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

1.1 Product identifier
bio-chem Kunststoffreiniger

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

Sectors of use [SU]

Consumer uses: Private households (= general public = consumers)

1.3 Details of the supplier of the safety data sheet
Supplier
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

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

BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3
DISODIUM METASILICATE ; CAS No. : 6834-92-0
POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3

Hazard statements

H318	Causes serious eye damage.
H315	Causes skin irritation.

Precautionary statements

P102	Keep out of reach of children.
P103	Read label before use.

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-BUTOXYETHANOL ; REACH No. : 01-2119475108-36-XXXX ; EC No. : 203-905-0; CAS No. : 111-76-2

Weight fraction :	≥ 5 - < 10 %
Classification 1272/2008 [CLP] :	Acute Tox. 3 ; H331 Acute Tox. 4 ; H302 Skin Irrit. 2 ; H315 Eye Irrit. 2 ; H319 Substance with a common (EC) occupational exposure limit value.
Specific Conc. Limits :	(ATE - oral : 1200 mg/kg) • (ATE - inhalative (vapour) : 3 mg/L)

BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; REACH No. : 01-2119489428-22-XXXX ; EC No. : 270-115-0; CAS No. : 68411-30-3

Weight fraction :	≥ 1 - < 3 %
Classification 1272/2008 [CLP] :	Eye Dam. 1 ; H318 Acute Tox. 4 ; H302 Skin Irrit. 2 ; H315 Aquatic Chronic 3 ; H412

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

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

POTASSIUM CUMENESULFONATE ; REACH 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 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

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

Weight fraction :	≥ 1 - < 2 %
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

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

In case of respiratory tract irritation, consult a physician.

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) , Sulphur oxides.

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.

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-BUTOXYETHANOL ; CAS No. : 111-76-2

Limit value type (country of origin) :	KZGW (CH)
Limit value :	20 ppm / 98 mg/m³
Remark :	H; SSc; B
Version :	09.03.2021
Limit value type (country of origin) :	MAK (CH)
Limit value :	10 ppm / 49 mg/m³
Remark :	H; SSc; B
Version :	09.03.2021
Limit value type (country of origin) :	STEL (EC)
Limit value :	50 ppm / 246 mg/m³
Remark :	Skin
Version :	20.06.2019
Limit value type (country of origin) :	TWA (EC)
Limit value :	20 ppm / 98 mg/m³
Remark :	Skin
Version :	20.06.2019

POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3

Limit value type (country of origin) :	MAK (CH)
Parameter :	E: inhalable fraction
Limit value :	2 mg/m³
Version :	09.03.2021

DNEL-/PNEC-values

DNEL/DMEL

2-BUTOXYETHANOL ; CAS No. : 111-76-2

Limit value type :	DNEL worker (local)
Exposure route :	Inhalation
Exposure frequency :	Short-term
Limit value :	246 mg/m³

POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3

Limit value type :	DNEL worker (local)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	1 mg/m³

BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3

Limit value type :	DNEL worker (local)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	12 mg/m³
Limit value type :	DNEL worker (systemic)
Exposure route :	Inhalation
Exposure frequency :	Long-term
Limit value :	12 mg/m³

SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5

Limit value type :	DNEL worker (systemic)
Exposure route :	Inhalation
Exposure frequency :	Long-term

Limit value : 53,6 mg/m³
POTASSIUM HYDROXIDE ; CAS No. : 1310-58-3
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 1 mg/m³
POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 53,6 mg/m³
2-BUTOXYETHANOL ; CAS No. : 111-76-2
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 98 mg/m³
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Short-term
Limit value : 663 mg/m³
POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 7,6 mg/kg
SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 7,6 mg/kg
BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 170 mg/m³
2-BUTOXYETHANOL ; CAS No. : 111-76-2
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 75 mg/kg
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Short-term
Limit value : 89 mg/kg

