

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



PERLKA®

Version 3.11 / REG_EU
Revision Date: 14.12.2021

Specification: 132649
Material no.:

Date of first issue: 14.12.2021
Print Date: 15.12.2021

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

1.1 Product identifier

Trade name : PERLKA®
Registration number : if available listed in Chapter. 3
Unique Formula Identifier (UFI) : Q410-R0SR-W001-EE9C

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

Use of the Sub-stance/Mixture : Fertiliser

1.3 Details of the supplier of the safety data sheet

Company : Alzchem Trostberg GmbH
Dr.-Albert-Frank-Str. 32
83308 Trostberg, Germany
Telephone : +49 8621 86-3351
E-mail address of person responsible for the SDS : alz-pst@alzchem.com

1.4 Emergency telephone number

Emergency telephone number : +49 8621 86-2776
Alzchem Trostberg GmbH, Fire Brigade

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

| | |
|--|--|
| Acute toxicity, Category 4 | H302: Harmful if swallowed. |
| Skin irritation, Category 2 | H315: Causes skin irritation. |
| Skin sensitisation, Category 1 | H317: May cause an allergic skin reaction. |
| Serious eye damage, Category 1 | H318: Causes serious eye damage. |
| Specific target organ toxicity - single exposure, Category 3 | H335: May cause respiratory irritation. |
| Long-term (chronic) aquatic hazard, Category 3 | H412: Harmful to aquatic life with long lasting effects. |

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms :



Signal word : Danger

Hazard statements :
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
Response:
P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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

A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out

Intake of alcoholic beverages increases the effect (see section 4).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Fertilizer based on calcium cyanamide contains:
1.8 %
Nitric nitrogen
Residual content of calcium carbide < 0.1 %

Components

| Chemical name | CAS-No. EC-No. Index-No. Registration number | Classification | Concentration (% w/w) |
|------------------------------|---|--------------------|--------------------------|
| calcium cyanamide, technical | 156-62-7 | Acute Tox. 4; H302 | > 40 |

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| | | | |
|------------------------------|--|--|---------|
| | 205-861-8 615-017-00-4 01-2119777581-29-0000 | Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Dam. 1; H318 STOT SE 3; H335 Aquatic Chronic 3; H412 | |
| calcium dihydroxide | 1305-62-0 215-137-3 01-2119475151-45-XXXX | Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335 | 13 - 15 |
| Graphite | 7782-42-5 231-955-3 01-2119486977-12-XXXX | not classified | >= 11 |
| Calcium nitrate tetrahydrate | 13477-34-4 233-332-1 01-2119495093-35-0019 | Acute Tox. 4; H302 Eye Dam. 1; H318 | >= 10 |
| calcium sulphate | 7778-18-9 231-900-3 01-2119444918-26-XXXX | not classified | < 3 |

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Seek medical advice in case of symptoms caused by eye or skin contact, inhalation or swallowing.
Remove contaminated or soaked clothing immediately and dispose of safely.
- If inhaled : Move to fresh air.
- In case of skin contact : Wash off with plenty of water and soap immediately.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.
Remove contact lenses if this can be easily done.
Immediate further treatment in ophthalmic hospital/ ophthalmologist.
- If swallowed : Rinse mouth.
Drink 1 or 2 glasses of water.
Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Erythema
Fall in blood pressure
increased pulse frequency,
feeling of burning,

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Irritation of skin and mucous membranes
headache
Shortness of breath
Nausea

Risks : Attention: interactions with alcohol (ethanol).

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treatment:
No specific antidote known.
Symptomatic treatment.
Control of circulatory system
If necessary, administer activated charcoal (10-20g) and sodium sulfate (Glauber salt, 20g).
stomach pumping under gastroscopic view.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : quenching powder
Dry sand
water spray

Unsuitable extinguishing media : high volume water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : Ammonia
nitrous gases
Carbon oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the case of fire, wear respiratory protective equipment independent of surrounding air and chemical protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Wear personal protective equipment; see section 8.
Avoid dust formation.
Ensure adequate ventilation.

6.2 Environmental precautions

Environmental precautions : Product or extinguishing water with product must not be allowed to enter soil, sewers or natural bodies of water.

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6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Sweep up and shovel.
Avoid dust formation.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Provide appropriate exhaust ventilation at places where dust is formed.
Handle in accordance with good industrial hygiene and safety practice.
Use in the open air or with adequate ventilation.

Advice on protection against fire and explosion : Does not present a risk of dust explosion 1 m³ standard container, 10 kJ ignition energy

Keep away from combustible material.

