

Safety Data Sheet

#48565588 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
Calcium nitrate tetrahydrate	13477-34- 4	Ca(NO ₃) ₂ · 4H ₂ O	10	19 Aug 2026

SECTION 1

Identification

Product name	Calcium nitrate tetrahydrate
CAS number	13477-34-4
Chemical formula	Ca(NO ₃) ₂ · 4H ₂ O
Molecular weight	236.15
SMILES	[N+](=O)([O-])[O-].[N+](=O)([O-])[O-].O.O.O.O.[Ca+2]
EC / EINECS number	603-865-8
Recommended use & restrictions	For research use, laboratory use and manufacture of chemicals. Not for human or animal use
Emergency telephone	0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

**DANGER****CODE HAZARD STATEMENT****H302** Harmful if swallowed**H318** Causes serious eye damage**H412** Harmful to aquatic life with long lasting effects**CODE PRECAUTIONARY STATEMENT****P273** Avoid release to the environment**P280** Wear protective gloves/protective clothing/eye protection/face protection**P301+P330+P331** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting**P304+P340** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing**P305+P351+P338** IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing**Other hazards (e.g. PBT / vPvB, not classified)** Does not contain components considered to have endocrine-disrupting properties. Does not meet PBT or vPvB criteria under REACH Annex XIII.

SECTION 3

Composition / information on ingredients

Purity / concentration c. 100% Calcium nitrate tetrahydrate (CAS: 13477-34-4)- H302, H318, H412**Impurities / stabilising additives** None

SECTION 4

First-aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. In case of persistent throat irritation or coughing: seek medical attention.
Skin contact	Wash with plenty of water. Continue to rinse for at least 15 minutes and seek medical attention.
Eye contact	Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention
Ingestion	Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.
Symptoms / effects & medical attention	See Section 11.

SECTION 5

Fire-fighting measures

Suitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Unsuitable extinguishing media	None known
Special hazards	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of: Calcium. Nitrogen
Advice for firefighters	Evacuate area. Avoid breathing gas, fume, vapours or spray. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

SECTION 6

Accidental release measures

Personal precautions & PPE	Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. For personal protection, see section 8.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Containment & clean-up methods	Collect spillage with shovel, broom or the like.

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

Storage temperature Ambient

Precautions for safe handling

Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs.

Wash contaminated skin thoroughly after handling. Do not eat, drink or smoke when using this product. Remove contaminated clothing and launder thoroughly before re-use.

Wear protective clothing, gloves, eye and face protection. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

Conditions for safe storage (incompatibilities)

Hygroscopic. Store under inert gas.

SECTION 8

Exposure controls / personal protection

Occupational exposure limits (OEL / WEL) *Not applicable*

DNEC/PNEC data *Not applicable*

Eye / face protection

Safety glasses

Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.

Skin / hand protection

Gloves: Nitrile Rubber, 0.11mm (480 mins).

Respiratory protection

Dust mask (FFP2/FFP3)

Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.

SECTION 9

Physical & chemical properties

Density (g/mL)	1.82 g/mL DERIVED FROM: LITERATURE
Flash point	<i>Not applicable</i>
Acidity	Neutral DERIVED FROM: LITERATURE
Appearance / physical state	Solid DERIVED FROM: LITERATURE
Colour	Colourless DERIVED FROM: LITERATURE
Odour	Not known DERIVED FROM: LITERATURE
Melting / freezing point	44-45°C DERIVED FROM: LITERATURE
Boiling point	132°C DERIVED FROM: LITERATURE
Solubility (water)	1293 g/l DERIVED FROM: LITERATURE
pH	5 - 7 DERIVED FROM: LITERATURE
Vapour pressure	<i>No data available</i>
Partition coefficient (log Pow)	<i>No data available</i>
Auto-ignition / decomposition temp	<i>No data available</i>

SECTION 10

Stability & reactivity

Chemical stability / reactivity	Stable under the prescribed storage conditions
Conditions to avoid	Avoid moisture
Incompatible materials	Reducing agents
Hazardous decomposition products	See section 5

SECTION 11

Toxicological information

Acute toxicity (LD50 / LC50)	Information on hazard classes as defined in Regulation (EC) No 1272/2008. Acute Toxicity Estimate (ATE): LD50 > 300 mg/kg < 2000 mg/kg Ref: External SDS
Skin corrosion / irritation	Based on available data, the classification criteria are not met
Eye corrosion / irritation	Causes serious eye damage
Respiratory / skin sensitisation	Not classified
Carcinogenicity	Not classified
Mutagenicity	Not classified
Reproductive toxicity	Not classified
STOT (single / repeated exposure)	Not classified
Aspiration hazard	Not classified
Endocrine disruptors	Not classified

SECTION 12

Ecological information

Aquatic toxicity	Information on hazard classes as defined in Regulation (EC) No 1272/2008. LC50: >98.9 mg/l - Oncorhynchus mykiss - 96h
Persistence & degradability	<i>Not applicable</i>
Bioaccumulative potential	<i>Not applicable</i>
Mobility in soil	<i>Not applicable</i>
PBT / vPvB assessment	<i>Not applicable</i>

SECTION 13

Disposal considerations

Waste treatment / disposal methods	Dispose of in accordance with local/national regulations
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SECTION 14

Transport information

UN number *Not applicable*

Proper shipping name *Not applicable*

Class *Not applicable*

Packing group *Not applicable*

Transport category *Not applicable*

Tunnel code *Not applicable*

Packing instruction (ADR) *Not applicable*

Packing instruction (IMDG) *Not applicable*

Environmental hazards *Not applicable*

Special precautions for user *Not applicable*

SECTION 15

Regulatory information

REACH code Y110

UFI code *Not applicable*

ECHA notification *Not applicable*

Chemical safety assessment carried out? *Not applicable*

SECTION 16

Other information

Revision notes / other information *Not applicable*

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