

Safety Data Sheet

according to Regulation (EC) No. 830/2015

Calcium Nitrate Horticultural Grade

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

1.1. Productidentificatie

Productnaam: Van Iperen Calciumnitraat Fertigation Grade

Index number: none

CAS number: none ES (EINECS) number: none

Name by registration: it is a mixture

Registration number: it is a mixture

Other names of the substance or mixture: none

UFI: P220-W0X7-R00Y-J87E

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

Identified uses of the substance or mixture:

Nitrogen-calcium fertiliser for regenerative fertilisation of winter crops and mainly for fertilisation during the growing season.

Uses of the substance or mixture advised against: Unknown.

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. Telefoonnummer voor noodgevallen

Land	Organisatie/Bedrijf	Adres	Noodnummer
Belgium	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn B -1120 Brussels	+32 70 245 245
Nederland	Nationaal Vergiftigingen Informatie Centrum NB Uitsluitend bestemd om artsen te informeren bij accidentele vergiftigingen	Postbus 1 3720 BA Bilthoven	+31 30 274 88 88

SECTION 2: Hazards identification

2.1. Indeling van de stof of het mengsel

Classification according to Regulation (EC) No. 1272/2008 (CLP) Acute Tox. 4; H302 Eye Dam. 1; H318

2.2. Label elements:

Labelling according to Regulation (EC) No. 1272/2008 (CLP):

Hazard pictograms



Signal word: Danger

Components of the mixture to be labelled: It contains calcium nitrate.

Standard hazard statements:

H302 – Harmful if swallowed.

H318 – Causes serious eye damage.

Precautions for safe handling:

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 P301+P312 - IF

SWALLOWED: Call a doctor 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.

P310 - Immediately call a POISON CENTER/doctor.

P330 - Rinse mouth.

P501 - Dispose of contents/container in according to local regulations.

2.3. Other hazards:

The most serious adverse impacts on health of a human being when using the substance or mixture:

Dust from granulated fertiliser, depending on the concentration, irritates the skin, the airways and the eyes. The irritant effect increases with moisture or perspiration.

The most serious adverse impacts on the environment when using the substance or mixture: The fertiliser and residues must not contaminate water sources, including surface water.

The most important adverse physicochemical effects when using the substance or mixture: Unknown.

The full text of classifications and standard hazard statements are given in Section 16.

SECTION 3: Composition/information on ingredients

3.2 De preparaten:

Mengsels:

*Calcium nitrate Ca(NO₃)₂

Safety Data Sheet

according to Regulation (EC) No. 830/2015



Calcium Nitrate Horticultural Grade

Content: max. 77%

Identification number: none

CAS number: 10124-37-5

ES number (EINECS): 233-332-1

Name by registration: calcium nitrate Registration No.: 01-2119495093-35-0004 Classification according to 1272/2008:

Ox. Sol. 3; H272

Eye Dam. 1; H318

Acute Tox. 4; H302

Ammonium nitrate NH₄NO₃

Content: max. 9 %

Identification number: none

CAS number: 6484-52-2

ES number (EINECS): 229-347-8

Name by registration: ammonium nitrate

Registration No.: 01-2119490981-27-0022 Classification according to 1272/2008:

Ox. Sol. 3; H272

Eye Irrit. 2; H319

Concentration limits are 80% <C ≤ 100%: Eye Irrit. 2; H319

Magnesium nitrate Mg(NO₃)₂

Contents: < 1 %

Index number: none

CAS number: 10377-60-3

ES number (EINECS): 233-826-7

Name by registration: magnesium nitrate

Registration No.: 01-2119491164-38-xxxx Classification according to 1272/2008: Ox. Sol. 3; H272

The full text of classifications and standard hazard statements are given in Section 16.

Notice:

*The anhydrous form of calcium nitrate (CAS: 10124-37-5) does not normally occur. In production, calcium nitrate occurs as various hydrated forms that are not classified as oxidising. The anhydrous form was used for substance registration purposes.

