Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)

Trade name :	ALUSTAR 200		
Revision date :	09.10.2019	**Version (Revision) :**	5.1.0 (5.0.0)
Print date :	11.10.2019		

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

1.1 Product identifier
ALUSTAR 200

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses
PC 35 - Washing and cleaning products

1.3 Details of the supplier of the safety data sheet
Supplier (manufacturer/importer/only representative/downstream user/distributor)
Bio-Circle Surface Technology AG

Street : Aahusweg 16

Postal code/city : 6403 Küssnacht am Rigi

Telephone : 0041 41 878 1166

Telefax : 0041 41 878 1347

Information contact : service@bio-circle.ch

1.4 Emergency telephone number
+41 (0)442515151
Schweizerisches Toxikologisches Informationszentrum, 145 during normal office hours

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.

2.2 Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Hazard pictograms

Corrosion (GHS05)

Signal word
Danger

Hazard components for labelling
DISODIUM METASILICATE ; CAS No. : 6834-92-0

Hazard statements

H318	Causes serious eye damage.
H315	Causes skin irritation.

Precautionary statements

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

2.3 Other hazards
None

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients

2-(2-BUTOXYETHOXY)ETHANOL ; REACH registration 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

ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; REACH registration No. : (Polymer) ; CAS No. : 68154-97-2

Weight fraction : ≥ 1 - < 5 %
Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

DISODIUM METASILICATE ; REACH registration No. : 01-2119449811-37-XXXX ; EC No. : 229-912-9; CAS No. : 6834-92-0

Weight fraction : ≥ 1 - < 3 %
Classification 1272/2008 [CLP] : Skin Corr. 1B ; H314 Eye Dam. 1 ; H318 STOT SE 3 ; H335

POTASSIUM CUMENESULFONATE ; REACH registration No. : 01-2119489427-24-XXXX ; EC No. : 629-764-9; CAS No. : 164524-02-1

Weight fraction : ≥ 1 - < 5 %
Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

SODIUM CUMENESULPHONATE ; REACH registration No. : 01-2119489411-37-XXXX ; EC No. : 239-854-6; CAS No. : 15763-76-5

Weight fraction : ≥ 1 - < 5 %
Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

2-Phosphonobutane-1,2,4-tricarbonic acid ; REACH registration No. : 01-2119436643-39-XXXX ; EC No. : 253-733-5; CAS No. : 37971-36-1

Weight fraction : ≥ 1 - < 5 %
Classification 1272/2008 [CLP] : Met. Corr. 1 ; H290 Eye Irrit. 2 ; H319

ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; REACH registration No. : 01-0000016977-53-XXXX ; CAS No. : 164462-16-2

Weight fraction : ≥ 1 - < 5 %
Classification 1272/2008 [CLP] : Met. Corr. 1 ; H290

POTASSIUM HYDROXIDE ; REACH registration No. : 01-2119487136-33-XXXX ; EC No. : 215-181-3; CAS No. : 1310-58-3

Weight fraction : ≥ 0,5 - < 1 %
Classification 1272/2008 [CLP] : Met. Corr. 1 ; H290 Skin Corr. 1A ; H314 Eye Dam. 1 ; H318 Acute Tox. 4 ; H302
Specific Conc. Limits : Skin Corr. 1A ; H314: C ≥ 5 % • Eye Dam. 1 ; H318: C ≥ 2 % • Skin Corr. 1B ; H314: C ≥ 2 % • Skin Corr. 1C ; H314: C ≥ 2 % • Eye Irrit. 2 ; H319: C ≥ 0,5 % • Skin Irrit. 2 ; H315: C ≥ 0,5 %

Additional information

Full text of H- and EUH-phrases: 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.

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

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Causes skin irritation. Causes serious eye 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

Carbon dioxide (CO2) Carbon monoxide

5.3 Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4 Additional information

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Special danger of slipping by leaking/spilling product.

