

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Rexolin APN

Version	Revision Date:	GR / EN	Date of last issue: 24.01.2022
3.0	28.06.2022		Date of first issue: 26.05.2015

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

1.1 Product identifier

Trade name : Rexolin APN

UFI : MQ25-30VF-P009-SNUC

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

Use of the Substance/Mixture : Plant nutrient

1.3 Details of the supplier of the safety data sheet

Company : Nouryon
Functional Chemicals B.V.
Haaksbergweg 88
NL 1101 BZ Amsterdam
Netherlands

Telephone : +31263664433

E-mail address of person responsible for the SDS : sds_chelates@nouryon.com

1.4 Emergency telephone number

Emergency telephone number : 24 hours:+31 57 06 79211, CHEMTREC-USA:1-800-424-9300, CHEMTREC outside USA +1-703-527-3887, CANUTEC-CANADA:1-613-996-6666, 化学事故应急咨询电话 : 国家化学事故应急响应中心 +86 532 8388 9090<(> , <)> -: Nouryon Emergency Response Centre: +31 570 679211

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Reproductive toxicity, Category 1B H360FD: May damage fertility. May damage the unborn child.

2.2 Label elements


Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H360FD May damage fertility. May damage the unborn child.
Precautionary statements	:	<p>Prevention:</p> <p>P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.</p> <p>Response:</p> <p>P308 + P313 IF exposed or concerned: Get medical advice/ attention.</p> <p>Storage:</p> <p>P405 Store locked up.</p> <p>Disposal:</p> <p>P501 Dispose of contents/ container to an approved waste disposal plant.</p>

Hazardous components which must be listed on the label:

Boric acid

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Dust can form an explosive mixture in air.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Boric acid	10043-35-3 233-139-2 005-007-00-2 01-2119486683-25	Repr. 1B; H360FD	>= 5 - < 5,5
Ethylenediaminetetraacetic acid, disodium salt	139-33-3 205-358-3 01-2119486775-20	Acute Tox. 4; H332 STOT RE 2; H373 (Respiratory Tract) Acute toxicity estimate Acute inhalation toxicity (dust/mist): 1,0001 mg/l	>= 1 - < 5
Ethylenediaminetetraacetic acid, copper disodium complex	14025-15-1 237-864-5 01-2119963944-23	Acute Tox. 4; H302 Eye Irrit. 2; H319 Acute toxicity estimate Acute oral toxicity: 890 mg/kg	>= 1 - < 5
Substances with a workplace exposure limit :			
Ethylenediaminetetraacetic acid, manganese disodium complex	15375-84-5 239-407-5 01-2119493600-40		>= 15 - < 20

For explanation of abbreviations see section 16.

Remarks : Substances with a workplace exposure limit

The following substances have multiple CAS-number

Ethylenediaminetetraacetic acid, disodium salt : 6381-92-6

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.

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- Consult a physician.
Show this safety data sheet to the doctor in attendance.
- If inhaled : Remove to fresh air.
Keep patient warm and at rest.
Rinse nose and mouth with water.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
- In case of eye contact : Rinse with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.
- Hazardous combustion products : Fire will produce smoke containing hazardous combustion products (see section 10).
Nitrogen oxides (NOx)

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5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
-

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal precautions : Use personal protective equipment.
Wear respiratory protection.
Avoid dust formation.
Avoid breathing dust.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Only qualified personnel equipped with suitable protective equipment may intervene.
Prevent unauthorised persons entering the zone.

6.2 Environmental precautions

- Environmental precautions : Do not flush into surface water or sanitary sewer system. Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up

- Methods for cleaning up : Pick up and arrange disposal without creating dust.
Sweep up and shovel.
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13.
For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : For personal protection see section 8.
Avoid formation of respirable particles.
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Smoking, eating and drinking should be prohibited in the application area.

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Dispose of rinse water in accordance with local and national regulations.

Obtain special instructions before use.

Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed. No sparking tools should be used.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Prevent unauthorized access. Keep in a dry place. Store at room temperature in the original container. Keep container tightly closed.

