

Protectogen C aqua

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Substance key: 000000121445

Revision Date: 09.04.2018

Version : 5 - 2 / EU

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

1.1. Product identifier

Trade name

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Material number: 187211

Chemical nature: aqueous solution of organic and inorganic salts

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

Relevant identified uses of the substance or mixture

Industry sector : Functional Fluids
Type of use : Techno-chemical industry.
Corrosion inhibitors

1.3. Details of the supplier of the safety data sheet

Identification of the company

Clariant Produkte (Deutschland) GmbH
65926 Frankfurt am Main
Telephone no. : +49 69 305 18000

Information about the substance/mixture

BU Industrial & Consumer Specialties
Product Stewardship
e-mail: SDS.Europe@clariant.com

1.4. Emergency telephone number

00800-5121 5121 (24 h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

No additional hazards are known except those derived from the labelling.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Sodium nitrate	7631-99-4 231-554-3 01-2119488221-41 01-2119488221-41- 0013 01-2119488221-41- 0026 01-2119488221-41- XXXX	Ox. Sol. 3; H272 Eye Irrit. 2; H319	>= 3 - < 10
Methyl-1H-benzotriazole	29385-43-1 249-596-6 01-2119979081-35 01-2119979081-35- 0000	Acute Tox. 4; H302 Aquatic Chronic 2; H411	>= 1 - < 2,5

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Remove/Take off immediately all contaminated clothing.
- If inhaled : Move the victim to fresh air.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- If swallowed : Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : No symptoms known currently.
- Risks : No hazards known at this time.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray jet
Dry powder
Carbon dioxide (CO₂)
Alcohol-resistant foam

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : In case of fires, hazardous combustion gases are formed:
Carbon monoxide (CO)

Nitrogen oxides (NO_x)

5.3 Advice for firefighters

Special protective equipment for firefighters : Self-contained breathing apparatus

Further information : Wear suitable protective equipment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Ensure adequate ventilation.
Wear suitable protective equipment.

6.2 Environmental precautions

Environmental precautions : Do not allow to enter drains or waterways

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Can be landfilled or incinerated, when in compliance with local regulations.

6.4 Reference to other sections

Information regarding Safe handling, see chapter 7., For personal protection see section 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Handle and open container with care.

Advice on protection against fire and explosion : Observe the general rules of industrial fire protection

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Hygiene measures : Keep away from food and drink.

7.2 Conditions for safe storage, including any incompatibilities

Further information on storage conditions : Keep containers tightly closed in a cool, well-ventilated place.
Handle and open container with care.

Advice on common storage : Keep away from oxidizing agents.

7.3 Specific end use(s)

Specific use(s) : No further recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Sodium nitrate CAS-No.: 7631-99-4	Workers	Skin contact	Long-term systemic effects	20,8 mg/kg bw/day
Remarks:	DNEL			
	Workers	Inhalation	Long-term systemic effects	36,7 mg/m3
Remarks:	DNEL			
	General population	Inhalation	Long-term systemic effects	10,9 mg/m3
Remarks:	DNEL			
	General population	Skin contact	Long-term systemic effects	12,5 mg/kg bw/day
Remarks:	DNEL			
	General population	Ingestion	Long-term systemic effects	12,5 mg/kg bw/day
Remarks:	DNEL			
Hexanoic acid, 3,5,5-trimethyl- CAS-No.: 3302-10-1	Workers	Skin contact	Long-term systemic effects	2 mg/kg bw/day
Remarks:	DNEL			
	Workers	Inhalation	Long-term systemic effects	7 mg/m3
Remarks:	DNEL			
	Consumer use	Skin contact	Long-term systemic effects	1 mg/kg bw/day
Remarks:	DNEL			
	Consumer use	Inhalation	Long-term systemic effects	2 mg/m3
Remarks:	DNEL			
	Consumer use	Ingestion	Long-term systemic effects	1 mg/kg bw/day
Remarks:	DNEL			

