ENERGY gel All-in-One 650ML

WM 0717402 **Order number: 0717402**

Version 4.0 Revision Date 15.10.2026 Print Date 15.10.2026

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

1.1 Product identifier

Trade name	:	ENERGY gel All-in-One 650ML
UFI	:	KE6H-70VM-8000-34HC

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

Use of the Substance/Mixture	:	Detergents for dishwashers
		Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company	:	Tana Chemie GmbH Rheinallee 96 55120 Mainz
Telephone	:	+49613196403
Telefax	:	+4961319642526
E-mail address	:	Produktsicherheit@werner-mertz.com
Responsible/issuing person		
Contact person	:	Product development / product safety

1.4 Emergency telephone

EU: 112

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

Labeling (REGULATION (EC) No 1272/2008)

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

Additional Labeling:

Safety data sheet available on request.
EUH208 Contains Subtilisin. May produce an allergic reaction.

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.

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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)
Alanine, N,N-bis(carboxymethyl)-, trisodium salt	164462-16-2 423-270-5423-270-5 01-0000016977-53	Met. Corr. 1; H290	>= 1 - < 3
2,3-Oxiranedicarboxylic acid, disodium salt, homopolymer	109578-44-1	Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	>= 1 - < 3
Oxirane, methyl-, polymer with oxirane, mono-C8-10-alkyl ethers, ethers with 1,2-decanediol (1:1)	501019-88-1	Eye Irrit. 2; H319 Aquatic Chronic 3; H412	>= 1 - < 2,5
Subtilisin	9014-01-1 232-752-2 647-012-00-8 01-2119480434-38	STOT SE 3; H335 Skin Irrit. 2; H315 Eye Dam. 1; H318 Resp. Sens. 1; H334 Acute Tox. 4; H302 Aquatic Acute 1; H400 Aquatic Chronic 2; H411	>= 0,1 - < 0,25
Substances with a workplace exposure limit :			
propane-1,2-diol	57-55-6 200-338-0 01-2119456809-23		>= 1 - < 3

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice : No hazards which require special first aid measures.

If inhaled : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.
If symptoms persist, call a physician.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.

In case of eye contact : Protect unharmed eye.
If easy to do, remove contact lens, if worn.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	No information available.
Risks	:	No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment	:	For specialist advice physicians should contact the Poisons Information Service.

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 fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for fire-fighters	:	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.

6.2 Environmental precautions

Environmental precautions	:	Try to prevent the material from entering drains or water courses.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Sweep up and shovel. Wipe up with absorbent material (e.g. cloth, fleece). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8., Treat recovered material as described in the section "Disposal considerations"., Refer to section 15 for specific national regulation.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.
No special handling advice required.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : 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 : Store in cool place. Store at room temperature in the original container. To maintain product quality, do not store in heat or direct sunlight.

Advice on common storage : No special restrictions on storage with other products.

Further information on storage stability : No decomposition if stored and applied as directed.
Protect from frost, heat and sunlight.

7.3 Specific end use(s)

Specific use(s) : Detergents for dishwashers

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
propane-1,2-diol	Not Assigned		7 mg/m3	

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

Substance name	End Use	Routes of exposure	Potential health effects	Value
tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	Workers	Inhalation	Acute systemic effects	55 mg/m3
	Workers	Inhalation	Acute local effects	55 mg/m3
	Workers	Skin contact	Long-term systemic effects	15000 mg/kg
	Workers	Inhalation	Long-term systemic effects	7,3 mg/m3
	Consumers	Skin contact	Long-term systemic	7500 mg/kg