SECTION 4: First aid measures

4.1 Beschrijving van de eerste hulp:

If health problems occur or if in doubt, always seek medical advice and give him/her the information contained in this safety data sheet.

If inhaled:

Stop work and move to fresh air.

In case of skin contact:

Remove the contaminated clothing, quickly rinse with plenty of water. Later thoroughly but without great mechanical irritation, wash with soap and water.

If eyes are affected:

Rinse at least 15 minutes with plenty of water, do not allow the victim to close his eyes. If the victim wears contact lenses, remove them before washing. Consult an ophthalmologist.

In case of ingestion:

Rinse your mouth with water, drink a small amount of water (about 0.2 litres). Do not induce vomiting. Seek medical advice immediately and show the container or label of the mixture.

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

Dust from granulated fertiliser, depending on the concentration, irritates the skin, the airways and the eyes. The irritant effect increases with moisture or perspiration.

4.3 Indication of any immediate medical attention and special treatment needed:

If swallowed or if eyes are affected, seek medical aid.

SECTION 5: Firefighting measures

5.1 Extinguishing agents:

Appropriate extinguishing agents:

It is not a fire dangerous substance or explosive substance and therefore focus extinguishing measures towards nearby fire.

Inappropriate extinguishing agents:

full stream of water, powder extinguisher

5.2 Special hazards arising from the substance or mixture: Not known.

5.3 Advice for fire fighters:

Avoid inhaling combustion products. In case of fire, extinguish with water while using an isolating respirator. At a small scale, a small focal point of digestion can be excavated and extinguished with water away from the stored fertiliser.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Wear protective clothing, eye protection, protective gloves, ventilate, do not eat, drink or smoke while working with fertiliser, use dust respirator if excessive dust concentrations are present.

Safety Data Sheet

according to Regulation (EC) No. 830/2015



Calcium Nitrate Horticultural Grade

6.2 Environmental precautions:

Clean the contaminated area to prevent contamination of groundwater and surface water.

6.3 Methods and material for containment and cleaning up:

Dispose of in a dry way, we recommend to use a composting plant.

6.4 Reference to other sections:

Requirements for protective equipment are stated in Section 8.
Instructions for disposal are stated in Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

When handling, observe the principles of personal hygiene, minimise dustiness, do not eat, drink or smoke. Maintain cleanliness, spilled material on a solid support may cause slippage.

7.2 Conditions for safe storage of substances and mixtures, including any incompatible substances and mixtures:

The fertiliser is stored in stockpiles in bulk, up to a maximum of 6 m, spaced min. 1 m or in units (boxes). Both stockpiles and units must be labelled with the name of the fertiliser. Packaged fertiliser of up to 50 kg is stored in bags stacked one on top of another up to max. 1.5 m. When fertiliser bags are stored on pallets, the pallets can be stored up to two layers. Fertiliser must be stored on an impervious surface. It must be protected from direct sunlight and radiant heat, otherwise the granules are destroyed and the fertiliser hardens. It is stored separately from other fertilisers and it must be protected against contamination. The storage area must be protected against moisture penetration. It is recommended to cover the stored fertiliser with a PE tarpaulin.

7.3 Specific end use(s):

The use is given in section 1.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

Ammonium nitrate: DNEL:

Workers / Inhalation / Systemic effects / Long-term – 36 mg/m³

Workers / Dermal / Systemic effects / Long-term – 5.12 mg/kg/day

Consumers / Inhalation / Systemic effects / Long-term – 8.9 mg/m³

Consumers / Dermal / Systemic effects / Long-term – 2.56 mg/kg/day Consumers / Oral / Systemic effects / Long-term – 2.56 mg/kg/day

PNEC:

Sewage treatment plants (STP) – 18 mg/l

Calcium nitrate:

DNEL:

Consumers / Oral / Systemic effects / Short-term – 10 mg/kg/day

PNEC:

Sewage treatment plants (STP) – 18 mg/l

Magnesium nitrate: PNEC:

Sewage treatment plants (STP) – 18 mg/l

8.2 Exposure limitations:

Dust concentrations in the air must be kept as low as possible using appropriately designed technical means (local ventilation, local exhaust, etc.).