PNEC

2-BUTOXYETHANOL ; CAS No. : 111-76-2
Limit value type : PNEC (Aquatic, freshwater)
Limit value : 8,8 mg/l
Limit value type : PNEC (Aquatic, marine water)
Limit value : 0,88 mg/l
Limit value type : PNEC (Sediment, freshwater)
Limit value : 34,6 mg/kg
Limit value type : PNEC (Soil)
Limit value : 2,33 mg/kg
Limit value type : PNEC (Sewage treatment plant)
Limit value : 463 mg/l

ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2

Limit value type :	PNEC (Aquatic, freshwater)
Exposure route :	Water (Including sewage plant)
Limit value :	2 mg/l
Limit value type :	PNEC (Aquatic, marine water)
Exposure route :	Water (Including sewage plant)
Limit value :	0,2 mg/l
Limit value type :	PNEC (Sediment, freshwater)
Limit value :	24 mg/kg
Limit value type :	PNEC Soil, Freshwater
Exposure route :	Soil
Limit value :	2,5 mg/kg
Limit value type :	PNEC (Sewage treatment plant)
Exposure route :	Water (Including sewage plant)
Limit value :	100 mg/l

DISODIUM METASILICATE ; CAS No. : 6834-92-0

Limit value type :	PNEC (Aquatic, freshwater)
Limit value :	7,5 mg/l
Limit value type :	PNEC (Aquatic, marine water)
Limit value :	1 mg/l
Limit value type :	PNEC (Sewage treatment plant)
Limit value :	1000 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



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

Remark

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 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 : viscous

Colour : colourless

Odour

like: Ether , sweetish

Safety characteristics

Melting point/freezing point :	(1013 hPa)	approx.	0	°C	
Initial boiling point and boiling range :	(1013 hPa)	approx.	97	°C	
Flash point :			none		DIN EN ISO 13736
Auto-ignition temperature :			none		
Flammability :			non-flammable		
Lower explosion limit :			not relevant		
Upper explosion limit :			not relevant		
Vapour pressure :	(50 °C)		not determined		
Density :	(20 °C)	approx.	1,03	g/cm³	
Water solubility :	(20 °C)		completely miscible		
pH :	(20 °C)	approx.	13,5		
Cinematic viscosity :	(20 °C)	<	30	mm²/s	
Relative vapour density :	(20 °C)		not determined		
Maximum VOC content (EC) :			5	Weight-%	
Maximum VOC content (Switzerland) :			5	Weight-%	
Taxable VOC content (Switzerland) :			5	Weight-%	
Corrosive to metals :			GHS/CLP criteria are not met.		

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

Aluminium Zinc

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 :	ATEmix
Exposure route :	Oral
Effective dose :	> 2000 mg/kg
Parameter :	LD50 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 7000 mg/kg
Method :	OECD 401
Parameter :	LD50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 7000 mg/kg
Method :	OECD 401
Parameter :	LD50 (BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3)
Exposure route :	Oral
Species :	Rat
Effective dose :	1080 mg/kg
Method :	OECD 401
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 (2-BUTOXYETHANOL ; CAS No. : 111-76-2)
Exposure route :	Oral
Species :	Rat
Effective dose :	1250 - 1490 mg/kg
Method :	OECD 401
Parameter :	LD50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 4000 mg/kg

Acute dermal toxicity

Parameter :	ATEmix
Exposure route :	Dermal
Effective dose :	> 2000 mg/kg

Parameter :	LD50 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	> 2000 mg/kg
Method :	OECD 402
Parameter :	LD50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 2000 mg/kg
Method :	OECD 402
Parameter :	LD50 (BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3)
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 300 - 2000 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 (2-BUTOXYETHANOL ; CAS No. : 111-76-2)
Exposure route :	Dermal
Species :	Rabbit
Effective dose :	841 mg/kg
Method :	OECD 402
Parameter :	LD50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Exposure route :	Dermal
Species :	Rat
Effective dose :	> 4000 mg/kg
Method :	OECD 402