			effects	
	Consumers	Inhalation	Long-term systemic effects	1,8 mg/m3
	Consumers	Ingestion	Long-term systemic effects	1,5 mg/kg
glycerol	Workers	Inhalation	Long-term local effects	56 mg/m3
	Consumers	Inhalation	Long-term local effects	33 mg/m3
	Consumers	Oral	Long-term systemic effects	229 mg/kg
Alanine, N,N-bis(carboxymethyl)-, trisodium salt	Workers	Inhalation	Acute systemic effects	40 mg/m3
	Workers	Inhalation	Acute local effects	40 mg/m3
	Workers	Inhalation	Long-term systemic effects	40 mg/m3
	Workers	Inhalation	Long-term local effects	4 mg/m3
	Consumers	Inhalation	Acute local effects	20 mg/m3
	Consumers	Inhalation	Acute systemic effects	20 mg/m3
	Consumers	Inhalation	Long-term systemic effects	20 mg/m3
	Consumers	Inhalation	Long-term local effects	2 mg/m3
	Consumers	Ingestion	Acute systemic effects	85 mg/kg
	Consumers	Ingestion	Long-term systemic effects	17 mg/kg
propane-1,2-diol	Workers	Inhalation	Long-term systemic effects	168 mg/m3
	Workers	Inhalation	Long-term local effects	10 mg/m3
	Consumers	Inhalation	Long-term systemic effects	50 mg/m3
	Consumers	Inhalation	Long-term local effects	10 mg/m3
	Consumers	Skin contact	Long-term systemic effects	213 mg/m3
	Consumers	Ingestion	Long-term systemic	85 mg/m3

			effects	
Subtilisin	Workers	Inhalation	Long-term local effects	0,06 µg/m3
	Workers	Inhalation	Long-term systemic effects	0,06 µg/m3
	Consumers	Inhalation	Long-term local effects	0,015 µg/m3
	Consumers	Inhalation	Long-term systemic effects	0,015 µg/m3
	Consumers	Ingestion	Long-term systemic effects	1,8 mg/kg
	Consumers	Ingestion	Acute systemic effects	3,6 mg/kg

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

Substance name	Environmental Compartment	Value
tetrasodium N,N-bis(carboxylatomethyl)-L-glutamate	Fresh water	> 2 mg/l
	Sea water	> 0,2 mg/l
	intermittent release	> 1 mg/l
	STP	> 41,2 mg/l
	Oral	67 mg/kg
1,2,3-Propanetricarboxylic acid, 2-hydroxy-, trisodium salt, dihydrate	Fresh water	0,44 mg/l
	Sea water	0,044 mg/l
	STP	1000 mg/l
	Fresh water sediment	34,6 mg/kg
	Sea sediment	3,46 mg/kg
	Soil	33,1 mg/kg
glycerol	Fresh water	0,885 mg/l
	Sea water	0,088 mg/l
	Sewage treatment plant	1000 mg/l
	Fresh water sediment	3,3 mg/kg
	Sea sediment	0,33 mg/kg

	Soil	0,141 mg/kg
Alanine, N,N-bis(carboxymethyl)-, trisodium salt	Fresh water	2 mg/l
	Sea water	0,2 mg/l
	Fresh water sediment	24 mg/kg
	Soil	2,5 mg/kg
	STP	100 mg/l
	intermittent release	1 mg/l
propane-1,2-diol	Fresh water	260 mg/l
	Sea water	26 mg/l
	Fresh water sediment	572 mg/kg dry weight (d.w.)
	Sea sediment	57,2 mg/kg dry weight (d.w.)
	Soil	50 mg/kg
	intermittent release	183 mg/l
	STP	20000 mg/l
Subtilisin	intermittent release	0,0009 mg/l
	STP	65 mg/l
	Soil	0,568 mg/kg
	Fresh water	1,7 µg/l
	Sea water	0,170 µg/l

8.2 Exposure controls

Personal protective equipment

Eye/face protection : not required under normal use

Hand protection

Material : not required under normal use

Material	:	For prolonged or repeated contact use protective gloves. It is suggested the usage of chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374. As alternative, a different type of gloves might be used if, accordingly to the recommendations of the producer, guarantee the same level of protection.
Remarks	:	Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Skin and body protection	:	not required under normal use
Respiratory protection	:	not required under normal use

