

LOVOFERT CN 15 + B

Date of issue: 06/12/2019

Date of revision: first edition

SECTION 1: IDENTIFICATION OF A SUBSTANCE / MIXTURE AND COMPANY / PLANT

1.1 Product identifier:

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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

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

Identified uses of the substance or mixture:

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

Uses of the substance or mixture advised against:

Uses by general public due to restrictions on uses listed in Annex XVII of REACH

1.3 Details of the supplier of the safety data sheet:

Manufacturer

Name or business name: **Lovochemie, a.s.**

Place of business or registered office: **Lovosice, Terezińska 57**

Identification No.: 49100262

Telephone number: 416 561 111

Email: info@lovochemie.cz

1.4 Emergency telephone number:

corporate centre 416 563 441, 736 507 221

Toxicology Information Centre (TIC) Na Bojišti 1, 128 08 Prague 2

phone (24 hours/day) 224 91 92 93; 224 91 54 02; 224 91 45 75; 224 97 11 11

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture:

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

Acute Tox. 4; H302

Eye Dam. 1; H318

Repr. 1B; H360FD

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 and disodium octaborate tetrahydrate.

Standard hazard statements:

H302 – Harmful if swallowed.

H318 – Causes serious eye damage.

H360FD - May damage fertility. May damage the unborn child.

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Precautions for safe handling:

P280 – Wear protective gloves, protective clothing, eye protection

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.

P405 - Store locked up.

According to REACH, annex XVII

Restricted to professional users only.

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 Mixtures:

***Calcium nitrate $\text{Ca}(\text{NO}_3)_2$**

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 NH_4NO_3

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

Disodium octaborate tetrahydrate $\text{Na}_2\text{B}_8\text{O}_{13} \cdot 4\text{H}_2\text{O}$

Content: < 1,5 %

Identification number: 005-020-00-3

CAS number: 12280-03-4

ES number (EINECS): 234-541-0

Name by registration: Boron sodium oxide (B8Na2O13), tetrahydrate

Registration No.: 01-2119490860-33-xxxx

Classification according to 1272/2008:

Repr. 1B; H360FD

Magnesium nitrate $\text{Mg}(\text{NO}_3)_2$

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.

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Notice:

*The anhydrous form of calcium nitrate 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 Description of first aid measures:

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: FIRE FIGHTING 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.

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.

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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: LIMITING EXPOSITION / PERSONAL PROTECTIVE DEVICES

8.1 Control parameters:

Recommended value for fertiliser dust 10 mg/m³

DNEL and PNEC values:

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

Disodium octaborate tetrahydrate:

DNEL:

Workers / Inhalation / Systemic effects / Long-term - 6,9 mg/m³

Workers / Dermal / Systemic effects / Long-term - 326 mg/kg/den

Consumers / Inhalation / Systemic effects / Long-term - 3,5 mg/m³

Consumers / Dermal / Systemic effects / Long-term - 163,3 mg/kg/den

Consumers / Oral / Systemic effects / Long-term - 0,81 mg/kg/den

Consumers / Oral / Systemic effects / Short-term - 0,81 mg/kg/den

PNEC:

Fresh water - 2,9 mg/l

Sea water - 2,9 mg/l

Intermittent release - 1,6 µg/l

Waste water treatment plants (STP) - 10 mg/l

Soil - 5,7 mg/kg

Food chain - no potential for bioaccumulation

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

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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: white 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
 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: not specified

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: ≥ 300 - ≤ 2000 mg/kg

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

LD50, orally, rat for disodium octaborate: > 2500 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, rabbit for disodium octaborate: > 2000 mg/kg

LD50, dermal, rat for magnesium nitrate: > 5000 mg/kg

LC50, inhalation, rat for ammonium nitrate: $> 88,8$ mg/l (4 h)

LC50, inhalation, rat for disodium octaborate: $> 2,01$ mg/l (4 h)

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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)
 disodium octaborate: Not corrosive / irritating to skin (rabbit, 72 hours)
 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)
 disodium octaborate: not irritating to the eyes (rabbit, 72 hours, 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)
 disodium octaborate: not sensitising (guinea pig, OECD No. 406)
 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)
 disodium octaborate: negative result (mammalian chromosome aberration test, OECD No. 473)
 Magnesium nitrate: negative result (mammalian chromosome aberration test, OECD No. 473)

Carcinogenicity:

Mixture: Based on available data the criteria for classification are not met.
 disodium octaborate: negative result (mouse, OECD č. 451)

Toxicity for reproduction:

Mixture: Based on available data the criteria for classification are not met.
 calcium nitrate: NOAEL \geq 1500 mg/kg bw/day (rat, orally, OECD No. 422)
 ammonium nitrate: NOAEL \geq 1500 mg/kg bw/day (rat, orally, OECD No. 422)
 disodium octaborate : NOAEL = 83,3 mg/kg bw/day, (rat, orally)
 magnesium nitrate: NOAEL \geq 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:

Mixture: Based on available data the criteria for classification are not met.
 ammonium nitrate: NOAEL \geq 1500 mg/kg bw/day (rat, orally, OECD No. 422)
 disodium octaborate : NOAEL = 83,3 mg/kg bw/day, (rat, orally, testicles)
 magnesium nitrate: NOAEL \geq 1500 mg/kg bw/day (rat, orally, OECD No. 422)

Aspiration hazard:

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

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 Toxicity:

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, Fathead minnow (*Pimephales promelas*): 79,7 mg/l - disodium octaborate
 LC₅₀, 96 hours, Rainbow trout (*Oncorhynchus mykiss*): > 100 mg/l – magnesium nitrate
 EC₅₀, 48 hours, daphnia: 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, Ceriodaphnia dubia: 165 mg/l - disodium octaborate
 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

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EC₅₀, 10 d., more kinds of water algae and cyanobacteria: > 1700 mg / l - ammonium nitrate
 EC₅₀, 3 d., Pseudokirchneriella subcapitata: 52,4 mg/l - disodium octaborate
 EC₅₀, 10 d., more kinds of water algae and cyanobacteria: > 1700 mg/l – magnesium nitrate
 EC₅₀, 180 min., activated sludge: > 1000 mg/l – calcium nitrate
 EC₅₀, 180 min., activated sludge: > 1000 mg / l ammonium nitrate
 EC₅₀, 180 min., activated sludge: > 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 Other adverse effects**
No data available

SECTION 13: INSTRUCTIONS FOR REMOVAL

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:** none
- 14.2 Relevant UN shipping name:** not assigned
- 14.3 Class/ classes of transport hazard:** 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.
- 14.6 Special safety precautions for a user:**
Packaged product can be transported by cars, railway wagons, ships and air.
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:**
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 subject to Regulation (EU) 98/2013, all suspicious transactions, disappearances and thefts shall be reported to the relevant authority.

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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:

First edition

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.

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

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

Repr. 1B - Reproductive toxicity cat. 1B

H272 – May intensify fire; oxidant.

H302 – Harmful if swallowed.

H318 – Causes serious eye damage.

H319 – Causes serious eye irritation.

H360FD - May damage fertility. May damage the unborn child.

P280 – Wear protective gloves, protective clothing, eye protection

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

P310 - Immediately call a POISON CENTER/doctor.

P405 - Store locked up.

The safety data sheet layout has been changed and Sections 3 and 4 have been added in this revision. The information has been drawn from safety data sheets, 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.