Acute inhalation toxicity

Parameter :	ATEmix
Exposure route :	Inhalation
Effective dose :	> 20 mg/l
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 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Exposure route :	Inhalation
Species :	Rat
Effective dose :	> 6,41 mg/l
Exposure time :	232 min
Method :	OECD 403
Parameter :	LC50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Exposure route :	Inhalation
Species :	Rat
Effective dose :	> 6,41 mg/l
Exposure time :	232 min
Method :	OECD 403
Parameter :	LC50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Exposure route :	Inhalation
Species :	Rat

Effective dose :	> 5 mg/l
Parameter :	LC50 (2-BUTOXYETHANOL ; CAS No. : 111-76-2)
Exposure route :	Inhalation
Species :	Rat
Effective dose :	2 - 20 mg/l
Exposure time :	4 h

Corrosion

Skin corrosion/irritation

Parameter :	Skin corrosion/irritation
Species :	3D skin model
Result :	Not corrosive
Method :	OECD 431

Test was carried out with a similar mixture.
Bridging principle "Substantially similar mixtures".

In vitro skin test

Evaluation

Causes skin irritation.

Acid/alkaline reserve

The mixture has a low buffer capacity (Acid/Alkaline reserve).

Serious eye damage/eye irritation

Parameter :	Serious eye damage/eye irritation
Species :	In vitro eye test
Result :	Causes serious eye damage
Method :	OECD 437

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. May be absorbed through the skin. May cause respiratory 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-BUTOXYETHANOL ; CAS No. : 111-76-2)
Species :	Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	1474 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 (BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3)
Species :	Lepomis macrochirus (Bluegill)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	1,67 mg/l
Exposure time :	96 h
Parameter :	LC50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; 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 :	LC50 (BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3)
Species :	Daphnia
Evaluation parameter :	Acute (short-term) daphnia toxicity
Effective dose :	3,5 mg/l
Exposure time :	96 h

Chronic (long-term) fish toxicity

Parameter :	NOEC (2-BUTOXYETHANOL ; CAS No. : 111-76-2)
Species :	Danio rerio (zebrafish)
Evaluation parameter :	Chronic (long-term) fish toxicity
Effective dose :	> 100 mg/l
Exposure time :	21 D
Method :	OECD 204
Parameter :	NOEC (BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3)

Species :	Fish
Evaluation parameter :	Chronic (long-term) fish toxicity
Effective dose :	0,25 mg/l
Exposure time :	90 D
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
Parameter :	LOEC (BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3)
Species :	Fish
Evaluation parameter :	Chronic (long-term) fish toxicity
Effective dose :	0,51 mg/l
Exposure time :	90 D

Acute (short-term) toxicity to crustacea

Parameter :	EC50 (2-BUTOXYETHANOL ; CAS No. : 111-76-2)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) toxicity to crustacea
Effective dose :	1550 mg/l
Exposure time :	48 h
Method :	DIN 38412 / part 11
Parameter :	EC50 (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) toxicity to crustacea
Effective dose :	1700 mg/l
Exposure time :	48 h
Method :	OECD 202
Parameter :	EC50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) toxicity to crustacea
Effective dose :	> 100 mg/l
Exposure time :	48 h
Parameter :	EC50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; 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 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) toxicity to crustacea
Effective dose :	> 100 mg/l
Exposure time :	48 h

Chronic (long-term) toxicity to aquatic invertebrate

Parameter :	NOEC (2-BUTOXYETHANOL ; CAS No. : 111-76-2)
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 :	OECD 211
Parameter :	NOEC (BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3)

Species :	Scenedesmus subspicatus
Evaluation parameter :	Acute (short-term) algae toxicity
Effective dose :	2,4 mg/l
Exposure time :	72 h
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) toxicity to aquatic invertebrate
Effective dose :	>= 100 mg/l
Exposure time :	21 D
Method :	Regulation (EC) No. 440/2008, Annex C.20
Parameter :	LOEC (BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3)
Species :	Daphnia
Evaluation parameter :	Chronic (long-term) daphnia toxicity
Effective dose :	4 mg/l
Exposure time :	28 D