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

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) :	STEL (EC)
Limit value :	15 ppm / 101,2 mg/m^3
Version :	31.01.2018
Limit value type (country of origin) :	TWA (EC)
Limit value :	10 ppm / 67,5 mg/m^3
Version :	31.01.2018

DNEL/DMEL and PNEC values

DNEL/DMEL

Limit value type :	DNEL worker (local) (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Exposure route :	Inhalation
Exposure frequency :	Long-term (repeated)
Limit value :	67,5 mg/m^3
Limit value type :	DNEL worker (local) (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Exposure route :	Inhalation
Exposure frequency :	Short-term (acute)
Limit value :	101,2 mg/m^3
Limit value type :	DNEL worker (systemic) (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Exposure route :	Inhalation
Exposure frequency :	Long-term (repeated)
Limit value :	67,5 mg/m^3
Limit value type :	DNEL worker (systemic) (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Exposure route :	Dermal
Exposure frequency :	Long-term (repeated)
Limit value :	20 mg/kg
Limit value type :	DNEL worker (systemic) (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Exposure route :	Inhalation
Exposure frequency :	Long-term (repeated)
Limit value :	6,22 mg/m^3
Limit value type :	DNEL worker (systemic) (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Exposure route :	Dermal
Exposure frequency :	Long-term (repeated)
Limit value :	1,49 mg/kg
Limit value type :	DNEL worker (systemic) (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Exposure route :	Inhalation
Exposure frequency :	Long-term (repeated)
Limit value :	53,6 mg/m^3
Limit value type :	DNEL worker (systemic) (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Exposure route :	Inhalation
Exposure frequency :	Long-term (repeated)
Limit value :	53,6 mg/m^3
Limit value type :	DNEL worker (systemic) (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Exposure route :	Dermal
Exposure frequency :	Long-term (repeated)
Limit value :	7,6 mg/kg
Limit value type :	DNEL worker (systemic) (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Exposure route :	Dermal
Exposure frequency :	Long-term (repeated)
Limit value :	7,6 mg/kg
Limit value type :	DNEL worker (local) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Exposure route :	Inhalation
Exposure frequency :	Short-term (acute)
Limit value :	40 mg/m^3

Limit value type :	DNEL worker (local) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Exposure route :	Inhalation
Exposure frequency :	Long-term (repeated)
Limit value :	4 mg/m³
Limit value type :	DNEL worker (systemic) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Exposure route :	Inhalation
Exposure frequency :	Short-term (acute)
Limit value :	40 mg/m³
Limit value type :	DNEL worker (systemic) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Exposure route :	Inhalation
Exposure frequency :	Long-term (repeated)
Limit value :	40 mg/m³
Limit value type :	DNEL worker (local) (POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3)
Exposure route :	Inhalation
Exposure frequency :	Long-term (repeated)
Limit value :	1 mg/m³
Limit value type :	DNEL worker (systemic) (POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3)
Exposure route :	Inhalation
Exposure frequency :	Long-term (repeated)
Limit value :	1 mg/m³

PNEC

Limit value type :	PNEC (Aquatic, freshwater) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Exposure route :	Water (Including sewage plant)
Limit value :	2 mg/l
Limit value type :	PNEC (Aquatic, marine water) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Exposure route :	Water (Including sewage plant)
Limit value :	0,2 mg/l
Limit value type :	PNEC (Sediment, freshwater) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Limit value :	24 mg/kg
Limit value type :	PNEC soil, freshwater (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Exposure route :	Soil
Limit value :	2,5 mg/kg
Limit value type :	PNEC (Sewage treatment plant) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Exposure route :	Water (Including sewage plant)
Limit value :	100 mg/l

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

Wear protective gloves in case of longer lasting skin contact.

Suitable gloves type : EN 374.

Suitable material : NBR (Nitrile rubber)

Breakthrough time (maximum wearing 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 (EN 14387)

Type : A

Remark

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

General health and safety measures

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 : Liquid

Colour : colourless

Odour : characteristic

Safety relevant basis data

Initial boiling point and boiling range :	(1013 hPa)	approx.	100	°C	
Flash point :			not applicable		
Lower explosion limit :			not relevant		
Upper explosion limit :			not relevant		
Vapour pressure :	(50 °C)		not applicable		
Density :	(20 °C)		1,05	g/cm^3	
Solvent separation test :	(20 °C)		not applicable		
pH :			12,7		
Flow time :	(20 °C)		not applicable		DIN-cup 4 mm
Maximum VOC content (EC) :			0	Wt %	
Maximum VOC content (Switzerland) :		<	3	Wt %	

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity
No information available.