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	gel
Color	:	green
Odor	:	fruity
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flammability (solid, gas)	:	No data available
Flammability (liquids)	:	No data available
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Flash point	:	does not flash
Ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	ca. 9,8, 100 % at 25 °C
Viscosity, dynamic	:	ca. 1.024 mPa.s at 20 °C
Viscosity, kinematic	:	No data available

Water solubility	:	soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapor pressure	:	No data available
Density	:	ca. 1,159 g/cm3 at 20 °C
Relative density	:	No data available
Relative vapor density	:	No data available
Particle characteristics	:	No data available

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.
No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid : Protect from frost, heat and sunlight.

10.5 Incompatible materials

Materials to avoid : No data available

10.6 Hazardous decomposition products

No hazardous decomposition products are known.
No hazardous decomposition products are known.

SECTION 11: Toxicological information

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

Our company is strongly against animal testing.
Our company does not place any orders for animal testing for the finished product or the ingredients.
However, as a result of EU legislation (REACH Regulation), the manufacturers of ingredients or EU importers are obliged to test ingredients with regard to their effects on human health and the environment before they are brought onto the market. Some of the tests made necessary by this took place decades ago.

Acute toxicity

Not classified due to lack of data.

Acute toxicity : Not Rated

Components:

Alanine, N,N-bis(carboxymethyl)-, trisodium salt

164462-16-2:

Acute oral toxicity	:	LD50 Oral (Rat): > 2.000 mg/kg Method: Tested according to Directive 92/69/EEC.
Acute inhalation toxicity	:	LC50 (Rat): > 5 mg/l Exposure time: 4 h
Acute dermal toxicity	:	LD50 (Rat): > 2.000 mg/kg Method: OECD Test Guideline 402

2,3-Oxiranedicarboxylic acid, disodium salt, homopolymer

109578-44-1:

Acute oral toxicity	:	LD50 Oral (Rat): > 5.000 mg/kg
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 5.000 mg/kg

Oxirane, methyl-, polymer with oxirane, mono-C8-10-alkyl ethers, ethers with 1,2-decanediol (1:1)

501019-88-1:

Acute oral toxicity	:	LD50 Oral: > 2.000 mg/kg

Subtilisin

9014-01-1:

Acute oral toxicity	:	LD50 (Rat): 1.800 mg/kg Method: OECD Test Guideline 401 LD50 (Rat): 1.800 g/kg LD50 (Rat): 3.700 mg/kg LD50: 504 mg/kg Method: OECD Test Guideline 423
Acute inhalation toxicity	:	LC50 (Rat): 0,8 mg/l Exposure time: 4 h
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 2 mg/kg LD50 Dermal (Rabbit): > 2 mg/kg

propane-1,2-diol

57-55-6:

Acute oral toxicity	:	LD50 (Rat, male and female): 22.000 mg/kg LD50 Oral (Rat): 20.000 mg/kg
Acute inhalation toxicity	:	LC50 (Rabbit): 20 mg/l Exposure time: 4 h

LC50 (Rabbit): 317.042 mg/l
Exposure time: 2 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rabbit): 20.800 mg/kg

Skin corrosion/irritation

Not classified due to lack of data.

Product:

Remarks : According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Components:

Alanine, N,N-bis(carboxymethyl)-, trisodium salt

164462-16-2:

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

2,3-Oxiranedicarboxylic acid, disodium salt, homopolymer

109578-44-1:

Result : Skin irritation

Subtilisin

9014-01-1:

Method : OECD Test Guideline 404
Result : Mild skin irritation

propane-1,2-diol

57-55-6:

Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Not classified due to lack of data.

