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

1.1 Product identifier

Bio-Circle ALUSTAR 500
UFI: K300-P0FM-N00S-GFPT

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

Relevant identified uses

Sectors of use [SU]
Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Industrial uses
Products Category [PC]
PC-CLN-2 - All-purpose (or multi-purpose) non-abrasive cleaners

1.3 Details of the supplier of the safety data sheet

Supplier

Bio-Circle Surface Technology GmbH
Street : Berensweg 200
Postal code/City : 33334 Gütersloh
Telephone : +49 5241 9443 0
Telefax : +49 5241 9443 44

Information contact :

Product application:	ae@bio-circle.de
Orders:	www.bio-circle.de service@bio-circle.de
Current safety data sheet:	www.bio-circle.de [DE + EN] service@bio-circle.de
Questions about the contents of the safety data sheet:	ehs@bio-circle.de

1.4 Emergency telephone number

+49 5241 9443 51 during normal office hours
(Monday to Thursday from 8 am to 4 pm and Friday from 8 am to 3 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Skin Irrit. 2 ; H315 - Skin corrosion/irritation : Category 2 ; Causes skin irritation.
Eye Dam. 1 ; H318 - Serious eye damage/eye irritation : Category 1 ; Causes serious eye damage.
Aquatic Chronic 3 ; H412 - Hazardous to the aquatic environment : Chronic 3 ; Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms

Corrosion (GHS05)

Signal word

Danger

Hazard components for labelling

AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7
AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N-(2-(HYDROXYPROPYL) ; CAS No. : 1335203-30-9
ALCOHOLS, C8-10, ETHOXYLATED PROPOXYLATED ; CAS No. : 68603-25-8
Octenylsuccinic acid ; CAS No. : 28805-58-5

Hazard statements

H318	Causes serious eye damage.
H315	Causes skin irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P310	Immediately call a POISON CENTER/doctor/....
P332+P313	If skin irritation occurs: Get medical advice/attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352	IF ON SKIN: Wash with plenty of water/....

2.3 Other hazards

None

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients

2-(2-BUTOXYETHOXY)ETHANOL ; REACH No. : 01-2119475104-44-XXXX ; EC No. : 203-961-6; CAS No. : 112-34-5

Weight fraction : ≥ 1 - < 5 %

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319
Substance with a common (EC) occupational exposure limit value.

AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; REACH No. : 01-2119490100-53-XXXX ; EC No. : 931-329-6; CAS No. : 68155-07-7

Weight fraction : ≥ 1 - < 2,5 %

Classification 1272/2008 [CLP] : Eye Dam. 1 ; H318 Skin Irrit. 2 ; H315 Aquatic Chronic 2 ; H411

ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; REACH No. : 01-0000016977-53-XXXX ; EC No. : 423-270-5; CAS No. : 164462-16-2

Weight fraction : ≥ 1 - < 5 %

Classification 1272/2008 [CLP] : Met. Corr. 1 ; H290

AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N-(2-(HYDROXYPROPYL) ; REACH No. : 01-2119519248-37-XXXX ; EC No. : 931-596-9; CAS No. : 1335203-30-9

Weight fraction : ≥ 1 - < 2,5 %

Classification 1272/2008 [CLP] : Eye Dam. 1 ; H318 Skin Irrit. 2 ; H315 Aquatic Chronic 2 ; H411
(M=1)

ALCOHOLS, C8-10, ETHOXYLATED PROPOXYLATED ; REACH No. : Polymer ; CAS No. : 68603-25-8

Weight fraction : ≥ 1 - < 3 %

Classification 1272/2008 [CLP] : Eye Dam. 1 ; H318 Acute Tox. 4 ; H302

CITRIC ACID ; REACH No. : 01-2119457026-42-XXXX ; EC No. : 201-069-1; CAS No. : 77-92-9

Weight fraction : ≥ 1 - < 5 %

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319 STOT SE 3 ; H335

Octenylsuccinic acid ; REACH No. : Polymer ; EC No. : 249-244-1; CAS No. : 28805-58-5

