

Calcium Nitrate Horticultural Grade

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

1.1. Product identifier: Nitric acid, ammonium calcium salt

Trade name: Van Iperen Calcium Nitrate Horticultural Grade

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

Relevant identified uses:

Professional use of fertilizers containing nitric acid ammonium calcium salt. Consumer use of seeds coated in fertilizer substance.

Uses advised against:

Not recommended for other uses than is mentioned.

1.3. Details of the supplier of the safety data sheet

Van Iperen International BV

Smidsweg 24

3273 LK Westmaas - Nederland

T +31 (0) 186 578 888 - F +31 (0) 186 573 452

info@iperen.com - www.vaniperen.com

1.4. Emergency telephone number

In case of emergency contact the national emergency telephone number: UK and Ireland: 112 or 999

Country	Official advisory body	Address	Emergency number
Ireland (Republic of)	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	0870 243 2241

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Mixture is classified as dangerous according to the Regulation (EC) No 1272/2008 of the European parliament and of the council, on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Risk identification: Acute toxicity (oral), Hazard Category 4 H302 Harmful if swallowed. Serious eye damage/eye irritation, Hazard Category 1 H318 Causes serious eye damage.

2.2. Label elements



Danger

H302 Harmful if swallowed.

H318 Causes serious eye damage.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since calcium nitrate is inorganic.

SECTION 3: Composition/information on ingredients

3.1. Substances

CAS	EC	Category	H-phrases	Pictogram	Content (%)
<i>Nitric acid, ammonium calcium salt</i>					
15245-12-2	239-289-5	Acute Tox. 4 Eye Dam. 1	H302 H318	GHS05 GHS07 Dgr	80.0 – 85.0
¹ Calcium nitrate					
13477-34-4	233-332-1	Acute Tox. 4 Eye Dam. 1	H302 H318	GHS05 GHS07 Dgr	12.0 – 13.0

Calcium Nitrate Horticultural Grade

3.2. Mixtures

Contains no hazardous mixtures.

Notes: *Full text H - phrases is referred to in point 16.

¹anhydrous forms of calcium nitrate (CAS 10124-37-5) under normal conditions not occur. In production is used commonly occurring form of calcium nitrate tetrahydrate (CAS 13477-34-4), which is not classified as oxidizing (Cat. 3 May intensify fire; oxidizer.) Anhydrous form was used only for the purposes of registration materials, complete classification of the anhydrous form of calcium nitrate is given in Section 16.

Name and registration number:

Nitric acid, ammonium calcium salt **01-2119493947-16-0001**

Calcium nitrate **01-2119495093-35-0008**

SECTION 4: First aid measures

4.1. Description of first aid measures

Eye contact: Immediately wash eyes with plenty of running water for at least 15 minutes, keep the eyelids open and occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice.

Skin contact: Wash affected skin area with plenty of water and soap for at least 15 minutes thoroughly while removing contaminated clothing and shoes. Seek medical advice if irritation develops and persists.

Ingestion: Seek medical advice if the victim feels unwell. Wash out mouth with plenty of water and give plenty of water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Inhalation: Remove the victim from exposure into fresh air immediately if adverse effects (e.g. dizziness, drowsiness or respiratory irritation) occur. If not breathing, give artificial respiration and if breathing is difficult, give oxygen, seek medical advice. Seek medical advice when dust is intensively inhaled and the victim feels unwell.

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

Acute effects: Eye irritation (redness). **Ingestion:** abdominal pain, confusion, convulsions, dizziness, headache, nausea, unconsciousness.

Delayed effects: Ingestion: blue lips or fingernails (methemoglobinemia)

4.3 Indication of any immediate medical attention and special treatment needed

Normally no immediate medical service and special treatment is needed. If the effects are persisting get medical attention. It can cause methemoglobinemia.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1. Suitable extinguishing media: Use appropriate extinguishing media.

Note: As the substance is non-combustible, but enhances combustion of other substances, the preferable medias are water or foam.

5.1.2. Unsuitable extinguishing media: No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

In case of fire, may produce hazardous decomposition products such as nitrogen oxides (NO, NO₂ etc.). Keep away from combustible materials.

5.3. Advice for firefighters

No special measures required. In the event of fire, wear a self-contained breathing apparatus and a chemical protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid creating dusty conditions. Avoid contact with eyes and skin. Use personal protective equipments. Keep away from sources of ignition.

6.2. Environmental precautions

Prevent the material from entering surface water or sanitary sewer system. Do not discharge directly to a water source. If accidental high amount spillage or washings enter drains or watercourses contact local Environment Authority.