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Methyl-1H-benzotriazole CAS-No.: 29385-43-1	Consumers	Ingestion	Long-term systemic effects	0,25 mg/kg bw/day
Remarks:	DNEL			
	Consumers	Skin contact	Long-term systemic effects	0,25 mg/kg bw/day
Remarks:	DNEL			
	Workers	Skin contact	Long-term systemic effects	0,5 mg/kg bw/day
Remarks:	DNEL			
	Consumers	Inhalation	Long-term systemic effects	4,4 mg/m3
Remarks:	DNEL			
	Workers	Inhalation	Long-term systemic effects	8,8 mg/m3
Remarks:	DNEL			
Sodium hydroxide CAS-No.: 1310-73-2	Workers	Inhalation	Long-term local effects	1,0 mg/m3
Remarks:	DNEL			
	Consumers	Inhalation	Long-term local effects	1,0 mg/m3
Remarks:	DNEL			

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

Substance name	Environmental Compartment	Value
Sodium nitrate CAS-No.: 7631-99-4	Fresh water	0,45 mg/l
	Marine water	0,045 mg/l
	intermittent releases	4,5 mg/l
Remarks:	water	
	Effects on waste water treatment plants	18 mg/l
Hexanoic acid, 3,5,5-trimethyl- CAS-No.: 3302-10-1	Fresh water	0,068 mg/l
	Marine water	0,0068 mg/l
	intermittent releases	1,36 mg/l
	Sewage treatment plant	23 mg/l
	Fresh water sediment	0,904 mg/kg
	Marine sediment	0,0904 mg/kg
Methyl-1H-benzotriazole CAS-No.: 29385-43-1	Soil	0,141 mg/kg
	Fresh water	0,008 mg/l
	Marine water	0,008 mg/l
	Water (intermittent release)	0,086 mg/l
	Sewage treatment plant	39,4 mg/l
	Fresh water sediment	0,0025 mg/kg
	Marine sediment	0,0025 mg/kg
	Soil	0,0024 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye protection : Safety glasses

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- Hand protection
- Break through time : 480 min
 - Glove thickness : 0,7 mm
 - Remarks : Long-term exposure Impervious butyl rubber gloves
- Break through time : 30 min
- Glove thickness : 0,4 mm
- Remarks : For short-term exposure (splash protection): Nitrile rubber gloves.
- Remarks : These types of protective gloves are offered by various manufacturers. Please note the manufacturers' detailed statements, especially about the minimum thickness and the minimum breakthrough time. Consider also the particular working conditions under which the gloves are being used.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure
Full mask to standard DIN EN 136
Filter A (organic gases and vapours) to standard DIN EN 141
The use of filter apparatus presupposes that the environment atmosphere contains at least 17% oxygen by volume, and does not exceed the maximum gas concentration, usually 0.5% by volume. Relevant guidelines to be considered include EN 136/141/143/371/372 as well as other national regulations.
- Protective measures : Avoid contact with skin and eyes.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : Liquid
- Colour : colourless to slightly yellow
- Odour : characteristic
- Odour Threshold : not tested.
- pH : 8,3 (20 °C)
Concentration: 100 g/l
Method: DIN 51369
- Solidification point : approx. -10 °C
Method: ASTM D 97
- Boiling point : 102 °C
(1.013 hPa)
Method: ASTM D 1120

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Flash point	:	> 100 °C Method: ISO 2592
Evaporation rate	:	Not applicable
Burning number	:	Not applicable
Upper explosion limit / upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Vapour pressure	:	< 0,001 Pa (20 °C) Method: Calculated by Syracuse.
Relative vapour density	:	Not applicable
Density	:	1,0703 g/cm ³ (20 °C) Method: DIN 51757
Bulk density	:	Not applicable
Solubility(ies)		
Water solubility	:	completely miscible (20 °C)
Solubility in other solvents	:	not tested. Solvent: fat
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	495 °C Method: DIN 51794
Decomposition temperature	:	> 300 °C Method: DSC No decomposition up to 300 °C.
Viscosity		
Viscosity, dynamic	:	10,47 mPa.s (20 °C)
Viscosity, kinematic	:	9,78 mm ² /s (20 °C) Method: DIN 51562
Explosive properties	:	no data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Surface tension	:	27,5 mN/m
Minimum ignition energy	:	not tested.