Acute (short-term) toxicity to algae and cyanobacteria

Parameter :	EC50 (2-BUTOXYETHANOL ; CAS No. : 111-76-2)
Species :	Pseudokirchneriella subcapitata
Evaluation parameter :	Acute (short-term) toxicity to algae and cyanobacteria
Effective dose :	1840 mg/l
Exposure time :	72 h
Method :	OECD 201
Parameter :	EC50 (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Species :	Scenedesmus subspicatus
Evaluation parameter :	Acute (short-term) toxicity to algae and cyanobacteria
Effective dose :	207 mg/l
Exposure time :	72 h
Method :	DIN 38412 / part 9
Parameter :	EC50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; 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 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Species :	Desmodesmus subspicatus
Evaluation parameter :	Acute (short-term) toxicity to algae and cyanobacteria
Effective dose :	> 100 mg/l
Exposure time :	72 h
Parameter :	EC50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Species :	Desmodesmus subspicatus
Evaluation parameter :	Acute (short-term) toxicity to algae and cyanobacteria
Effective dose :	> 100 mg/l
Exposure time :	72 h

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

Parameter :	NOEC (2-BUTOXYETHANOL ; CAS No. : 111-76-2)
Species :	Pseudokirchneriella subcapitata
Evaluation parameter :	Chronic (long-term) toxicity to aquatic algae and cyanobacteria
Effective dose :	286 mg/l
Exposure time :	72 h
Method :	OECD 201

Toxicity to microorganisms

Parameter :	EC50 (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Species :	Toxicity to microorganisms

Effective dose :	> 100 mg/l
Exposure time :	3 h
Parameter :	EC50 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Species :	Toxicity to microorganisms
Effective dose :	> 1000 mg/l
Exposure time :	3 h
Parameter :	EC50 (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Species :	Toxicity to microorganisms
Effective dose :	> 1000 mg/l

12.2 Persistence and degradability

The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

Biodegradation

Parameter :	Biodegradation (2-BUTOXYETHANOL ; CAS No. : 111-76-2)
Inoculum :	Biodegradation
Degradation rate :	88 %
Test duration :	20 D
Parameter :	Biodegradation (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	99,8 %
Test duration :	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 duration :	28 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301B
Parameter :	BOD (% of ThOD) (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; 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 :	CO2 formation (% of the theoretical value) (BENZENESULFONIC ACID, C10-C13-ALKYL DERIVATES, SODIUM SALTS ; CAS No. : 68411-30-3)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	85 %
Test duration :	29 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301B
Parameter :	DOC reduction (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)
Inoculum :	Degree of elimination
Evaluation parameter :	Aerobic
Degradation rate :	> 90 - 100 %
Test duration :	28 D
Method :	OECD 301F

12.3 Bioaccumulative potential

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 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.

12.8 Additional ecotoxicological information

After neutralisation, reduction in toxic effects is observed.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Ordinance on the avoidance and disposal of waste (ADWO) SR 814.600.

Before intended use

Waste code according to the lists for the movement of waste

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

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. 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 VVEA, specific to the industry and process.

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 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, 75

Restrictions of occupation

Observe restrictions to employment for juveniles 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

National regulations

Other regulations, restrictions and prohibition regulations

Switzerland

Chemicals Ordinance, ChemO (SR 813.11)
Chemical Risk Reduction Ordinance, ORRChem (SR 814.81)
Swiss Maternity Protection Ordinance (SR 822.111.52): Pregnant women and nursing mothers are only allowed to get in contact with or be exposed to this preparation in the course of their work when it is established on the basis of a risk assessment by a specialist, that in context with the activities and the protection measures applied, exposure does no harm to mother and child.

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

09. Information on basic physical and chemical properties · 11. Endocrine disrupting properties · 12. Endocrine disrupting properties

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
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 : Human Skin Model (HSM) test (OECD 431)
Eye Dam. 1 : In vitro eye test (OECD 437)

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.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H412	Harmful 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.