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

10.3 Possibility of hazardous reactions
Exothermic reaction with: Acid

10.4 Conditions to avoid
No information available.

10.5 Incompatible materials
No information available.

10.6 Hazardous decomposition products
No information available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects

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 (ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; CAS No. : 68154-97-2)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Exposure route :	Oral
Species :	Mouse
Effective dose :	770 - 820 mg/kg
Parameter :	LD50 (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Exposure route :	Oral
Species :	Rat
Effective dose :	1152 - 1349 mg/kg
Parameter :	LD50 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (2-Phosphonobutane-1,2,4-tricarbonic acid ; CAS No. : 37971-36-1)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 6500 mg/kg
Parameter :	LD50 (POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3)

Exposure route :	Oral
Species :	Rat
Effective dose :	365 mg/kg
Method :	OECD 425

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 (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 5000 mg/kg
Parameter :	LD50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (2-Phosphonobutane-1,2,4-tricarbonic acid ; CAS No. : 37971-36-1)
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 4000 mg/kg

Acute inhalation toxicity

Parameter :	LC50 (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Exposure route :	Inhalation
Species :	Rat
Effective dose :	> 2,06 mg/l
Exposure time :	4 h
Parameter :	LC50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Exposure route :	Inhalation
Species :	Rat
Effective dose :	> 5 mg/l
Exposure time :	4 h

Irritant and corrosive effects

Primary irritation to the skin

No further relevant information available.

Irritation to eyes

Parameter :	Irritation to eyes (2-Phosphonobutane-1,2,4-tricarbonic acid ; CAS No. : 37971-36-1)
Species :	Rabbit
Result :	Oedema.
Method :	OECD 405

No further relevant information available.

Sensitisation

In case of skin contact

No further relevant information available.

In case of inhalation

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 Toxicokinetics, metabolism and distribution
There are no data available on the preparation/mixture itself.

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

11.4 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 :	Acute (short-term) fish toxicity (ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; CAS No. : 68154-97-2)
Species :	Brachydanio rerio (zebra-fish)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 1 - 10 mg/l
Exposure time :	96 h
Method :	OECD 203
Parameter :	LC50 (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Species :	Fish
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	2320 mg/l
Exposure time :	96 h
Parameter :	LC50 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Species :	Cyprinus carpio (Common Carp)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 100 mg/l
Exposure time :	96 h
Parameter :	LC50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Species :	Cyprinus carpio (Common Carp)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 100 mg/kg
Exposure time :	96 h
Parameter :	LC50 (POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3)
Species :	Fish
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	80 mg/l
Exposure time :	96 h

Chronic (long-term) fish toxicity

Parameter :	NOEC (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ;

	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) daphnia toxicity

Parameter :	EC50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) daphnia toxicity
Effective dose :	> 100 mg/l
Exposure time :	48 h
Method :	OECD 202
Parameter :	EC50 (ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; CAS No. : 68154-97-2)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) daphnia toxicity
Effective dose :	> 1 - 10 mg/l
Exposure time :	48 h
Method :	OECD 202
Parameter :	EC50 (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) daphnia toxicity
Effective dose :	1700 mg/l
Exposure time :	48 h
Method :	OECD 202
Parameter :	EC50 (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Species :	Scenedesmus subspicatus
Evaluation parameter :	Acute (short-term) algae toxicity
Effective dose :	207 mg/l
Exposure time :	72 h
Method :	DIN 38412 / part 9
Parameter :	EC50 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) daphnia toxicity
Effective dose :	> 100 mg/l
Exposure time :	48 h
Parameter :	EC50 (2-Phosphonobutane-1,2,4-tricarbonic acid ; CAS No. : 37971-36-1)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) daphnia toxicity
Effective dose :	> 1071 mg/l
Exposure time :	48 h
Method :	OECD 202

Chronic (long-term) daphnia toxicity

Parameter :	NOEC (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Chronic (long-term) daphnia toxicity
Effective dose :	>= 100 mg/l
Exposure time :	21 d
Method :	Regulation (EC) No. 440/2008, Annex, C.20