Hygiene measures : Avoid contact with skin, eyes and clothing. Take off clothing and shoes contaminated with product. Clean before reuse. Do not consume any alcoholic beverages before, during or after working with this product. Do not eat, drink or smoke during use. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in a dry place. Keep in a well-ventilated place.

Advice on common storage : Incompatible with acids and bases.
Incompatible with oxidizing agents.
If stored together outdoors with ammonium nitrate and ammonium nitrate preparations, a minimum distance between the containers of 5 m must be maintained, (TRGS 511, 6.1.2 (3)).
If lime nitrogen is stored together in the same room with ammonium nitrate and preparations containing ammonium nitrate, a minimum distance between the containers of 2.5 m must be maintained, (TRGS 511, 6.1.2 (6)).
Protect against humid air and water.

Storage class (TRGS 510) : 13, Non Combustible Solids

Packaging material : Suitable material: polyethylene, Stainless steel

7.3 Specific end use(s)

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Specific use(s) : We are unaware of any specific end uses which go beyond the data reported in Section 1.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---------------------|---------------------------------|-------------------------------|---------------------|-------------|
| calcium dihydroxide | 1305-62-0 | TWA (Respirable fraction) | 1 mg/m ³ | 2017/164/EU |
| | Further information: Indicative | | | |
| | | STEL (Respirable fraction) | 4 mg/m ³ | 2017/164/EU |
| | Further information: Indicative | | | |

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|------------------------------|-------------------------------------|-----------------|----------------------------|-------------------------|
| calcium cyanamide, technical | Worker | dermal | Long-term systemic effects | 0,65 mg/kg bw/day |
| | Worker | Inhalation | Long-term systemic effects | 1 mg/m ³ |
| calcium dihydroxide | Industrial use | Inhalation | Long-term local effects | 1 mg/m ³ |
| | Industrial use | Inhalation | Acute local effects | 4 mg/m ³ |
| Graphite | Workers | Inhalation | Long-term systemic effects | 1,2 mg/m ³ |
| | Workers | Inhalation | Long-term local effects | 1,2 mg/m ³ |
| calcium sulphate | Industrial use | Inhalation | Long-term systemic effects | 21,17 mg/m ³ |
| | Industrial use | Inhalation | Acute systemic effects | 5082 mg/m ³ |
| Calcium nitrate tetrahydrate | DNEL not necessary (not classified) | | | |

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

| Substance name | Environmental Compartment | Value |
|------------------------------|-------------------------------------|-------------------------------|
| calcium cyanamide, technical | Freshwater | 0,01 mg/l |
| | Marine water | 0,001 mg/l |
| | STP | 1,09 mg/l |
| | Soil | 0,151 mg/kg dry weight (d.w.) |
| calcium dihydroxide | Fresh water | 0,49 mg/l |
| | Marine water | 0,32 mg/l |
| | STP | 3 mg/l |
| | Soil | 1080 mg/kg |
| Graphite | PNEC not necessary (not classified) | |

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| | | |
|------------------------------|-----|----------|
| calcium sulphate | STP | 100 mg/l |
| Calcium nitrate tetrahydrate | STP | 18 mg/l |

8.2 Exposure controls

Personal protective equipment

Eye protection : Goggles

Hand protection

Material : Nitrile rubber, Recommendation: Dermatril 740
Break through time : > 480 min
Glove thickness : 0,11 mm
Directive : DIN EN 374
Manufacturer : Kächele-Cama Latex GmbH (KCL), Germany

Material : Nitrile rubber, Recommendation: Camatril 730
Break through time : > 480 min
Glove thickness : 0,6 mm
Directive : DIN EN 374
Manufacturer : Kächele-Cama Latex GmbH (KCL), Germany

Skin and body protection : Protective clothing
If intensive contact with the hazardous material cannot be avoided with certainty, order (depending on the hazard involved) additional protective measures for example chemical protective suit.
DuPont™ Tyvek® Classic Xpert (white)
DuPont™ Tychem® C (yellow)

Respiratory protection : Do not inhale gases, vapours, aerosols or dust - use respiratory protection equipment.
Dust protection mask in accordance with EN 149 FFP2

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : solid
Colour : grey, black
Odour : characteristic
Melting point/range : 1145 - 1217 °C
Boiling point/boiling range : not to be determined
Flammability : not flammable
Flash point : Not applicable, solid
Auto-ignition temperature : > 850 °C (ca. 1100 - 1600 hPa)

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pH : Aqueous solutions are strongly alkaline.