Weight fraction : ≥ 1 - < 3 %

Classification 1272/2008 [CLP] : Skin Corr. 1C ; H314 Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 Acute Tox. 4 ; H312

2,2´-IMINODIETHANOL (IMPURITY) ; REACH No. : 01-2119488930-28-XXXX ; EC No. : 203-868-0; CAS No. : 111-42-2

Weight fraction : < 0,15 %

Classification 1272/2008 [CLP] : Repr. 2 ; H361fd STOT RE 2 ; H373 Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 Skin Irrit. 2 ; H315

Further ingredients

2,2`,2``-NITRILOTRIETHANOL ; REACH No. : 01-2119486482-31-XXXX ; EC No. : 203-049-8; CAS No. : 102-71-6

Weight fraction : ≥ 1 - < 5 %

Additional information

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice. Never give anything by mouth to an unconscious person or a person with cramps.

Following inhalation

Remove casualty to fresh air and keep warm and at rest.

In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Rub greasy ointment into the skin.

After eye contact

Protect uninjured eye. In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Following ingestion

Rinse mouth thoroughly with water. Let 1 glass of water be drunken in little sips (dilution effect). Do NOT induce vomiting. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye damage.
Causes skin irritation.

4.3 Indication of any immediate medical attention and special treatment needed

None

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Extinguishing powder Carbon dioxide (CO2) Sand Nitrogen Extinguishing blanket

Unsuitable extinguishing media

Full water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide , Carbon dioxide (CO2) , Nitrogen oxides (NOx)

5.3 Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

5.4 Additional information

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings. Move undamaged containers from immediate hazard area if it can be done safely. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Special danger of slipping by leaking/spilling product. Use personal protection equipment.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

6.3 Methods and material for containment and cleaning up

Clear spills immediately. Wipe up with absorbent material (eg. cloth, fleece). Wash with plenty of water. Treat the recovered material as prescribed in the section on waste disposal.

6.4 Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep container tightly closed.

7.2 Conditions for safe storage, including any incompatibilities

Keep/Store only in original container. Protect against : Frost .

Hints on joint storage

Storage class (TRGS 510) : 12

7.3 Specific end use(s)

Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5

Limit value type (country of origin) :	TRGS 900 (D)
Limit value :	10 ppm / 67 mg/m³
Peak limitation :	1,5(I)
Remark :	Y
Version :	23.06.2022
Limit value type (country of origin) :	STEL (EC)
Limit value :	15 ppm / 101,2 mg/m³
Version :	20.06.2019
Limit value type (country of origin) :	TWA (EC)
Limit value :	10 ppm / 67,5 mg/m³
Version :	20.06.2019

2,2`,2``-NITRILOTRIETHANOL ; CAS No. : 102-71-6

Limit value type (country of origin) :	TRGS 900 (D)
Parameter :	E: inhalable fraction
Limit value :	1 mg/m³
Peak limitation :	1(I)
Remark :	Y
Version :	23.06.2022

CITRIC ACID ; CAS No. : 77-92-9

Limit value type (country of origin) :	TRGS 900 (D)
Parameter :	E: inhalable fraction
Limit value :	2 mg/m³
Peak limitation :	2(I)

Remark : Y
Version : 23.06.2022
Limit value type (country of origin) : TLV/STEL (D)
Limit value : 4 mg/m³
Version :
Limit value type (country of origin) : TLV/TWA (D)
Limit value : 2 mg/m³
Version :

2,2´-IMINODIETHANOL (IMPURITY) ; CAS No. : 111-42-2
Limit value type (country of origin) : AGW (D)
Limit value : 5,1 mg/m³ / 2 ml/m³
Version :
Limit value type (country of origin) : TRGS 900 (D)
Limit value : 0,11 ppm / 0,5 mg/m³
Peak limitation : 1(I)
Remark : H, Sh, Y
Version : 23.06.2022

