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 11482).
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).

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	The substance is not listed
SZW-lijst van mutagene stoffen	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	:	The substance is not listed

Poland

Polish National Regulations	:	Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225). Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797). The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended). Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923). Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154). Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended). The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488) Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended). Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141). ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891) Regulation of the Minister of Health of 25 August 2015 on the method of marking places, pipelines, and containers and tanks used for storing or containing hazardous substances or hazardous mixtures (J.o.L. 2015, item 1368 as amended)

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

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

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.