Vapour pressure : Not applicable

Density : 2,3 g/cm³ (20 °C)

Bulk density : 1000 kg/m³

9.2 Other information

Minimum ignition energy : > 30 kJ
comparable product

SECTION 10: Stability and reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical stability

No decomposition if stored normally.

10.3 Possibility of hazardous reactions

Hazardous reactions : No hazardous reactions are known if properly handled and stored.

10.4 Conditions to avoid

Conditions to avoid : No specific hazards are known.

10.5 Incompatible materials

Materials to avoid : Acids and bases
Oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions.
see section 5

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat): 594 mg/kg
Method: OECD Test Guideline 401
Assessment: Harmful if swallowed.
Remarks: Own test result.

Acute inhalation toxicity : Maximum attainable concentration (Rat): 5,1 mg/l
Method: OECD Test Guideline 403

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Assessment: Based on available data, the classification criteria are not met.
Remarks: maximum attainable dust concentration during the test: 10% mortality after 4 hour inhalation
Own test result.

Acute dermal toxicity : LD50 (Rabbit): > 2000 mg/kg
Assessment: Based on available data, the classification criteria are not met.
Remarks: Own test result.

Components:

calcium cyanamide, technical:

Acute oral toxicity : LD50 (Rat): 765 mg/kg
Assessment: Harmful if swallowed.
Remarks: Own test result.

Acute inhalation toxicity : Maximum attainable concentration (rat): > 0,155 mg/l
Exposure time: 4 h
Assessment: Based on available data, the classification criteria are not met.
Remarks: maximum concentration in the test: no animals died.
Own test result.

Acute dermal toxicity : LD50 (Rabbit): > 2000 mg/kg
Method: OECD Test Guideline 402
Assessment: Based on available data, the classification criteria are not met.
Remarks: Own test result.

calcium dihydroxide:

Acute oral toxicity : LD50 (rat): > 2000 mg/kg
Remarks: IUCLID

Acute inhalation toxicity : LC50 (rat): > 3 mg/l
Exposure time: 4 h
Remarks: IUCLID

Acute dermal toxicity : LD50 (Rabbit): > 2500 mg/kg
Remarks: The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
IUCLID

Calcium nitrate tetrahydrate:

Acute oral toxicity : LD50 (rat): 1000 mg/kg
Method: OECD 423
Assessment: Harmful if swallowed.
Remarks: Literature, IUCLID

Acute inhalation toxicity : Remarks: no data available

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Acute dermal toxicity : LD50 (Rat): > 2000 mg/kg
Remarks: Literature, IUCLID

calcium sulphate:

Acute oral toxicity : Assessment: Based on available data, the classification criteria are not met.
Remarks: IUCLID

Acute inhalation toxicity : Assessment: Based on available data, the classification criteria are not met.
Remarks: IUCLID

Acute dermal toxicity : Assessment: Based on available data, the classification criteria are not met.
Remarks: IUCLID

Skin corrosion/irritation

Product:

Species : Rabbit
Exposure time : 4 h
Assessment : Irritating to skin.
Method : OECD Test Guideline 404
Remarks : Own test result.

Components:

calcium cyanamide, technical:

Result : irritating
Remarks : Based on experience in human subjects

calcium dihydroxide:

Species : Rabbit
Assessment : Causes skin irritation.
Method : OECD Guide-line 404
Remarks : IUCLID

Calcium nitrate tetrahydrate:

Species : Rabbit
Exposure time : 4 h
Result : No skin irritation
Remarks : The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Literature, IUCLID

calcium sulphate:

Assessment : Based on available data, the classification criteria are not met.
Remarks : IUCLID

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Serious eye damage/eye irritation

Product:

Species : Rabbit
Exposure time : 24 h
Assessment : Corrosive
Method : OECD Guide-line 405
Result : Risk of serious damage to eyes.
Remarks : Own test result.

Components:

calcium cyanamide, technical:

Species : Rabbit
Assessment : Risk of serious damage to eyes.
Method : OECD Test Guideline 405
Result : Causes serious eye damage.
Remarks : Own test result.

calcium dihydroxide:

Species : Rabbit
Assessment : Causes serious eye damage.
Method : OECD Guide-line 405
Remarks : IUCLID

Calcium nitrate tetrahydrate:

Species : Rabbit
Assessment : Causes serious eye damage.
Method : OECD Guide-line 405
Remarks : Literature, IUCLID

calcium sulphate:

Assessment : Based on available data, the classification criteria are not met.
Remarks : IUCLID

Respiratory or skin sensitisation

Product:

Result : May cause sensitisation by skin contact.