DNEL-/PNEC-values

DNEL/DMEL

2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5
Limit value type : DNEL Consumer (systemic)
Exposure route : Oral
Exposure frequency : Long-term
Limit value : 6,25 mg/kg bw/day
Limit value type : DNEL worker (local)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 67,5 mg/m³
Limit value type : DNEL worker (local)
Exposure route : Inhalation
Exposure frequency : Short-term
Limit value : 101,2 mg/m³

AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7
Limit value type : DNEL Consumer (local)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 0,056 mg/kg bw/day
Limit value type : DNEL Consumer (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 2,5 mg/kg bw/day
Limit value type : DNEL Consumer (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 21,73 mg/m³
Limit value type : DNEL Consumer (systemic)
Exposure route : Oral
Exposure frequency : Long-term
Limit value : 6,25 mg/kg bw/day
Limit value type : DNEL worker (local)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 0,0936 mg/kg bw/day
Limit value type : DNEL worker (systemic)
Exposure route : Dermal

Exposure frequency :	Long-term
Limit value :	4,16 mg/kg bw/day
Limit value type :	DNEL worker (systemic)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	73,4 mg/m³

ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2

Limit value type :	DNEL Consumer (local)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	2 mg/m³
Limit value type :	DNEL Consumer (local)
Exposure route :	Dermal
Exposure frequency :	Short-term
Limit value :	400 mg/cm²
Limit value type :	DNEL Consumer (local and systemic)
Exposure route :	Inhalation
Exposure frequency :	Short-term
Limit value :	20 mg/m³
Limit value type :	DNEL Consumer (systemic)
Exposure route :	Oral
Exposure frequency :	Short-term
Limit value :	85 mg/kg bw/day
Limit value type :	DNEL Consumer (systemic)
Exposure route :	Oral
Exposure frequency :	Long-term
Limit value :	17 mg/kg bw/day
Limit value type :	DNEL Consumer (systemic)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	20 mg/m³
Limit value type :	DNEL Consumer (systemic)
Exposure route :	Dermal
Exposure frequency :	Long-term
Limit value :	25 mg/kg bw/day
Limit value type :	DNEL Consumer (systemic)
Exposure route :	Dermal
Exposure frequency :	Short-term
Limit value :	400 mg/kg bw/day
Limit value type :	DNEL worker (local)
Exposure route :	Dermal
Exposure frequency :	Short-term
Limit value :	2000 mg/cm²
Limit value type :	DNEL worker (local)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	4 mg/m³
Limit value type :	DNEL worker (local and systemic)
Exposure route :	Inhalation
Exposure frequency :	Short-term
Limit value :	40 mg/m³
Limit value type :	DNEL worker (systemic)
Exposure route :	Dermal
Exposure frequency :	Long-term
Limit value :	170 mg/kg bw/day
Limit value type :	DNEL worker (systemic)

Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 40 mg/m³
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Short-term
Limit value : 2000 mg/kg bw/day

2,2´-IMINODIETHANOL (IMPURITY) ; CAS No. : 111-42-2
Limit value type : DNEL worker (local)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 1 mg/m³
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 0,13 mg/kg

PNEC

2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5
Limit value type : PNEC (Aquatic, freshwater)
Limit value : 1,1 mg/l
Limit value type : PNEC (Aquatic, intermittent release)
Limit value : 11 mg/l
Limit value type : PNEC (Aquatic, marine water)
Limit value : 0,11 mg/l
Limit value type : PNEC (Sediment, freshwater)
Limit value : 4,4 mg/kg dw
Limit value type : PNEC (Sediment, marine water)
Limit value : 0,44 mg/kg dw
Limit value type : PNEC (Soil)
Limit value : 0,32 mg/kg dw
Limit value type : PNEC (Secondary poisoning)
Limit value : 56 mg/kg food

AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7
Limit value type : PNEC (Aquatic, freshwater)
Limit value : 0,007 mg/l
Limit value type : PNEC (Aquatic, intermittent release)
Limit value : 0,024 mg/l
Limit value type : PNEC (Aquatic, marine water)
Limit value : 0,0007 mg/l
Limit value type : PNEC (Sediment, freshwater)
Limit value : 0,195 mg/kg dw
Limit value type : PNEC (Sediment, marine water)
Limit value : 0,0195 mg/kg dw
Limit value type : PNEC (Soil)
Limit value : 32 mg/kg soil dw
Limit value type : PNEC (Sewage treatment plant)
Limit value : 830 mg/l

ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2
Limit value type : PNEC (Soil)
Limit value : 2,5 mg/kg dw

8.2 Exposure controls

Personal protection equipment

Eye/face protection

Wear suitable safety goggles in case of splash.