6.3. Methods and material for containment and cleaning up

Sweep up into suitable labelled containers for recovery or disposal. Clean up affected area with a large amount of water. Pick up with suitable absorbent material (dry sand or soil). Do not use sawdust and other combustible materials as absorbent. Sweep up absorbed substance, place in a solid waste container for later disposal.

6.4. Reference to other sections

See section 8 for personal protective equipment and section 13 for waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Technical measures/ Precautions: Use with adequate ventilation. Use personal protective equipment as advised in Section 8.2. Avoid contact with eyes and skin. Avoid creating dusty conditions. Keep away from sources of ignition. Prevent moisture pickup.

General occupation hygiene: Do not to eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective

Calcium Nitrate Horticultural Grade

equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/ Storage conditions: Keep in the original container. Do not store near combustible materials. Keep container tightly closed in a cool, dry, well-ventilated place. Keep product away from heat, sparks, flame and other sources of ignition, out of direct sunlight and away from incompatible materials (see Section 10). Suitable material for containers: Plastic drums, containers and vessels.

Incompatible products: Combustible and reducing materials

7.3. Specific end use(s)

Exposure scenarios attached as annex to this SDS.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Highest exposure limits (NPEL) based on Slovak Order No. 355/2006: No limits established for this product.

Nitric acid, ammonium calcium salt: Regulated occupational exposure limit values: Total inhalable dust – 10 mg/m³, Respirable dust – 3 mg/m³

Exposure pattern	Derived No Effect Level (DNEL)	
	Workers	General population
Oral1	Not applicable	8.33 mg/kg bw/d
Dermal1	13.9 mg/kg bw/day	8.33 mg/kg bw/day
Inhalation1	24.5 mg/m ³	6.3 mg/m ³
Exposure pattern	Predicted No Effect Level (PNEC)	
Aqua-freshwater	0.45 mg/l	
Aqua-marine water	0.045 mg/l	
Aqua-intermittent release	4.5 mg/l	
STP	18 mg/l	

8.2. Exposure controls

Appropriate engineering controls: None required: Use of adequate ventilation is good industrial practice. In addition, an eyewash facility and a safety shower for facilities storing or utilizing this material is good industrial practice. Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

a) **Eye/face protection:** Use dust goggles if high dust concentration is generated.

b) **Skin protection:**

I. Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

II. Other: Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

c) **Respiratory protection:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

d) **Thermal hazards:** No information available.

8.3. Environmental exposure controls

Leakage of product should be cleaned up promptly and placed in a clean labelled container for safe disposal. (See also Section 6.3 and 13).

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Solid, granule
granulometry:	1 - 4 mm
Colour:	White
Odour:	Odourless
Odour threshold:	No information available.
pH:	5.0 – 7.0
Melting point/freezing point:	116,6°C
Initial boiling point and boiling range:	Not determined, no melting up to 300°C*
Flash point:	Not relevant, as the substance is an inorganic.
Evaporation rate:	No information available.
Flammability (solid, gas):	Non-flammable.
Flammability or explosive limits:	No information available
Vapour pressure:	Considered negligible (based on high melting point)
Vapour density:	Not relevant.
Relative density:	1.12 g/cm ³ at 25°C
Solubility(ies):	Water solubility: 316 g/L at 20°C*
Partition coefficient: n-octanol/water:	Not relevant as the substance is inorganic.

Calcium Nitrate Horticultural Grade

Auto-ignition temperature:	Will not auto-ignite between room temperature and melting temperature (based on molecular structure)
Decomposition temperature:	No information available.
Viscosity:	Not applicable to solids.
Explosive properties:	Not explosive.
Oxidising properties:	Not oxidising.

9.2 Other information

Surface tension:	Not surface active (based on molecular structure).
Bulk density:	1,000 – 1,200 kg.m-3

* Information relating to Nitric acid, ammonium calcium salt

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage and handling conditions (see section 7, handling and storage).

10.2 Chemical stability

Stable under recommended storage and handling conditions (see section 7, handling and storage).

10.3 Possibility of hazardous reactions

When heated, decomposition products.

10.4 Conditions to avoid

Decomposes on heating.

10.5 Incompatible materials

Reactive or incompatible with the following materials: combustible materials, acids and alkalis.