Components:

calcium cyanamide, technical:

Test Type : maximization test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : May cause sensitisation by skin contact.
Remarks : Own test result.

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calcium dihydroxide:

Assessment : Based on available data, the classification criteria are not met.
Remarks : The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
IUCLID

Calcium nitrate tetrahydrate:

Test Type : Local Lymphnode Assay
Species : Mouse
Assessment : Based on available data, the classification criteria are not met.
Remarks : The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Literature, IUCLID

calcium sulphate:

Assessment : Based on available data, the classification criteria are not met.
Remarks : IUCLID

Germ cell mutagenicity

Product:

Germ cell mutagenicity- Assessment : Not mutagenic in a battery of in-vitro test systems.

Components:

calcium cyanamide, technical:

Genotoxicity in vitro : Test Type: Sister chromatid exchange assay
Test system: CHO-cells
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Rat
Result: negative

Germ cell mutagenicity- Assessment : Not mutagenic in a battery of in-vitro test systems., Own study

calcium dihydroxide:

Germ cell mutagenicity- Assessment : Based on available data, the classification criteria are not met.
Remarks: IUCLID

Calcium nitrate tetrahydrate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay
Result: negative
Remarks: The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Literature, IUCLID

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Germ cell mutagenicity- Assessment :
Remarks: Literature, IUCLID

calcium sulphate:

Germ cell mutagenicity- Assessment : Based on available data, the classification criteria are not met.
Remarks: IUCLID

Carcinogenicity

Product:

Remarks : Did not show carcinogenic effects in animal experiments.

Components:

calcium cyanamide, technical:

Remarks : No evidence that cancer may be caused.
Literature, IUCLID

calcium dihydroxide:

Carcinogenicity - Assessment : Based on available data, the classification criteria are not met.
Remarks: IUCLID

Calcium nitrate tetrahydrate:

Carcinogenicity - Assessment : No data available
Remarks: Literature, IUCLID

calcium sulphate:

Carcinogenicity - Assessment : Based on available data, the classification criteria are not met.
Remarks: IUCLID

Reproductive toxicity

Product:

Effects on fertility : Remarks: no data available

Components:

calcium cyanamide, technical:

Reproductive toxicity - Assessment : no data available

calcium dihydroxide:

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.
Remarks: IUCLID

Calcium nitrate tetrahydrate:

Effects on fertility : Remarks: Literature, IUCLID

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Reproductive toxicity - Assessment : Remarks: Literature, IUCLID

calcium sulphate:

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.
Remarks: IUCLID

STOT - single exposure

Product:

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Components:

calcium cyanamide, technical:

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.
Remarks : IUCLID

calcium dihydroxide:

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.
Remarks : Literature, IUCLID

STOT - repeated exposure

Product:

Remarks : no data available

Components:

calcium cyanamide, technical:

Assessment : Based on available data, the classification criteria are not met.
Remarks : IUCLID

calcium dihydroxide:

Assessment : Based on available data, the classification criteria are not met.
Remarks : Literature, IUCLID

Aspiration toxicity

Product:

No data available

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Components:

calcium cyanamide, technical:

No data available

calcium dihydroxide:

No data available

Calcium nitrate tetrahydrate:

No data available

11.2 Information on other hazards

Experience with human exposure

Product:

General Information : Alcohol consumption increases the effect of the poison.

Concentration above the OEL may cause irritation of eyes and mucous membranes.

Patch test on human volunteers did not demonstrate sensitisation properties.

Components:

calcium cyanamide, technical:

General Information : Alcohol consumption increases the effect of the poison.

Further information

Product:

Remarks : No additional toxicological data are available.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Danio rerio): 212,8 mg/l
Exposure time: 96 h
Method: OECD 203
Remarks: The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

NOEC (Danio rerio): 152 mg/l
Exposure time: 96 h
Method: OECD 203
Remarks: The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

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Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 9,12 mg/l
Exposure time: 48 h
Method: OECD 202
Remarks: The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

NOEC (Daphnia magna): 2,736 mg/l
Exposure time: 48 h
Method: OECD 202
Remarks: The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

Toxicity to algae/aquatic plants : EC50 (Pseudokirchnerella subcapitata): 41,86 mg/l
Exposure time: 72 h
Method: OECD 201
Remarks: The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

NOEC (Pseudokirchnerella subcapitata): 20,87 mg/l
Exposure time: 72 h
Method: OECD 201
Remarks: The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Components:

calcium cyanamide, technical:

Toxicity to fish : LC50 (Danio rerio): 140 mg/l
Exposure time: 96 h
Method: OECD 203
Remarks: Own test result.