Suitable eye protection

EN 166.

Skin protection

Hand protection

Suitable gloves type : EN 374.

Suitable material : NBR (Nitrile rubber)

Breakthrough time : 480 min.

Thickness of the glove material : 0.4 mm

Remark : The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Respiratory protection

Respiratory protection necessary at: exceeding exposure limit values

Suitable respiratory protection apparatus

Combination filtering device
Type : A P2

Remark

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (DGUV 112-190).

General information

Do not put any product-impregnated cleaning rags into your trouser pockets. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. P362+P364 - Take off contaminated clothing and wash it before reuse. P264 - Wash hands thoroughly after handling.

8.3 Additional information

No tests have been performed. Selection made for preparations according to the best available knowledge and information on ingredients. In the case of preparations the resistance of glove materials cannot be calculated in advance so it has to be tested before use.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid

Colour : colourless

Odour

characteristic

Safety characteristics

Melting point/freezing point :	(1013 hPa)	not determined

Initial boiling point and boiling range :	(1013 hPa)	approx.	100	°C	
Flash point :			not applicable		DIN EN ISO 13736
Auto-ignition temperature :			none		
Flammability :			non-flammable		
Lower explosion limit :			not determined		
Upper explosion limit :			not determined		
Vapour pressure :	(50 °C)		not determined		
Density :	(20 °C)	approx.	1,1	g/cm^3	
Water solubility :	(20 °C)		completely miscible		
pH :	(20 °C)		7,3		
Relative vapour density :	(20 °C)		not determined		
Maximum VOC content (2010/75/EC) :			0	Weight-%	
Maximum VOC content (Switzerland) :			4,5	Weight-%	
Taxable VOC content (Switzerland) :			4,5	Weight-%	

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non-reactive under normal use conditions.

10.2 Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No known hazardous decomposition products.
Decomposition products in case of fire: see section 5.

SECTION 11: Toxicological information

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

Acute toxicity

Acute oral toxicity

Parameter :	LD50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Exposure route :	Oral
Species :	Mouse
Effective dose :	5530 mg/kg
Method :	OECD 401
Parameter :	LD50 (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Method :	OECD 401
Parameter :	LD50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)

Exposure route :	Oral
Species :	Rat
Effective dose :	> 4000 mg/kg
Parameter :	LD50 (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N-(2-(HYDROXYPROPYL) ; CAS No. : 1335203-30-9)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LC50 (ALCOHOLS, C8-10, ETHOXYLATED PROPOXYLATED ; CAS No. : 68603-25-8)
Exposure route :	Oral
Species :	Rat
Effective dose :	616 mg/kg
Parameter :	LD50 (CITRIC ACID ; CAS No. : 77-92-9)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (2,2´-IMINODIETHANOL (IMPURITY) ; CAS No. : 111-42-2)
Exposure route :	Oral
Species :	Rat
Effective dose :	approx. 1100 - 2500 mg/kg
Method :	OECD 401

Acute dermal toxicity

Parameter :	LD50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	2764 mg/kg
Method :	OECD 402
Parameter :	LD50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 4000 mg/kg
Method :	OECD 402
Parameter :	LD50 (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N-(2-(HYDROXYPROPYL) ; CAS No. : 1335203-30-9)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (ALCOHOLS, C8-10, ETHOXYLATED PROPOXYLATED ; CAS No. : 68603-25-8)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	5660 mg/kg
Parameter :	LD50 (2,2´-IMINODIETHANOL (IMPURITY) ; CAS No. : 111-42-2)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	8380 mg/kg

Acute inhalation toxicity

Parameter :	LC50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Exposure route :	Inhalation
Species :	Rat
Effective dose :	> 5 mg/l

Corrosion

Skin corrosion/irritation

Parameter :	Skin corrosion/irritation (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Result :	Irritant

Assessment/classification

Causes skin irritation.