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Particle size : Not applicable
Self-ignition : The substance or mixture is not classified as self heating.

SECTION 10: Stability and reactivity

10.1 Reactivity

See section 10.3. "Possibility of hazardous reactions"

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Reactions with oxidising agents.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : not known

10.6 Hazardous decomposition products

When handled and stored appropriately, no dangerous decomposition products are known

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Remarks: no data available

Components:

Sodium nitrate:

Acute oral toxicity : LD50 (Rat, male and female): ca. 3.430 mg/kg
Method: OECD Test Guideline 401
GLP: no

Acute inhalation toxicity : Remarks: Not applicable

Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Remarks: By analogy with a product of similar composition

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Methyl-1H-benzotriazole:

- Acute oral toxicity : LD50 (Rat, male and female): ca. 720 mg/kg
Method: OECD Test Guideline 401
GLP: no
- Acute inhalation toxicity : Remarks: not required
- Acute dermal toxicity : LD50 (Rabbit, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Remarks: By analogy with a product of similar composition

Skin corrosion/irritation

Product:

- Remarks : no data available

Components:

Sodium nitrate:

- Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : no
Remarks : By analogy with a product of similar composition

Methyl-1H-benzotriazole:

- Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : no

Serious eye damage/eye irritation

Product:

- Remarks : no data available

Components:

Sodium nitrate:

- Species : rabbit eye
Method : OECD Test Guideline 405
Result : Eye irritation
GLP : yes

Methyl-1H-benzotriazole:

- Species : rabbit eye

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Exposure time : 24 h
Method : OECD Test Guideline 405
Result : slight irritation
GLP : no

Respiratory or skin sensitisation

Product:

Remarks : no data available

Components:

Sodium nitrate:

Test Type : Mouse local lymphnode assay
Exposure routes : Dermal
Species : Mouse
Method : OECD Test Guideline 429
Result : Does not cause skin sensitisation.
GLP : yes

Methyl-1H-benzotriazole:

Test Type : Guinea pig maximization test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.
GLP : yes

Germ cell mutagenicity

Product:

Germ cell mutagenicity-
Assessment : No information available.

Components:

Sodium nitrate:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test system: Human lymphocytes
Concentration: 10 - 850 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: <=5000 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471

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Result: negative
GLP: No information available.

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Concentration: <=5000 µg/ml
Metabolic activation: without
Method: Other
Result: positive
GLP: No information available.

Genotoxicity in vivo : Test Type: Unscheduled DNA synthesis test (UDS) in testicular cells
Species: Mouse (male)
Application Route: oral (gavage)
Exposure time: 3 times, 17 d
Dose: 600 - 1200 mg/kg
Method: Other
Result: negative
GLP: No information available.

Test Type: Micronucleus test
Species: Mouse (male)
Strain: Swiss Webster
Application Route: oral (gavage)
Exposure time: 2 times, 24 h
Dose: 108-323-969-2906 mg/kg
Method: Other
Result: positive
GLP: No information available.

Germ cell mutagenicity-
Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Methyl-1H-benzotriazole:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 20 - 12500 µg/plate
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: no

Test Type: HGPRT assay
Test system: Chinese hamster ovary cells
Concentration: 50 - 1000 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: By analogy with a product of similar composition

Genotoxicity in vivo : Test Type: Micronucleus test

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Species: Mouse (male and female)
Strain: NMRI
Cell type: Bone marrow
Application Route: oral (gavage)
Exposure time: 1 treatment, 24-48-72 h
Dose: 600 mg/kg
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Germ cell mutagenicity-
Assessment : It is concluded that the product is not mutagenic based on
evaluation of several mutagenicity tests.

Carcinogenicity

Product:

Carcinogenicity -
Assessment : No information available.

Components:

Sodium nitrate:

Carcinogenicity -
Assessment : Animal testing did not show any carcinogenic effects.

Methyl-1H-benzotriazole:

Carcinogenicity -
Assessment : No information available.

Reproductive toxicity

Product:

Reproductive toxicity -
Assessment : No information available.
No information available.