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethylenediaminetetraacetic acid, manganese disodium complex	15375-84-5	TWA (Inhalable fraction)	0,2 mg/m ³ (Manganese)	GR OEL
		TWA (Respirable fraction)	0,05 mg/m ³ (Manganese)	GR OEL

Further occupational exposure limits

Description	Value type (Form of exposure)	Control parameters	Basis
Dissolvine APN	TWA (Total dust)	5 mg/m ³	GR OEL

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

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Substance name	End Use	Exposure routes	Potential health effects	Value
Diethylenetriaminepentaacetic acid, ferric disodium complex	Workers	Inhalation	Long-term systemic effects	22 mg/m ³
	Workers	Skin contact	Long-term systemic effects	625000 mg/kg
	Consumers	Inhalation	Long-term systemic effects	5,5 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	31250 mg/kg
Ethylenediaminetetraacetic acid, copper disodium complex	Consumers	Ingestion	Long-term systemic effects	6,25 mg/kg
	Workers	Inhalation	Long-term systemic effects	1,8 mg/m ³
	Workers	Skin contact	Long-term systemic effects	3750 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,45 mg/m ³
Ethylenediaminetetraacetic acid, disodium salt	Consumers	Skin contact	Long-term systemic effects	1875 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0,375 mg/kg bw/day
	Workers	Inhalation	Long-term local effects	1,5 mg/m ³
	Workers	Inhalation	Acute local effects	3 mg/m ³
Ethylenediaminetetraacetic acid, manganese disodium complex	Workers	Skin contact	Long-term systemic effects	25000 mg/kg
	Workers	Inhalation	Long-term systemic effects	12 mg/m ³
	Workers	Inhalation	Acute local effects	69 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	3 mg/m ³
Ethylenediaminetetraacetic acid, zinc disodium complex	Consumers	Ingestion	Long-term systemic effects	2,5 mg/kg
	Consumers	Skin contact	Long-term systemic effects	12500 mg/kg
	Workers	Inhalation	Long-term systemic effects	30 mg/m ³
	Workers	Skin contact	Long-term systemic effects	62500 mg/kg
	Consumers	Ingestion	Long-term systemic effects	6,25 mg/kg

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	Consumers	Inhalation	Long-term systemic effects	7,5 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	31250 mg/kg
Sodium sulfate	Workers	Inhalation	Long-term systemic effects	20 mg/m ³
	Workers	Inhalation	Long-term local effects	20 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	12 mg/m ³
	Consumers	Inhalation	Long-term local effects	12 mg/m ³

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

Substance name	Environmental Compartment	Value
Diethylenetriaminepentaacetic acid, ferric disodium complex	Fresh water	6,2 mg/l
	Marine water	0,62 mg/l
	Intermittent water	3,1 mg/l
	Sewage treatment plant	50 mg/l
	Soil	1,23 mg/kg dry weight
Ethylenediaminetetraacetic acid, copper disodium complex	Fresh water	2,95 mg/l
	Marine water	0,3 mg/l
	Sewage treatment plant	65,4 mg/l
	Soil	0,21 mg/kg dry weight
Ethylenediaminetetraacetic acid, disodium salt	Fresh water	2,5 mg/l
	Marine water	0,25 mg/l
	Intermittent water	1,4 mg/l
	Soil	0,84 mg/kg dry weight
	Sewage treatment plant	50 mg/l
Ethylenediaminetetraacetic acid, manganese disodium complex	Fresh water	4,88 mg/l
	Intermittent water	6,49 mg/l
	Marine water	0,49 mg/l
	Sewage treatment plant	64 mg/l
Ethylenediaminetetraacetic acid, zinc disodium complex	Fresh water	2,97 mg/l
	Marine water	0,3 mg/l
	Intermittent water	1,1 mg/l
	Sewage treatment plant	66 mg/l
	Soil	0,21 mg/kg dry weight
Sodium sulfate	Fresh water	11,09 mg/l

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	Marine water	1,109 mg/l
	Intermittent water	17,66 mg/l
	Sewage treatment plant	800 mg/l
	Fresh water sediment	40,2 mg/kg
	Marine sediment	4,02 mg/kg
	Soil	1,54 mg/kg

8.2 Exposure controls

Engineering measures

Provide appropriate exhaust ventilation at places where dust is formed.