Serious eye damage/eye irritation

Parameter :	Serious eye damage/eye irritation (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species :	Rabbit
Result :	Causes serious eye irritation
Parameter :	Serious eye damage/eye irritation (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Result :	Causes serious eye damage
Parameter :	Serious eye damage/eye irritation (ALCOHOLS, C8-10, ETHOXYLATED PROPOXYLATED ; CAS No. : 68603-25-8)
Result :	Causes serious eye damage
Parameter :	Serious eye damage/eye irritation (CITRIC ACID ; CAS No. : 77-92-9)
Species :	Rabbit
Result :	Causes serious eye irritation
Method :	OECD 405

Assessment/classification

Causes serious eye damage.

Irritation to respiratory tract

Parameter :	Irritation to respiratory tract (CITRIC ACID ; CAS No. : 77-92-9)
Result :	Irritant

Assessment/classification

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

Respiratory or skin sensitisation

Skin sensitisation

No further relevant information available.

Sensitisation to the respiratory tract

No further relevant information available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

No further relevant information available.

Germ cell mutagenicity

No further relevant information available.

Reproductive toxicity

No further relevant information available.

STOT-single exposure

No further relevant information available.

STOT-repeated exposure

No further relevant information available.

Aspiration hazard

No further relevant information available.

11.2 Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Toxicokinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

Other adverse effects

Has degreasing effect on the skin. Frequently or prolonged contact with skin may cause dermal irritation.

Additional information

Preparation not tested. The statement is derived from the properties of the single components.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Acute (short-term) fish toxicity

Parameter :	LC50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species :	Lepomis macrochirus (Bluegill)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	1300 mg/l
Exposure time :	96 h
Method :	OECD 203
Parameter :	LC50 (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Species :	Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	= 2,4 mg/l
Exposure time :	96 h
Method :	OECD 203
Parameter :	LC50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Species :	Danio rerio (zebrafish)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 110 mg/l
Exposure time :	96 h
Method :	Regulation (EC) No. 440/2008, Annex C.1
Parameter :	EC50 (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N-(2-(HYDROXYPROPYL) ; CAS No. : 1335203-30-9)
Species :	Acute (short-term) daphnia toxicity
Effective dose :	3,7 mg/l
Exposure time :	48 h
Method :	OECD 202
Parameter :	EC50 (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N-(2-(HYDROXYPROPYL) ; CAS No. : 1335203-30-9)
Species :	Algae
Effective dose :	> 9,4 mg/l
Parameter :	LC50 (ALCOHOLS, C8-10, ETHOXYLATED PROPOXYLATED ; CAS No. : 68603-25-8)
Species :	Pimephales promelas (fathead minnow)
Effective dose :	13,3 mg/l
Exposure time :	96 h
Parameter :	LC50 (CITRIC ACID ; CAS No. : 77-92-9)
Species :	Leuciscus idus (golden orfe)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	440 mg/l
Exposure time :	48 h
Method :	OECD 203
Parameter :	LC50 (2,2´-IMINODIETHANOL (IMPURITY) ; CAS No. : 111-42-2)
Species :	Leuciscus idus (golden orfe)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	1430 - 1850 mg/l

Exposure time :	48 h
Method :	DIN 38412 / part 15

Chronic (long-term) fish toxicity

Parameter :	NOEC (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Species :	Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter :	Chronic (long-term) fish toxicity
Effective dose :	= 0,32 mg/l
Exposure time :	28 D
Method :	OECD 204
Parameter :	LOEC (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Species :	Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter :	Chronic (long-term) fish toxicity
Effective dose :	= 1 mg/l
Exposure time :	28 D
Method :	OECD 204
Parameter :	NOEC (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Species :	Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter :	Chronic (long-term) fish toxicity
Effective dose :	= 100 mg/l
Exposure time :	28 D
Method :	OECD 204