10.6 Hazardous decomposition products

These products are nitrogen oxides metal oxide/oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

- a) acute toxicity: Acute oral toxicity: LD50: > 300 — < 2,000 mg/kg bw (female) (OECD 423) Acute dermal toxicity: LD50 > 2,000 mg/kg bw (OECD 402 with potassium pentacalcium nitrate decahydrate). Acute inhalation toxicity: No data. Vapour pressure considered to be low, particle size is high. Sub-acute toxicity: Oral 28-day NOAEL ≥ 1000 mg/kg bw (OECD 407, with potassium pentacalcium nitrate decahydrate)
- b) skin corrosion/irritation: Not irritating (OECD 404 with potassium pentacalcium nitrate decahydrate).
- c) serious eye damage/irritation: Irritating (OECD 405, EC B.5).
- d) respiratory or skin sensitisation: skin sensitisation: Not sensitising (OECD 429, EC B.42)
- e) germ cell mutagenicity:
Negative (OECD 471, EC B13/14)
Negative (OECD 473, EC B.10)
Negative (OECD 476)
- f) carcinogenicity: No information available.
- g) reproductive toxicity: Oral 28-day NOAEL ≥ 1,500 mg/kg bw/day (OECD 422, with potassium nitrate)
- h) STOT – single exposure: No information available.
- i) STOT – repeated exposure: No information available.
- j) aspiration hazard: No information available.

SECTION 12: Ecological information

12.1. Toxicity

Fish (short-term):	48-h LC50: 447 mg/l (no guideline followed, with ammonium nitrate)
Fish (long-term):	No data
Daphnia magna (shortterm):	48-h EC50: >100 mg/l (OECD 202, EC C.2)
Daphnia magna (longterm):	No data
Algae:	72-h EC50: >100 mg/l, NOEC 100 mg/l (OECD 202)
Inhibition of microbial activity:	3-h EC50: >1,000 mg/l; NOEC 180 mg/l (OECD 209, with sodium nitrate)

12.2 Persistence and degradability

In aqueous solution, nitric acid, ammonium calcium salt is completely dissociated into the calcium ion (Ca²⁺), the ammonium ion (NH₄⁺) and the nitrate anion (NO₃⁻). Hydrolysis of nitric acid, ammonium calcium salt does not occur.
Hydrolysis: No data available: not required as the substance is inorganic.

12.3 Bioaccumulative potential

Such a mixture has a low potential for bioaccumulation.

12.4 Mobility in soil

Adsorption coefficient: Low potential for adsorption (based on substance properties).

Calcium Nitrate Horticultural Grade

12.5 Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since nitric acid, ammonium calcium salt is inorganic.

12.6 Other adverse effects

No further details

SECTION 13: Disposal considerations

13.1. Waste treatment methods:

Waste from residues: In accordance with local and national regulations, disposed by landfill or incineration.

Container: Empty containers or liners may retain some product residues. Do not empty into drains; dispose of this material and its container in a safe way. Dispose of in accordance with all applicable local and national regulations.

SECTION 14: Transport information

Product is not classified as dangerous good for transport according to the ADR/RID/IMDG Code. Provision 208, Chapter 3.3 of ADR: The commercial grade of calcium nitrate fertilizer, when consisting mainly of a double salt (calcium nitrate and ammonium nitrate) containing not more than 10% ammonium nitrate and at least 12% water of crystallization, is not subject to the requirements of ADR.

14.1 UN number

Not regulated.

14.2 UN proper shipping name

Van Iperen Calcium Nitrate Horticultural Grade

14.3 Transport hazard class(es)

Not regulated.

14.4 Packing group

Not regulated.

14.5 Environmental hazards

Van Iperen Calcium Nitrate Horticultural Grade is not classified as environmentally hazardous substance according to the ADR/RID/IMDG Code.

14.6 Special precautions for user

The packed product can be transported by vehicles, railway carriages and ships.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not regulated.

SECTION 15: Regulatory information

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

Corrigendum to 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); 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 and as amended;

REGULATIONS COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH);

Decree No. 355/2006 Coll. of the Government of the Slovak Republic on health protection of employees against occupational risks related to the exposition to chemical factors and as amended;

REGULATION (EC) No 2003/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 October 2003 relating to fertilisers.

15.2. Chemical Safety Assessment

The chemical safety assessment for individual components of the mixture has been carried out.

SECTION 16: Other information

16.1 Used information sources:

The information provided in this safety data sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any proceed, unless specified in the text.

16.2 Instructions for the training:

Instruction in work with product shall be included into the educational system about the safety work (initial training, training at the workplace, repeated training) according to concrete conditions at the workplace.

16.3 List of relevant H phrases: H302 Harmful if swallowed.

H318 Causes serious eye damage.

Safety Data Sheet

According to Regulation (EC) No 2015/830

Calcium Nitrate Horticultural Grade

16.4 Changes made in the revision: --

16.5 Other information:

Classification and labelling Calcium nitrate tetrahydrate CAS 10124-37-5:

Pictogram:



Danger

H-phrases:

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

P-phrases:

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection. P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Company disclaimer

The information provided in this safety data sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any proceed, unless specified in the text.