Personal protective equipment

Eye protection : Tightly fitting safety goggles

Skin and body protection : Protective suit

Respiratory protection : Half mask with a particle filter P2 (EN 143)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : granular

Colour : yellow, brown

Odour : odourless

Odour Threshold : Not applicable

Melting point : Decomposes before melting.

Boiling point/boiling range : Not applicable

Flammability : Not classified as a flammability hazard
 May form combustible dust concentrations in air during processing, handling or other means.

Upper explosion limit / Upper flammability limit : Not applicable

Lower explosion limit / Lower flammability limit : $\geq 40 \text{ g/m}^3$

Flash point : Not applicable

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Auto-ignition temperature	:	320 °C Method: Auto-ignition of a 5mm dust layer according to EN 50281-2-1
Decomposition temperature	:	No data available
pH	:	5 - 7 Concentration: 1 %
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Solubility(ies)		
Water solubility	:	> 100 g/l
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	log Pow: < 0
Vapour pressure	:	Not applicable
Relative density	:	No data available
Bulk density	:	550 - 750 kg/m ³
Relative vapour density	:	Not applicable

9.2 Other information

Explosives	:	Not explosive
Oxidizing properties	:	Not classified as oxidising.
Flammability (liquids)	:	Not applicable
Self-ignition	:	No data available
Evaporation rate	:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions.

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10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Dust may form explosive mixture in air.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

Hazardous decomposition products : Carbon oxides
nitrogen oxides (NOx)

Thermal decomposition : No data available

SECTION 11: Toxicological information

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

Information on likely routes of exposure : Ingestion

Acute toxicity

Not classified based on available information.

Product:

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

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

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Components:

Boric acid:

- Acute oral toxicity : LD50 (Rat): 2.660 mg/kg
Remarks: Information taken from reference works and the literature.
- Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Information taken from reference works and the literature.

Ethylenediaminetetraacetic acid, disodium salt:

- Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
- Acute inhalation toxicity : LC50 (Rat): > 1 - 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 412
- Acute toxicity estimate: 1,0001 mg/l
Test atmosphere: dust/mist
Method: Calculation method

Ethylenediaminetetraacetic acid, copper disodium complex:

- Acute oral toxicity : LD50 (Rat): 890 mg/kg
Acute toxicity estimate: 890 mg/kg
Method: Calculation method
- Acute inhalation toxicity : LC50 (Rat): 5,30 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436

Ethylenediaminetetraacetic acid, manganese disodium complex:

- Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 423
GLP: yes

Skin corrosion/irritation

Not classified based on available information.

Components:

Ethylenediaminetetraacetic acid, disodium salt:

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Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Ethylenediaminetetraacetic acid, copper disodium complex:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	slight irritation
Remarks	:	Based on available data, the classification criteria are not met.

Ethylenediaminetetraacetic acid, manganese disodium complex:

Result	:	No skin irritation
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Serious eye damage/eye irritation

Not classified based on available information.

Components:

Ethylenediaminetetraacetic acid, disodium salt:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation

Ethylenediaminetetraacetic acid, copper disodium complex:

Species	:	Rabbit
Assessment	:	Irritating to eyes.
Method	:	OECD Test Guideline 405
Result	:	Irritating to eyes.

Ethylenediaminetetraacetic acid, manganese disodium complex:

Method	:	OECD Test Guideline 437
Result	:	No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Boric acid:

Result	:	Does not cause skin sensitisation.
Remarks	:	Information taken from reference works and the literature.

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Ethylenediaminetetraacetic acid, disodium salt:

Test Type	: Maximisation Test
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: Does not cause skin sensitisation.
GLP	: yes

Ethylenediaminetetraacetic acid, copper disodium complex:

Species	: Mouse
Method	: OECD Test Guideline 429
Result	: Does not cause skin sensitisation.

Ethylenediaminetetraacetic acid, manganese disodium complex:

Assessment	: Does not cause skin sensitisation.
Remarks	: Read-across (Analogy)

Germ cell mutagenicity

Not classified based on available information.