Components:

Sodium nitrate:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Strain: wistar
Application Route: oral (gavage)
Dose: 250 - 750 - 1500 mg/kg
General Toxicity - Parent: NOAEL: >= 1.500 mg/kg body
weight
Method: OECD Test Guideline 422
GLP: yes
Remarks: By analogy with a product of similar composition

Effects on foetal
development : Species: Rat
Strain: Sprague-Dawley
Application Route: oral (gavage)

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Dose: 250 - 750 - 1500 mg/kg
General Toxicity Maternal: NOAEL: \geq 1.500 mg/kg body weight
Teratogenicity: NOAEL: \geq 1.500 mg/kg body weight
Method: OECD Test Guideline 422
GLP: yes
Remarks: By analogy with a product of similar composition

Reproductive toxicity - Assessment : No reproductive toxicity to be expected.
No teratogenic effects to be expected.

Methyl-1H-benzotriazole:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat, male and female
Strain: wistar
Application Route: oral (gavage)
Dose: 12,5 - 50 - 200 mg/kg
General Toxicity - Parent: NOAEL: $>$ 200 mg/kg body weight
Method: OECD Test Guideline 421
GLP: yes
Remarks: By analogy with a product of similar composition

Effects on foetal development : Species: Rat
Strain: wistar
Application Route: oral (gavage)
Dose: 12,5 - 50 - 200 mg/kg
General Toxicity Maternal: NOAEL: $>$ 200 mg/kg body weight
Teratogenicity: NOAEL: $>$ 200 mg/kg body weight
Method: Other
GLP: yes
Remarks: By analogy with a product of similar composition

Reproductive toxicity - Assessment : No reproductive toxicity to be expected.
No teratogenic effects to be expected.

STOT - single exposure

Product:

Remarks : no data available

Components:

Sodium nitrate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

Methyl-1H-benzotriazole:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

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STOT - repeated exposure

Product:

Remarks : no data available

Components:

Sodium nitrate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Methyl-1H-benzotriazole:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Product:

Remarks : no data available

Components:

Sodium nitrate:

Species : Rat, male and female
NOAEL : ≥ 1.500 mg/kg
Application Route : oral (gavage)
Exposure time : 28 d
Number of exposures : daily
Dose : 250 - 750 - 1500 mg/kg
Group : yes
Method : OECD Test Guideline 422
GLP : yes
Remarks : By analogy with a product of similar composition

Application Route : Inhalation

Remarks : not tested.

Application Route : Skin contact

Remarks : not tested.

Methyl-1H-benzotriazole:

Species : Rat, male and female
NOAEL : ca. 150 mg/kg
Application Route : oral (gavage)
Exposure time : 28 d
Number of exposures : daily
Dose : 50 - 150 - 450 mg/kg
Group : yes
Method : OECD Test Guideline 407
GLP : yes

Application Route : Skin contact

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Remarks : This information is not available.

Application Route : Inhalation
Remarks : This information is not available.

Aspiration toxicity

Product:

no data available

Components:

Sodium nitrate:

No aspiration toxicity classification

Methyl-1H-benzotriazole:

No aspiration toxicity classification

Further information

Product:

Remarks : The classification was made by the conventional (calculation) method of the CLP Regulation (EC) No 1272/2008.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: no data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: no data available

Toxicity to algae : Remarks: no data available

Toxicity to microorganisms : EC50 : 233 mg/l
Exposure time: 30 min
Method: ISO 11348

Components:

Sodium nitrate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 98,9 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes
Remarks: By analogy with a product of similar composition

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- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 8.609 mg/l
Exposure time: 24 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 202
GLP: no
- Toxicity to algae : EC50 (other algae): > 1.700 mg/l
End point: Growth rate
Exposure time: 10 d
Analytical monitoring: yes
Method: Other
GLP: no
Remarks: By analogy with a product of similar composition
The details of the toxic effect relate to the nominal concentration.
- Toxicity to microorganisms : EC50 (activated sludge of a predominantly domestic sewage): > 1.000 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: aquatic
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.
- Toxicity to fish (Chronic toxicity) : Remarks: not required
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: not required
- Toxicity to soil dwelling organisms : Remarks: Not applicable
- Plant toxicity : Remarks: Not applicable
- Sediment toxicity : Remarks: Not applicable
- Toxicity to terrestrial organisms : Remarks: Not applicable
- Methyl-1H-benzotriazole:**
- Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 55 mg/l
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: no
Method: OECD Test Guideline 203
GLP: yes
Remarks: The details of the toxic effect relate to the nominal

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concentration.