Acute (short-term) toxicity to crustacea

Parameter :	EC50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) toxicity to crustacea
Effective dose :	> 100 mg/l
Exposure time :	48 h
Method :	OECD 202
Parameter :	EC50 (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) daphnia toxicity
Effective dose :	= 3,2 mg/l
Exposure time :	48 h
Method :	OECD 202
Parameter :	EC50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) toxicity to crustacea
Effective dose :	> 100 mg/l
Exposure time :	48 h
Method :	Regulation (EC) No. 440/2008, Annex C.2
Parameter :	EC50 (ALCOHOLS, C8-10, ETHOXYLATED PROPOXYLATED ; CAS No. : 68603-25-8)
Species :	Daphnia magna (Big water flea)
Effective dose :	12,3 mg/l
Exposure time :	48 h
Parameter :	EC50 (CITRIC ACID ; CAS No. : 77-92-9)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) toxicity to crustacea
Effective dose :	1535 mg/l
Exposure time :	24 h
Parameter :	EC50 (2,2´-IMINODIETHANOL (IMPURITY) ; CAS No. : 111-42-2)
Species :	Daphnia magna (Big water flea)

Evaluation parameter :	Acute (short-term) daphnia toxicity
Effective dose :	171 mg/l
Exposure time :	48 h
Method :	OECD 202

Chronic (long-term) toxicity to aquatic invertebrate

Parameter :	NOEC (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Chronic (long-term) daphnia toxicity
Effective dose :	= 0,07 mg/l
Exposure time :	21 D
Method :	OECD 211
Parameter :	LOEC (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Chronic (long-term) daphnia toxicity
Effective dose :	= 0,24 mg/l
Exposure time :	21 D
Parameter :	NOEC (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Chronic (long-term) toxicity to aquatic invertebrate
Effective dose :	>= 100 mg/l
Exposure time :	21 D
Method :	Regulation (EC) No. 440/2008, Annex C.20
Parameter :	NOEC (2,2´-IMINODIETHANOL (IMPURITY) ; CAS No. : 111-42-2)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Chronic (long-term) daphnia toxicity
Effective dose :	0,78 mg/l
Exposure time :	21 D
Parameter :	LOEC (2,2´-IMINODIETHANOL (IMPURITY) ; CAS No. : 111-42-2)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Chronic (long-term) daphnia toxicity
Effective dose :	1,56 mg/l
Exposure time :	21 D

Acute (short-term) toxicity to algae and cyanobacteria

Parameter :	EC50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species :	Scenedesmus subspicatus
Evaluation parameter :	Acute (short-term) toxicity to algae and cyanobacteria
Effective dose :	> 100 mg/l
Exposure time :	48 h
Method :	OECD 201
Parameter :	ErC50 (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Species :	Desmodesmus subspicatus
Evaluation parameter :	Acute (short-term) algae toxicity
Effective dose :	= 7,4 mg/l
Exposure time :	72 h
Method :	OECD 201
Parameter :	EC50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Species :	Scenedesmus subspicatus
Evaluation parameter :	Acute (short-term) toxicity to algae and cyanobacteria
Effective dose :	> 200 mg/l
Exposure time :	72 h
Parameter :	EC50 (2,2´-IMINODIETHANOL (IMPURITY) ; CAS No. : 111-42-2)
Species :	Ankistrodesmus bibraianus

Evaluation parameter :	Acute (short-term) algae toxicity
Effective dose :	> 100 mg/l
Exposure time :	72 h
Method :	DIN 38412 / part 9

Chronic (long-term) toxicity to aquatic algae and cyanobacteria

Parameter :	NOEC (CITRIC ACID ; CAS No. : 77-92-9)
Species :	Scenedesmus quadricauda
Evaluation parameter :	Chronic (long-term) toxicity to aquatic algae and cyanobacteria
Effective dose :	425 mg/l
Exposure time :	8 D
Method :	OECD 201