Product:

Remarks : According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

Components:

Alanine, N,N-bis(carboxymethyl)-, trisodium salt

164462-16-2:

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

2,3-Oxiranedicarboxylic acid, disodium salt, homopolymer

109578-44-1:

Result	:	Eye irritation

Subtilisin

9014-01-1:

Method	:	OECD Test Guideline 405
Result	:	Mild eye irritation

propane-1,2-diol

57-55-6:

Method	:	OECD Test Guideline 405
Result	:	Mild eye irritation

Respiratory or skin sensitization

Skin sensitization

Not classified due to lack of data.

Respiratory sensitization

Not classified due to lack of data.

Product:

Remarks	:	No data available

Components:

Alanine, N,N-bis(carboxymethyl)-, trisodium salt

164462-16-2:

Test Type	:	Maximization Test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Did not cause sensitization on laboratory animals.

Subtilisin

9014-01-1:

Routes of exposure	:	Dermal
Result	:	Does not cause skin sensitization.

Routes of exposure	:	Inhalation
Result	:	May cause sensitization by inhalation.

propane-1,2-diol

57-55-6:

Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitization.

Germ cell mutagenicity

Not classified due to lack of data.

Germ cell mutagenicity	:	Not Rated

Components:

Alanine, N,N-bis(carboxymethyl)-, trisodium salt

164462-16-2:

Genotoxicity in vitro	:	Test Type: Ames test Method: OECD Test Guideline 471 Result: negative Test Type: Micronucleus test Method: Mutagenicity (micronucleus test) Result: negative Method: OECD Test Guideline 476 Result: negative
Genotoxicity in vivo	:	Method: OECD Test Guideline 474

Subtilisin

9014-01-1:

Genotoxicity in vitro	:	Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative Test Type: Chromosome aberration test in vitro Result: negative Method: OECD Test Guideline 471 Result: negative Method: OECD Test Guideline 473 Result: negative Method: OECD Test Guideline 476 Result: negative

propane-1,2-diol

57-55-6:

Genotoxicity in vitro	:	Test Type: Ames test Result: negative

Carcinogenicity

Not classified due to lack of data.

Carcinogenicity	:	Not Rated

Reproductive toxicity

Not classified due to lack of data.

Reproductive toxicity	:	Not Rated

STOT-single exposure

Not classified due to lack of data.

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

Components:

2,3-Oxiranedicarboxylic acid, disodium salt, homopolymer

109578-44-1:

Assessment	:	May cause respiratory irritation.

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9014-01-1:

Routes of exposure	:	Inhalation
Target Organs	:	Respiratory Tract
Assessment	:	May cause respiratory irritation.

STOT-repeated exposure

Not classified due to lack of data.

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

Repeated dose toxicity

Components:

Alanine, N,N-bis(carboxymethyl)-, trisodium salt

164462-16-2:

Species	:	Rat
NOAEL	:	262 mg/kg
Application Route	:	Oral
Symptoms	:	Kidney disorders

Aspiration toxicity

Not classified due to lack of data.

Aspiration toxicity	:	Not Rated

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.

Further information

Product:

Remarks	:	No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

Alanine, N,N-bis(carboxymethyl)-, trisodium salt

164462-16-2:

Toxicity to fish	:	LC50 (Brachydanio rerio): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (microalgae)): > 100 mg/l Exposure time: 72 h Test Type: static test
Toxicity to microorganisms	:	EC20 (activated sludge): > 1.000 mg/l Exposure time: 0,5 h Method: OECD Test Guideline 209
Toxicity to fish (Chronic toxicity)	:	NOEC: > 100 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Method: OECD Test Guideline 204
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: > 100 mg/l Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202
Toxicity to soil dwelling organisms	:	LC50: 142 mg/kg Exposure time: 14 d Species: Eisenia fetida (earthworms)
Plant toxicity	:	EC50: 794 mg/kg Test period: 19 d Species: Avena sativa (oats) Method: OECD 208