Protection of breathing organs:

in case of non-compliance of the specified concentration limits – dust respirator

Eye protection: Safety glasses

Hand protection:

personal protective gloves

Protection of the whole body: suitable protective clothing, protective footwear

Additional information including general hygiene measures:

Do not eat, drink or smoke. After work wash your hands with warm water and soap. Treat your skin with appropriate reparation means.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

State at 20°C and 101.3kPa: solid

Colour: grey granules 2-5 mm

Odour: odourless

Odour threshold: not specified PH value at 20°C: 10% 5-7

Boiling point at 101.3 kPa: not specified

Boiling point at 101.3 kPa: not specified

Flash point: not flammable

Flammability: not flammable

Explosion limits: not explosive Vapour pressure at 20°C: not specified

Vapour density: not specified Density at 20°C: not specified

Safety Data Sheet

according to Regulation (EC) No. 830/2015



Calcium Nitrate Horticultural Grade

Solubility in water: soluble
Distributive coefficient n-octanol/water: not specified
Ignition temperature: not flammable
Decomposition temperature: not specified
Viscosity at 20°C: not specified
Explosive properties: none
Oxidation properties: none (Test O.1: Test for oxidizing solids, Research Institute for Organic Syntheses Inc., 2020)

9.2 Additional information

The fertiliser is highly hygroscopic.

SECTION 10: Stability and reactivity

10.1 Reactivity:

Under normal conditions, this is a stable mixture.

10.2 Chemical stability:

Under normal conditions, this is a stable mixture.

10.3 Possibility of hazardous reactions:

Reacts with strong bases to form ammonia.

10.4 Conditions to avoid:

It is dangerous to work with open fire and to weld at places where the fertiliser is stored, During such works, it is necessary to prevent the fall of the hot strands on the fertiliser.

10.5 Incompatible materials:

flammable materials

10.6 Hazardous products of decomposition:

nitrogen oxides, ammonia

SECTION 11: Toxicological information

11.1 Information on toxicological effects:

Dust from granulated fertiliser, depending on the concentration, can irritate the skin, the airways and the eyes. The irritant effect increases with moisture or perspiration.

The classification was derived from the properties of individual components of mixtures via the procedures laid down in Regulation (EC) No. 1272/2008.

Acute toxicity:

Mixture: Harmful if swallowed.

LD50, orally, rat for calcium nitrate: $\geq 300 - \leq 2000$ mg/kg

LD50, orally, rat for ammonium nitrate: 2950 mg/kg

LD50, orally, rat for magnesium nitrate: > 2000 mg/kg

LD50, dermal, rat/rabbit for calcium nitrate: > 2000 mg/kg (rat)

LD50, dermal, rat/rabbit for ammonium nitrate: > 5000 mg/kg (rat)

LD50, dermal, rat for magnesium nitrate: > 5000 mg/kg LC50, inhalation, rat for ammonium nitrate: $> 88,8$ mg/l (4 h)

Causticity / skin irritation:

Mixture: Based on available data the criteria for classification are not met.

calcium nitrate: not corrosive / irritating to skin (rabbit, 72 hours, OECD No. 404) ammonium nitrate: not corrosive / irritating to skin (rabbit, 72 hours, OECD No. 404) Magnesium Nitrate: Not corrosive / irritating to skin (rabbit, 72 hours, OECD No. 404)

Serious eye damage/irritation: Mixture: It causes serious eye damage. calcium nitrate: irreversible effects for the eyes, Category 1 (rabbit, 72 hours, OECD 405) ammonium nitrate: irritating to eyes (rabbit, 7 days, OECD No. 405) magnesium nitrate: not irritating to the eyes (rabbit, 72 hours, OECD No. 405)

Respiratory/skin sensitization:

Mixture: Based on available data the criteria for classification are not met. calcium nitrate: not sensitising (mouse – female, OECD No. 429)

ammonium nitrate: not sensitising (mouse, OECD No. 429) Magnesium nitrate: not sensitising (mouse, OECD No. 429)

Germ cell mutagenicity:

Mixture: Based on available data the criteria for classification are not met. calcium nitrate: negative result (bacterial reverse mutation, OECD No.