Toxicity to microorganisms

Parameter :	EC10 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species :	Toxicity to microorganisms
Effective dose :	> 1995 mg/l
Exposure time :	30 min
Parameter :	EC50 (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Species :	Pseudomonas putida
Evaluation parameter :	Bacteria toxicity
Effective dose :	= 6 g/l
Exposure time :	72 h
Method :	DIN 38412 / part 8
Parameter :	EC10 (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Species :	Pseudomonas putida
Evaluation parameter :	Bacteria toxicity
Effective dose :	= 0,83 mg/l
Exposure time :	72 h
Parameter :	Bacteria toxicity (ALCOHOLS, C8-10, ETHOXYLATED PROPOXYLATED ; CAS No. : 68603-25-8)
Effective dose :	220 - 770 mg/l
Exposure time :	16 h

12.2 Persistence and degradability

Abiotic degradation

Abiotic degradation (Air)

Parameter :	Half-life time (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Degradation rate :	4,8 h
Method :	Calculated

Biodegradation

Parameter :	BOD (% of COD) (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	95 %
Test duration :	28 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301C
Parameter :	Biodegradation (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	> 60 %
Test duration :	28 D
Method :	OECD 301B
Parameter :	CO2 formation (% of the theoretical value) (AMIDES, C8-18 (EVEN NUMBERED) AND

C18 (UNSATD.), N,N-BIS(HYDROXYETHYL) ; CAS No. : 68155-07-7)

Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	approx. 92,5 %
Test duration :	28 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301B
Parameter :	BOD (% of ThOD) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Inoculum :	Degree of elimination
Evaluation parameter :	Aerobic
Degradation rate :	> 80 - 90 %
Test duration :	28 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301F
Parameter :	DOC reduction (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Inoculum :	Degree of elimination
Evaluation parameter :	Aerobic
Degradation rate :	> 90 - 100 %
Test duration :	28 D
Method :	OECD 301F
Parameter :	Biodegradation (ALCOHOLS, C8-10, ETHOXYLATED PROPOXYLATED ; CAS No. : 68603-25-8)
Inoculum :	Degree of elimination
Degradation rate :	> 70 %
Test duration :	28 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 302B
Parameter :	CO2 formation (% of the theoretical value) (CITRIC ACID ; CAS No. : 77-92-9)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	97 %
Test duration :	28 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301B
Parameter :	DOC reduction (CITRIC ACID ; CAS No. : 77-92-9)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	100 %
Test duration :	19 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301E
Parameter :	DOC reduction (2,2´-IMINODIETHANOL (IMPURITY) ; CAS No. : 111-42-2)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	96 %
Test duration :	10 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301A

12.3 Bioaccumulative potential

Parameter :	Partition coefficient n-octanol/water (log value) (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Value :	1
	20 °C
Method :	OECD 117

Parameter : Partition coefficient n-octanol/water (log value) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Value : -4
25 °C
Parameter : Partition coefficient n-octanol/water (log value) (AMIDES, C8-18 (EVEN NUMBERED) AND C18 (UNSATD.), N-(2-(HYDROXYPROPYL) ; CAS No. : 1335203-30-9)
Value : 3,77
No indication of bioaccumulation potential.

12.4 Mobility in soil

Adsorption

Parameter : Henry's Law Constant (ALANINE N,N-BIS(CARBOXYMETHYL), -TRISODIUM SALT ; CAS No. : 164462-16-2)
Effective dose : 0 $Pa.m^3/mol$
Exposure time : 25 °C

12.5 Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Directive 2008/98/EC (Waste Framework Directive)

Before intended use

Waste codes/waste designations according to EWC/AVV

07 06 01* (Aqueous washing liquids and mother liquors)
20 01 29* (Detergents containing hazardous substances)

Other disposal recommendations

Dispose of waste according to applicable legislation. Dispose of contents/container to an appropriate recycling or disposal facility. Contaminated packages must be completely emptied and can be re-used following proper cleaning (Water (with cleaning agent)). Handle contaminated packages in the same way as the substance itself.