- Toxicity to daphnia and other aquatic invertebrates : LC50 (Acartia tonsa): 55 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: no
Method: ISO 14669 and PARCOM method
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.
- Toxicity to algae : EC50 (Skeletonema costatum (marine diatom)): 53 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Method: ISO 10253
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.
- Toxicity to microorganisms : EC50 (activated sludge): 1.060 mg/l
End point: Bacteria toxicity (respiration inhibition)
Test Type: aquatic
Analytical monitoring: no
Method: ISO 8192
GLP: yes
Remarks: By analogy with a product of similar composition
The details of the toxic effect relate to the nominal concentration.
- Toxicity to fish (Chronic toxicity) : Remarks: not required
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50: 18,4 - 37,6 mg/l
End point: Reproduction rate
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD 202, Part II (Reproduction test)
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.
- NOEC: 18,4 mg/l
End point: Reproduction rate
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD 202, Part II (Reproduction test)
GLP: yes

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Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to soil dwelling organisms	:	Remarks: Not applicable
Plant toxicity	:	Remarks: Not applicable
Sediment toxicity	:	Remarks: no data available
Toxicity to terrestrial organisms	:	Remarks: Not applicable

12.2 Persistence and degradability

Product:

Biodegradability : Biodegradation: > 96 %
Exposure time: 14 d
Method: OECD Test Guideline 302B

Chemical Oxygen Demand (COD) : 1.479 mg/g
Method: ISO/DIS 15705

Dissolved organic carbon (DOC) : 387 mg/g
Method: DIN/EN 1484

Components:

Sodium nitrate:

Biodegradability : Remarks: Not applicable

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

Methyl-1H-benzotriazole:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge, adapted
Concentration: 100 mg/l
Result: Not rapidly biodegradable
Biodegradation: 4 %
Related to: BOD in % of theoretical OD
Exposure time: 28 d
Method: Directive 67/548/EEC Annex V, C.4.D.
GLP: yes

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: no data available

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Components:

Sodium nitrate:

Bioaccumulation : Remarks: Not applicable

Remarks: Not relevant for inorganic substances

Methyl-1H-benzotriazole:

Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

12.4 Mobility in soil

Product:

Distribution among environmental compartments : Remarks: no data available

Components:

Sodium nitrate:

Distribution among environmental compartments : Remarks: Moderately mobile in soils

Methyl-1H-benzotriazole:

Distribution among environmental compartments : Adsorption/Soil
Medium: water - soil
log Koc: ca. 1,9
Method: estimated

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

Components:

Sodium nitrate:

Assessment : Remarks: Not applicable

: Remarks: Not relevant for inorganic substances

Methyl-1H-benzotriazole:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT)..

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12.6 Other adverse effects

Product:

Additional ecological information : no data available

Components:

Sodium nitrate:

Environmental fate and pathways : not available

Additional ecological information : Do not allow to enter ground water, waterways or waste water.

Methyl-1H-benzotriazole:

Environmental fate and pathways : not available

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : In accordance with local authority regulations, take to special waste incineration plant

Contaminated packaging : Packaging that cannot be cleaned should be disposed of as product waste

SECTION 14: Transport information

Section 14.1. to 14.5.

ADR	not restricted
ADN	not restricted
RID	not restricted
IATA	not restricted
IMDG	not restricted

14.6. Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code (International Bulk Chemicals Code)

No transport as bulk according IBC - Code.

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SECTION 15: Regulatory information

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

Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

15.2 Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

SECTION 16: Other information

Full text of H-Statements

H272 : May intensify fire; oxidizer.
H302 : Harmful if swallowed.
H319 : Causes serious eye irritation.
H411 : Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Chronic : Chronic aquatic toxicity
Eye Irrit. : Eye irritation
Ox. Sol. : Oxidizing solids

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; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for 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;

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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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information : Observe national and local legal requirements

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