471) ammonium nitrate: negative result (bacterial reverse mutation, OECD No. 471)

Magnesium nitrate: negative result (mammalian chromosome aberration test, OECD No. 473)

Carcinogenicity:

Mixture: Based on available data the criteria for classification are not met.

Toxicity for reproduction:

Mixture: Based on available data the criteria for classification are not met. calcium nitrate: NOAEL ≥ 1500 mg/kg bw/day (rat, orally, OECD No.

422) ammonium nitrate: NOAEL ≥ 1500 mg/kg bw/day (rat, orally, OECD No. 422) magnesium nitrate: NOAEL ≥ 1500 mg/kg bw/day (rat, orally, OECD No. 422)

Toxicity for specific target organs – single exposure:

Mixture: Based on available data the criteria for classification are not met.

Toxicity for specific target organs – repeated exposure:

Safety Data Sheet

according to Regulation (EC) No. 830/2015



Calcium Nitrate Horticultural Grade

Mixture: Based on available data the criteria for classification are not met. ammonium nitrate: NOAEL >= 1500 mg/kg bw/day (rat, orally, OECD No. 422) magnesium nitrate: NOAEL >= 1500 mg/kg bw/day (rat, orally, OECD No. 422)

Aspiration hazard:

Mixture: Based on available data the criteria for classification are not met.

11.2 Information on other hazards

Endocrine disrupting properties

Does not contain these substances

Other information See sections 2 and 4.

SECTION 12: Ecological information

The classification was derived from the properties of individual components of mixtures via the procedures laid down in Regulation (EC) No. 1272/2008.

12.1 Toxiciteit:

LC50, 96 hours, fish: data for mixture not available

LC50, 96 hours, Rainbow trout (*Oncorhynchus mykiss*): > 100 mg/l – calcium nitrate LC50, 48 hours, Common carp (*Cyprinus carpio*): 447 mg/l ammonium nitrate

LC50, 96 hours, Rainbow trout (*Oncorhynchus mykiss*): > 100 mg/l – magnesium nitrate LC50, 48 hours, fish: data for mixture not available

EC50, 48 hours, Daphnia Magna: 490 mg/l – calcium nitrate

EC50, 48 hours, Daphnia Magna: 490 mg/l ammonium nitrate

EC50, 48 hours, Daphnia Magna: 490 mg/l – magnesium nitrate

EC50, 7 d., *Bullia digitalis*: 555 mg/l ammonium nitrate

EC50, 10 d., Water algae and cyanobacteria: data for the mixture are not available

EC50, 10 d., more kinds of water algae and cyanobacteria: > 1700 mg/l – calcium nitrate

EC50, 10 d., more kinds of water algae and cyanobacteria: > 1700 mg / l - ammonium nitrate

EC50, 10 d., more kinds of water algae and cyanobacteria: > 1700 mg/l – magnesium nitrate

EC50, 180 min., aktivovaný kal: > 1000 mg/l – calcium nitrate

EC50, 180 min., aktivovaný kal: > 1000 mg / l ammonium nitrate EC50, 180 min., aktivovaný kal: > 1000 mg/l – magnesium nitrate

12.2 Persistence and decomposability:

Mixture: not specified

12.3 Bioaccumulation potential:

Mixture: The study has not been performed. It is a mixture well-soluble in water. Bioaccumulation is not expected.