Components:

Ethylenediaminetetraacetic acid, disodium salt:

Genotoxicity in vitro	: Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative
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Genotoxicity in vivo	: Test Type: Chromosome aberration test in vivo Species: Mouse Method: OECD Test Guideline 474 Result: negative
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Ethylenediaminetetraacetic acid, copper disodium complex:

Genotoxicity in vitro	: Test Type: Ames test Method: OECD Test Guideline 471 Result: negative
	Test Type: Micronucleus test Method: OECD Test Guideline 487 Result: Does not induce structural chromosome aberrations.
	Test Type: In vitro gene mutation study in mammalian cells Method: OECD Test Guideline 476 Result: Ambiguous results Remarks: Read-across from supporting substance (structural

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analogue or surrogate).

Genotoxicity in vivo : Remarks: Not classified due to data which are conclusive although insufficient for classification.

Ethylenediaminetetraacetic acid, manganese disodium complex:

Genotoxicity in vitro : Test Type: Ames test
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Result: Not mutagenic.

Carcinogenicity

Not classified based on available information.

Components:

Ethylenediaminetetraacetic acid, disodium salt:

Species : Rat
Application Route : Ingestion
Result : Not classified due to data which are conclusive although insufficient for classification.
Remarks : Read-across (Analogy)

Ethylenediaminetetraacetic acid, copper disodium complex:

Species : Rat
Application Route : Oral
Result : Not carcinogenic on laboratory animals.
Remarks : Read-across from supporting substance (structural analogue or surrogate).

Ethylenediaminetetraacetic acid, manganese disodium complex:

Remarks : Not classified due to data which are conclusive although insufficient for classification.

Reproductive toxicity

Not classified based on available information.

Components:

Boric acid:

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, based on animal experiments., Clear evidence of adverse effects on development, based on animal experiments.

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Ethylenediaminetetraacetic acid, copper disodium complex:

Effects on fertility : Species: Rat
Fertility: NOAEL: 500 mg/kg bw/day
Method: OECD Test Guideline 422

Effects on foetal development : Species: Rat
Teratogenicity: NOAEL: 500 mg/kg bw/day
Method: OECD Test Guideline 422

STOT - single exposure

Not classified based on available information.

Components:

Ethylenediaminetetraacetic acid, disodium salt:

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

Ethylenediaminetetraacetic acid, copper disodium complex:

Assessment : Not classified due to data which are conclusive although insufficient for classification.

Ethylenediaminetetraacetic acid, manganese disodium complex:

Exposure routes : Inhalation
Target Organs : Respiratory system
Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Not classified based on available information.

Components:

Ethylenediaminetetraacetic acid, disodium salt:

Exposure routes : Inhalation
Target Organs : Respiratory Tract
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Ethylenediaminetetraacetic acid, copper disodium complex:

Assessment : Not classified due to data which are conclusive although insufficient for classification.

Ethylenediaminetetraacetic acid, manganese disodium complex:

Exposure routes : Ingestion
Assessment : The substance or mixture is not classified as specific target

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organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

Ethylenediaminetetraacetic acid, manganese disodium complex:

NOAEL	:	500 mg/kg
Application Route	:	Oral
Exposure time	:	728 d
Method	:	OECD Test Guideline 422

Aspiration toxicity

Not classified based on available information.

Components:

Ethylenediaminetetraacetic acid, disodium salt:

Not classified due to data which are conclusive although insufficient for classification.

Ethylenediaminetetraacetic acid, copper disodium complex:

Not classified due to data which are conclusive although insufficient for classification.

Ethylenediaminetetraacetic acid, manganese disodium complex:

No aspiration toxicity classification

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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Further information

Product:

Remarks	:	No further data available.
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SECTION 12: Ecological information

12.1 Toxicity

Components:

Boric acid:

- | | | |
|---|---|--|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): > 50 - 100 mg/l
Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 133 mg/l
Exposure time: 48 h
Remarks: Information taken from reference works and the literature. |
| Toxicity to algae/aquatic plants | : | IC50 (Scenedesmus subspicatus (algae)): 192 mg/l
Exposure time: 72 h
Remarks: Information taken from reference works and the literature. |