NOEC (Danio rerio): 100 mg/l
Method: OECD 203
Remarks: Own test result.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 6,0 mg/l
Exposure time: 48 h
Method: OECD 202
Remarks: Own test result.

NOEC (Daphnia magna (Water flea)): 1,8 mg/l
Exposure time: 48 h
Method: OECD 202
Remarks: Own test result.

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchnerella subcapitata): 27,54 mg/l
Exposure time: 72 h

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Method: OECD 201
Remarks: Own test result.

NOEL (Pseudokirchnerella subcapitata): 13,73 mg/l
Method: OECD 201
Remarks: Own test result.

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

calcium dihydroxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss): 50,6 mg/l
Exposure time: 96 h
Method: OECD 203
Remarks: Literature, IUCLID

Calcium nitrate tetrahydrate:

Toxicity to fish : LC50 (Poecilia reticulata (guppy)): 1378 mg/l
Exposure time: 96 h
Test Type: static test
Remarks: The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Literature, IUCLID

NOEC (Rainbow trout): 100 mg/l
Exposure time: 96 h
Remarks: The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).
Literature, IUCLID

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 490 mg/l
Exposure time: 48 h
Remarks: Literature, IUCLID

Toxicity to microorganisms : EC50 (Activated sludge): > 1000 mg/l
Exposure time: 3 h
Test Type: Growth inhibition
Remarks: Literature, IUCLID

calcium sulphate:

Ecotoxicology Assessment

Acute aquatic toxicity : Based on available data, the classification criteria are not met.
Remarks: IUCLID

Chronic aquatic toxicity : Based on available data, the classification criteria are not met.
Remarks: IUCLID

12.2 Persistence and degradability

Product:

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Biodegradability : Remarks: Hydrolysis in water
In the soil, the product acts as fertilizer and is degraded within a few weeks.

Components:

calcium cyanamide, technical:

Biodegradability : Inoculum: Activated sludge
Result: Not readily biodegradable.
Method: OECD 301 B
Remarks: Hydrolysis in water

Calcium nitrate tetrahydrate:

Biodegradability : Remarks: No data available

calcium sulphate:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: no data available

Components:

calcium sulphate:

Bioaccumulation : Remarks: No significant bioaccumulation.
IUCLID

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out

12.6 Endocrine disrupting properties

no data available

12.7 Other adverse effects

Product:

Additional ecological information : Prevent penetration into soil, stretches of water and drainage systems.
No further ecotoxicological data are available.

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Components:

calcium cyanamide, technical:

Environmental fate and pathways : In the soil, the product acts as fertilizer and is degraded within a few weeks.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product : Must be brought to an adequate waste treatment facility, in conformity with applicable waste disposal regulations.
- Must not be disposed of together with household wastes. In the soil, the product acts as fertilizer and is degraded within a few weeks.
- Contaminated packaging : Packaging, that can not be reused after cleaning must be disposed or recycled in accordance with all federal, national and local regulations.

SECTION 14: Transport information

14.1 UN number or ID number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

- Remarks : Not classified as dangerous in the meaning of transport regulations., Residual content of calcium carbide < 0.1 %
- ADR** : Not regulated as a dangerous good
- RID** : Not regulated as a dangerous good
- IMDG** : Not regulated as a dangerous good
- Remarks : Not classified as dangerous in the meaning of transport regulations., Residual content of calcium carbide < 0.1 %
- IATA (Cargo)** : Not regulated as a dangerous good
- Remarks : Not classified as dangerous in the meaning of transport regulations., Residual content of calcium carbide < 0.1 %
- IATA (Passenger)** : Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

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14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations., Residual content of calcium carbide < 0.1 %
Residual calcium carbide content < 0.1%, so that labelling with UN No. 1403 is not necessary.
Perlka does not constitute hazardous cargo as defined by the transport regulations, so that transport together with ammonium nitrate and preparations containing ammonium nitrate is permissible.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Other regulations:

The product is a fertilizer with EEC-approval.

15.2 Chemical safety assessment

No substance safety assessment is required for this product.

SECTION 16: Other information

Full text of H-Statements

H302 : Harmful if swallowed.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H335 : May cause respiratory irritation.
H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Chronic : Long-term (chronic) aquatic hazard
Eye Dam. : Serious eye damage
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation
STOT SE : Specific target organ toxicity - single exposure
2017/164/EU : Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
2017/164/EU / STEL : Short term exposure limit
2017/164/EU / TWA : Limit Value - eight hours

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for

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the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECl - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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 a 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 process, unless specified in the text.

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