12.4 Mobility in soil:

Mixture: not specified

12.5 Results of PBT and vPvB assessment: It is not a PBT and vPvB substance.

12.6 Endocrine disrupting properties Does not contain these substances

12.7 Other adverse effects

The product has an adverse effect on the oxygen balance in water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

Methods of the product disposal:

Dispose of in a dry way, we recommend to use a composting plant.

Methods of package disposal:

Cleaned, PE containers are recyclable. The containers that are not cleaned need to be treated like the product.

Additional recommendations:

Removal must be in accordance with applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID):

Not subject to ADR/RID

14.1 UN number or ID number: none

14.2 UN proper shipping name: not assigned

14.3 Transport hazard class(es): not specified

14.4 Packaging group: not specified

14.5 Environmental hazards:

Not classified as hazardous to the environment according to the Agreement concerning the International Carriage of Dangerous Goods by Road ADR/ RID/IMDG.

Safety Data Sheet

according to Regulation (EC) No. 830/2015



Calcium Nitrate Horticultural Grade

14.6 Special safety precautions for a user:

Packaged product can be transported by cars, railway wagons, ships and air.

14.7 Maritime transport in bulk according to IMO instruments:

not available

SECTION 15: Regulatory information

15.1 Regulations relating to the safety, health and environmental regulations/ specific legislation for the substance or mixture:

European Agreement on International Road Transport of Hazardous Items (ADR)

European Parliament and Council Regulation (EC) No. 1907/2006 (REACH) European

Parliament and Council Regulation (EC) No. 1272/2008 (CLP)

Other regulations:

'This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Please see https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/crisis-and-terrorism/explosives/explosives-precursors/docs/list_of_competent_authorities_and_national_contact_points_en.pdf.'

15.2 Chemical safety assessment:

The Chemical Safety Report – CSR has been prepared for the substances.

SECTION 16: Other information

Changes made to the Safety Data Sheet as part of the revision:

Revision 1 – Modification of Section 3 – Modification of Product Composition, Modification of Subsection 7.2

Revision 2 – Update of Subsection 8.1, addition of the information in Sections 11 and 12

Revision 3 - Addition and update of Precautions for safe handling in Section 2 and 16

Revision 4 - addition of section 15 - reference to Regulation (EU) No 98/2013 on the placing on the market and use of explosives precursors

Revision 5 - refinement of the hazardous ingredients specification of the mixture in section 3

Revision 6 - Update of Subsection 9.1

Revision 7 - Addition of the UFI code in section 2, update of subsections 2.3, 8.1, 12.6, 13.1 and 15.1 Revision 8 - Update of sections 11, 12, 14 and 15

Explanations of abbreviations, the full text of the H-phrases and P-phrases:

PBT – hard to break down, bioaccumulative and toxic substances. vPvB – hard to break down and very bioaccumulative.

Acute Tox. 4 – acute toxicity, cat. 4.

Eye Dam. 1 – serious eye damage, cat. 1.

Ox. Sol. 3 – oxidizing solid substance, cat. 3.

Eye Irrit. 2 – eye irritation, cat. 2.

H272 – May intensify fire; oxidant.

H302 – Harmful if swallowed.

H318 – Causes serious eye damage. H319 – Causes serious eye irritation.

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 P301+P312 - IF

SWALLOWED: Call a doctor 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.

P310 - Immediately call a POISON CENTER/doctor.

P330 - Rinse mouth.

P501 - Dispose of contents/container in according to local regulations.

The safety datasheet layout has been changed and Sections 3 and 4 have been added in this revision. The information has been drawn from safety datasheets, literature, MedisAlarm databases and experience for a human being. It contains details necessary to secure safety and protection of health at work and protection of the environment. Such information does not substitute the quality specification and cannot be considered as a warranty of suitability and applicability of this product for a specific application. The shown details correspond to the current state of knowledge and experience and are in accordance with statutory provisions. The user is responsible for compliance with local laws in force.

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.