2,3-Oxiranedicarboxylic acid, disodium salt, homopolymer

109578-44-1:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1.000 mg/l

Oxirane, methyl-, polymer with oxirane, mono-C8-10-alkyl ethers, ethers with 1,2-decanediol (1:1)

501019-88-1:

Toxicity to fish	:	LC50 : < 10 mg/l Method: OECD Test Guideline 203 LC50 (Pimephales promelas (fathead minnow)): 1 - 10 mg/l Exposure time: 96 h Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates	:	(Daphnia magna (Water flea)): > 1 - < 10 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): 10 - 100 mg/l Exposure time: 72 h
Toxicity to microorganisms	:	EC0 (activated sludge): 3 mg/l Exposure time: 48 h

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9014-01-1:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 8,2 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia): 0,586 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 EC0 (Daphnia): 0,17 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	NOEC (Selenastrum capricornutum): 0,63 mg/l Exposure time: 48 h ErC50 (Selenastrum capricornutum (green algae)): 0,83 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Pseudokirchneriella subcapitata (microalgae)): 0,041 mg/l Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	:	EC10: 0,017 mg/l Exposure time: 32 d Species: Pimephales promelas (fathead minnow)

propane-1,2-diol

57-55-6:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 40.613 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 LC50 (Pimephales promelas (fathead minnow)): 54,9 g/l Exposure time: 96 h LC50 (Oncorhynchus mykiss (rainbow trout)): 51.600 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 43.500 mg/l Exposure time: 48 h EC50 (Mysidopsis bahia (opossum shrimp)): 18.800 mg/l Exposure time: 48 h EC50 (Ceriodaphnia dubia (water flea)): 18.340 mg/l

Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Selenastrum capricornutum (green algae)): 19.000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

EC50 (Skeletonema costatum (marine diatom)): 19.100 mg/l
Exposure time: 96 h

ErC50 (Pseudokirchneriella subcapitata (green algae)): 19.000 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (Photobacterium phosphoreum): 26,8 g/l
Exposure time: 30 min

NOEC (Pseudomonas putida): > 20.000 mg/l
Exposure time: 18 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 13.020 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia (water flea)

12.2 Persistence and degradability

Components:

Alanine, N,N-bis(carboxymethyl)-, trisodium salt

164462-16-2:

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 80 %
Related to: see user defined free text
Exposure time: 28 d
Method: OECD 301 F
Remarks: According to the results of tests of biodegradability this product is considered as being readily biodegradable.

2,3-Oxiranedicarboxylic acid, disodium salt, homopolymer

109578-44-1:

Biodegradability : Result: Biodegradable
Biodegradation: > 60 %
Exposure time: 28 d
Method: OECD 301 B

Oxirane, methyl-, polymer with oxirane, mono-C8-10-alkyl ethers, ethers with 1,2-decanediol (1:1)

501019-88-1:

Biodegradability : Test Type: aerobic
Result: Readily biodegradable.
Biodegradation: > 70 %
Exposure time: 28 d
Method: OECD 301 B

Subtilisin

9014-01-1:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 100 %
Exposure time: 29 d
Method: OECD 301 B

propane-1,2-diol

57-55-6:

Biodegradability	:	Test Type: aerobic Result: Readily biodegradable. Exposure time: 28 d Method: OECD 301 F GLP: yes Result: rapidly biodegradable Biodegradation: > 70 % Exposure time: 28 d Method: OECD 301 A Test Type: anaerobic Result: rapidly biodegradable Biodegradation: 81 % Exposure time: 28 d Method: OECD 301 F
Biochemical Oxygen Demand (BOD)	:	960 - 1.080 mg/g
Chemical Oxygen Demand (COD)	:	1.630 mg/g

12.3 Bioaccumulative potential

Components:

Alanine, N,N-bis(carboxymethyl)-, trisodium salt

164462-16-2:

Partition coefficient: n-octanol/water	:	log Pow: < -4 (25 °C) pH: 11,4 Method: Tested according to Directive 92/69/EEC.