Acute (short-term) algae toxicity

Parameter :	EC50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species :	Scenedesmus subspicatus
Evaluation parameter :	Acute (short-term) algae toxicity
Effective dose :	> 100 mg/l

Exposure time :	48 h
Method :	OECD 201
Parameter :	ErC50 (ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; CAS No. : 68154-97-2)
Species :	Selenastrum capricornutum
Evaluation parameter :	Acute (short-term) algae toxicity
Effective dose :	> 1 - 10 mg/l
Exposure time :	72 h
Parameter :	EC50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) daphnia toxicity
Effective dose :	> 100 mg/l
Exposure time :	48 h
Parameter :	EC50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Species :	Desmodesmus subspicatus
Evaluation parameter :	Acute (short-term) algae toxicity
Effective dose :	> 100 mg/l
Exposure time :	72 h
Parameter :	EC50 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Species :	Desmodesmus subspicatus
Evaluation parameter :	Acute (short-term) algae toxicity
Effective dose :	> 100 mg/l
Exposure time :	72 h

Bacteria toxicity

Parameter :	EC10 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species :	Bacteria toxicity
Effective dose :	> 1995 mg/l
Exposure time :	30 min
Parameter :	EC50 (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Species :	Bacteria toxicity
Effective dose :	> 100 mg/l
Exposure time :	3 h
Parameter :	EC50 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Species :	Bacteria toxicity
Effective dose :	> 1000 mg/l
Exposure time :	3 h
Parameter :	EC50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Species :	Bacteria toxicity
Effective dose :	> 1000 mg/l

12.2 Persistence and degradability

Biodegradation

Parameter :	Biodegradation (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Inoculum :	Biodegradation
Degradation rate :	90 - 100 %
Test durarion :	14 d
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301E
Parameter :	Biodegradation (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Inoculum :	Biodegradation
Degradation rate :	90 - 100 %
Test durarion :	8 d
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 302B
Parameter :	Biodegradation (ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; CAS No. : 68154-97-2)
Inoculum :	Biodegradation

Evaluation parameter :	Aerobic
Degradation rate :	> 60 %
Test durarion :	28 d
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301B
Parameter :	Biodegradation (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	99,8 %
Test durarion :	28 d
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301B
Parameter :	Biodegradation (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	99,8 %
Test durarion :	28 d
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301B
Parameter :	Biodegradation (2-Phosphonobutane-1,2,4-tricarbonic acid ; CAS No. : 37971-36-1)
Inoculum :	Degree of elimination
Degradation rate :	30 - 40 %
Test durarion :	28 d
Evaluation :	Not readily biodegradable (according to OECD criteria)
Method :	OECD 302A

12.3 Bioaccumulative potential

Parameter :	Partition coefficient n-octanol /water (log P O/W) (2-Phosphonobutane-1,2,4-tricarbonic acid ; CAS No. : 37971-36-1)
	Partition coefficient n-octanol /water (log P O/W)
Value :	1,36
Method :	Partition coefficient n-octanol /water (log P O/W)

No indication of bioaccumulation potential.

12.4 Mobility in soil

No information available.

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 Other adverse effects

No information available.

12.7 Additional ecotoxicological information

None

SECTION 13: Disposal considerations

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. List of proposed waste codes/waste designations in accordance with EWC

13.1 Waste treatment methods

Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

20 01 29* - detergents containing dangerous substances.

Waste code packaging

15 01 02 - plastic packaging.

Waste treatment options

Appropriate disposal / Package

Contaminated packages must be completely emptied and can be re-used following proper cleaning. Handle contaminated packages in the same way as the substance itself.

13.2 Additional information

These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use.

SECTION 14: Transport information

14.1 UN 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 Transport in bulk according to Annex II of Marpol and the IBC Code

not relevant

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

Restrictions of occupation

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Other regulations (EU)

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

< 5 % anionic surfactants
< 5 % non-ionic surfactants
< 5 % phosphonates

National regulations

AT: Labelling according to Austrian regulations (Chemikaliengesetz/ChemV).
CH: Chemikalienverordnung (ChemV) and Chemikalien-Risikoreduktions-Verordnung (Chem RRV) are complied.

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

02. Classification of the substance or mixture

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)
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
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]

No information available.

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

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

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.