13.2 Additional information

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

14.1 UN number or ID number

No dangerous good in sense of these transport regulations.

14.2 UN proper shipping name

No dangerous good in sense of these transport regulations.

14.3 Transport hazard class(es)

No dangerous good in sense of these transport regulations.

14.4 Packing group

No dangerous good in sense of these transport regulations.

14.5 Environmental hazards

No dangerous good in sense of these transport regulations.

14.6 Special precautions for user

None

14.7 Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

SECTION 15: Regulatory information

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

EU legislation

Authorisations and/or restrictions on use

Restrictions on use

Use restriction according to REACH annex XVII, no. : 3, 55, 75

Other regulations (EU)

Labelling for contents according to regulation (EC) No. 648/2004

5 - 15 % non-ionic surfactants
< 5 % anionic surfactants
< 5 % amphoteric surfactants
< 5 % cationic surfactants
< 5 % phosphates

National regulations

Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

Weight fraction (Number 5.2.5. I) : < 5 %

Water hazard class

Classification according to AwSV - Class : 2 (Obviously hazardous to water)

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1 Indication of changes

03. Hazardous ingredients · 08. Occupational exposure limit values · 15. Labelling for contents according to regulation (EC) No. 648/2004

16.2 Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (Europäisches Übereinkommen über die Beförderung gefährlicher Güter auf der Straße)
AOX: adsorbierbare organisch gebundene Halogene
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen
CAS: Chemical Abstracts Service (Unterabteilung der American Chemical Society)
CLP: Verordnung (EG) Nr. 1272/2008 über die Einstufung, Kennzeichnung und Verpackung von Stoffen und Gemischen (Classification Labelling and Packaging)
EAK / AVV: europäischer Abfallartenkatalog / Abfallverzeichnis-Verordnung
ECHA: Europäische Chemikalienagentur (European Chemicals Agency)
EINECS: : Altstoffverzeichnis (European Inventory of Existing Commercial Chemical Substances)
GHS: Global harmonisiertes System zur Einstufung und Kennzeichnung von Chemikalien (Globally Harmonized System of Classifiaction and Labelling of Chemicals)
IATA: Internationale Luftverkehrs-Vereinigung (International Air Transport Association)
ICAO: Internationale Zivilluftfahrtorganisation (International Civil Aviation Organization)
IMDG: Gefahrgutkennzeichnung für gefährliche Güter im Seeschiffverkehr (International Maritime Code for Dangerous Goods)
RID: Regelung zur internationalen Beförderung gefährlicher Güter im Schienenverkehr (Règlement concernant le transport international ferroviaire de marchandises dangereuses)
TRGS: Technische Regel für den Umgang mit Gefahrstoffen
VbF: Verordnung über brennbare Flüssigkeiten
VOC: flüchtige organische Verbindung (volatile organic compound)
VVEA: Verordnung über die Vermeidung und die Entsorgung von Abfällen

VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe
WGK: Wassergefährdungsklasse

16.3 Key literature references and sources for data

DGUV: GESTIS-Stoffdatenbank
ECHA: Classification And Labelling Inventory
ECHA: Pre-registered Substances
ECHA: Registered Substances
EC_Safety Data Sheet of Suppliers
ESIS: European Chemical Substances Information System
GDL: Gefahrstoffdatenbank der Länder
UBA Rigoletto: Wassergefährdende Stoffe
Regulation (EC) No. 1907/2006 of the European Parliament and of the Council
|-> COMMISSION REGULATION (EU) 2020/878 of 18 June 2020
Regulation (EC) No. 1272/2008 of the European Parliament and of the Council

16.4 Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].
Evaluation :
Skin Irrit. 2 : Calculation method.
Eye Dam. 1 : Calculation method.
Aquatic Chronic 3 : Calculation method.

16.5 Relevant H- and EUH-phrases (Number and full text)

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361fd	IF ON SKIN: Suspected of damaging fertility. Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

16.6 Training advice

None

16.7 Additional information

None

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.