2,3-Oxiranedicarboxylic acid, disodium salt, homopolymer

109578-44-1:

Bioaccumulation	:	Species: Fish Bioconcentration factor (BCF): < 100

Subtilisin

9014-01-1:

Bioaccumulation	:	Remarks: Does not bioaccumulate.
Partition coefficient: n-octanol/water	:	log Pow: < 0

propane-1,2-diol

57-55-6:

Bioaccumulation	:	Bioconcentration factor (BCF): 0,09 Remarks: Bioaccumulation is unlikely.
Partition coefficient: n-	:	Pow: 0,0851 (20,5 °C)

octanol/water	log Pow: -1,07 (20,5 °C) pH: 6,2 - 6,4 Method: OECD Test Guideline 107 GLP: yes

12.4 Mobility in soil

Components:

Alanine, N,N-bis(carboxymethyl)-, trisodium salt

164462-16-2:

Stability in soil	:	Remarks: Will not adsorb on soil.

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.

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	:	There is no data available for this product.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	In accordance with local and national regulations.
Contaminated packaging	:	Empty remaining contents. Empty containers should be taken to an approved waste handling site for recycling or disposal.
Waste Code		European Waste Catalog 20 01 29* According to the European Waste Catalog, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

SECTION 14: Transport information

14.1 UN number or ID number

ADR

Not dangerous goods

IMDG

Not dangerous goods
IATA
Not dangerous goods

14.2 UN proper shipping name
Not regulated as a dangerous good

14.3 Transport hazard class(es)
ADR
Not dangerous goods
IMDG
Not dangerous goods
IATA
Not dangerous goods

14.4 Packing group
ADR
Not dangerous goods
IMDG
Not dangerous goods
IATA
Not dangerous goods

14.5 Environmental hazards
ADR
Not dangerous goods
IMDG
Not regulated as a dangerous good
IATA
Not dangerous goods

14.6 Special precautions for user
Remarks : Not classified as dangerous in the meaning of transport regulations.

For personal protection see section 8.

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)	:	77-92-9 9014-01-1 92761-26-7 1310-73-2 122-99-6 78-70-6 See Annex XVII to Regulation (EC) no 1907/2006 for Conditions of restriction
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	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

TA Luft List (Germany)	:	Total dust: Not applicable
	:	Inorganic substances in powdered form: Not applicable
	:	Inorganic substances in gaseous form: Not applicable
	:	Organic Substances: : portionClass 1: 0,65 %
	:	Carcinogenic substance: Not applicable
	:	Quartz fine dust PM4: Not applicable
	:	Formaldehyde: Not applicable
	:	fibers: Not applicable
	:	Germ cell mutagens: Not applicable
	:	Substances toxic to reproduction: Not applicable
	:	Poorly degradable, easily enrichable and highly toxic organic substances: Not applicable
Volatile organic compounds (VOC) content	:	Directive 2010/75/EU of 24 November 2010 on industrial and livestock rearing emissions (integrated pollution prevention and control) Update: Percent volatile: 1,29 %
according to Detergents Regulation EC 648/2004	:	<5% non-ionic surfactants, enzymes, perfumes

15.2 Chemical Safety Assessment

There is no data available for this product.

SECTION 16: Other information

Full text of H-Statements

H290	:	May be corrosive to metals.
H302	:	Harmful if swallowed.
H315	:	Causes skin irritation.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H334	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	:	May cause respiratory irritation.
H400	:	Very toxic to aquatic life.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Met. Corr.	:	Corrosive to Metals
Resp. Sens.	:	Respiratory sensitization
Skin Irrit.	:	Skin irritation
STOT SE	:	Specific target organ toxicity - single exposure

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 Standardization; 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 Organization 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, Authorization 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: **Classification procedure:**

Calculation method

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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