Ecotoxicology Assessment

- | | | |
|--------------------------|---|---|
| Acute aquatic toxicity | : | This product has no known ecotoxicological effects. |
| Chronic aquatic toxicity | : | This product has no known ecotoxicological effects. |

Ethylenediaminetetraacetic acid, disodium salt:

- | | | |
|---|---|--|
| Toxicity to fish | : | LC50 (Fish): > 100 mg/l
Exposure time: 96 h
Remarks: Read-across (Analogy) |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (calculated) (Daphnia magna (Water flea)): 140 mg/l
Exposure time: 48 h
Method: DIN 38412 |
| Toxicity to microorganisms | : | EC50 (activated sludge): > 500 mg/l
Exposure time: 30 min
Test Type: Respiration inhibition
Method: OECD Test Guideline 209 |
| Toxicity to fish (Chronic toxicity) | : | NOEC: > 25,7 mg/l
Exposure time: 35 d
Species: Danio rerio (zebra fish)
Test Type: flow-through test
Method: OECD Test Guideline 210
Remarks: Read-across (Analogy) |
| Toxicity to daphnia and other | : | NOEC: > 25 mg/l |

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aquatic invertebrates
(Chronic toxicity) Exposure time: 21 d
Species: Daphnia magna (Water flea)

Ethylenediaminetetraacetic acid, copper disodium complex:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 555 mg/l
Exposure time: 96 h
Test Type: Fresh water

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 109,2 mg/l
aquatic invertebrates Exposure time: 48 h
Test Type: Fresh water
Method: OECD Test Guideline 202
Remarks: Read-across (Analogy)

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata (green algae)): 662,6
plants mg/l
Exposure time: 72 h
Test Type: Fresh water
Method: OECD Test Guideline 201
Remarks: Read-across (Analogy)

Toxicity to microorganisms : NOEC (activated sludge): > 654 mg/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
Remarks: Read-across (Analogy)

Toxicity to fish (Chronic : NOEC: 37,2 mg/l
toxicity) Exposure time: 35 d
Species: Danio rerio (zebra fish)
Test Type: flow-through test
Method: OECD Test Guideline 210
Remarks: Read-across (Analogy)

Toxicity to daphnia and other : NOEC: 29,5 mg/l
aquatic invertebrates End point: reproduction rate
(Chronic toxicity) Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211
Remarks: Read-across (Analogy)

Ethylenediaminetetraacetic acid, manganese disodium complex:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 1.000 mg/l
Exposure time: 96 h
Test Type: static test
Remarks: Read-across from supporting substance (structural
analogue or surrogate).

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- Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 649,3 mg/l
 Exposure time: 72 h
 Test Type: Growth inhibition
 Method: OECD Test Guideline 201
 Remarks: Read-across from supporting substance (structural analogue or surrogate).
- NOEC (Pseudokirchneriella subcapitata (green algae)): 15 mg/l
 Exposure time: 72 h
 Test Type: Growth inhibition
 Method: OECD Test Guideline 201
 Remarks: Read-across from supporting substance (structural analogue or surrogate).
- Toxicity to microorganisms : NOEC (activated sludge): 640 mg/l
 Exposure time: 3 h
 Test Type: Respiration inhibition
 Method: Domestic OECD Guideline 209
- Toxicity to fish (Chronic toxicity) : NOEC: 28,9 mg/l
 Exposure time: 35 d
 Species: Danio rerio (zebra fish)
 Test Type: flow-through test
 Method: OECD Test Guideline 210
 GLP: yes
 Remarks: Read-across from supporting substance (structural analogue or surrogate).
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 156 mg/l
 End point: reproduction rate
 Exposure time: 21 d
 Species: Daphnia magna (Water flea)
 Method: OECD Test Guideline 211
 GLP: yes

12.2 Persistence and degradability

Product:

- Biodegradability : Remarks: The product contains not readily biodegradable substances.
- Biochemical Oxygen Demand (BOD) : Remarks: No data available

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Components:

Boric acid:

Biodegradability : Result: Not applicable

Biochemical Oxygen Demand (BOD) : Remarks: No data available

Ethylenediaminetetraacetic acid, disodium salt:

Biodegradability : Remarks: Not readily biodegradable, but will degrade after a longer period.

Biochemical Oxygen Demand (BOD) : Remarks: No data available

Chemical Oxygen Demand (COD) : 630 mg/g

Ethylenediaminetetraacetic acid, copper disodium complex:

Biodegradability : Remarks: Not readily biodegradable, but will degrade after a longer period.

Biochemical Oxygen Demand (BOD) : Remarks: No data available

Ethylenediaminetetraacetic acid, manganese disodium complex:

Biodegradability : Result: Not readily biodegradable.

Biochemical Oxygen Demand (BOD) : Remarks: No data available

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Components:

Boric acid:

Bioaccumulation : Remarks: No data available

Ethylenediaminetetraacetic acid, disodium salt:

Bioaccumulation : Remarks: Not expected considering the low log Pow value.

Partition coefficient: n- : log Pow: < 0

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octanol/water

Ethylenediaminetetraacetic acid, copper disodium complex:

Bioaccumulation : Remarks: Not expected considering the low log Pow value.

Partition coefficient: n-octanol/water : log Pow: -10,416

Ethylenediaminetetraacetic acid, manganese disodium complex:

Bioaccumulation : Remarks: Not expected considering the low log Pow value.

Partition coefficient: n-octanol/water : log Pow: -8,12
Method: Calculation method
GLP: no

12.4 Mobility in soil

Product:

Mobility : Remarks: Adsorption to the solid soil particles is not expected.

Components:

Boric acid:

Mobility : Remarks: No data available

Ethylenediaminetetraacetic acid, disodium salt:

Mobility : Remarks: Adsorption to the solid soil particles is not expected.

Ethylenediaminetetraacetic acid, copper disodium complex:

Mobility : Remarks: Adsorption to the solid soil particles is not expected.

Ethylenediaminetetraacetic acid, manganese disodium complex:

Mobility : Remarks: No data available

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.

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Components:

Boric acid:

Assessment : No data available

Ethylenediaminetetraacetic acid, disodium salt:

Assessment : This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic). This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

Ethylenediaminetetraacetic acid, copper disodium complex:

Assessment : This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic). This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

Ethylenediaminetetraacetic acid, manganese disodium complex:

Assessment : This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic). This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : None known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Dispose of contents/container in accordance with local regulation.

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Contaminated packaging : Empty remaining contents.
Dispose of as unused product.

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

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Boric acid

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

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REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : Not applicable

The components of this product are reported in the following inventories:

TCSI	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory
AIIC	: On the inventory, or in compliance with the inventory
DSL	: This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL. Diethylenetriaminepentaacetic acid, ferric disodium complex
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: On the inventory, or in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
TECI	: Not in compliance with the inventory

15.2 Chemical safety assessment

Boric acid	: A Chemical Safety Assessment has been carried out for this substance.
Ethylenediaminetetraacetic acid, disodium salt	: A Chemical Safety Assessment has been carried out for this substance.
Ethylenediaminetetraacetic acid, copper disodium complex	: A Chemical Safety Assessment has been carried out for this substance.
Ethylenediaminetetraacetic	: A Chemical Safety Assessment has been carried out for this

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acid, manganese disodium
complex substance.

SECTION 16: Other information

Full text of H-Statements

H302 : Harmful if swallowed.
 H319 : Causes serious eye irritation.
 H332 : Harmful if inhaled.
 H360FD : May damage fertility. May damage the unborn child.
 H373 : May cause damage to organs through prolonged or repeated exposure if inhaled.

Full text of other abbreviations

Acute Tox. : Acute toxicity
 Eye Irrit. : Eye irritation
 Repr. : Reproductive toxicity
 STOT RE : Specific target organ toxicity - repeated exposure
 GR OEL : Greece. Hellenic Institute for Occupational Health and Safety - List of Limit Values
 GR OEL : Greece. Exposure limit values
 GR OEL / TWA : Time weighted average
 GR OEL / TWA : Long term exposure limit

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

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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; TECI - 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

Classification of the mixture:

Repr. 1B

H360FD

Classification procedure:

Calculation method

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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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