

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

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

1.1 Product identifier

Bio-Circle ALUSTAR 300
Unique Formula Identifier : 8R10-90K5-G005-2XS1

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

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 : labor@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 Corr. 1B ; H314 - Skin corrosion/irritation : Category 1B ; Causes severe skin burns and eye damage.
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

H314 Causes severe skin burns and eye damage.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P310 Immediately call a POISON CENTER/doctor/...
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

2.3 Other hazards

None

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients

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

Weight fraction : $\geq 10 - < 20$ %

Classification 1272/2008 [CLP] : Skin Corr. 1B ; H314 Eye Dam. 1 ; H318 STOT SE 3 ; H335

ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ≥ 2.5 EO/PO ; REACH No. : (Polymer) ; CAS No. : 68154-97-2

Weight fraction : $\geq 5 - < 10$ %

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

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

Weight fraction : $\geq 5 - < 10$ %

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

Substance with a common (EC) occupational exposure limit value.

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

Weight fraction : $\geq 1 - < 5$ %

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 : $\geq 1 - < 5$ %

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319

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

Weight fraction : $\geq 1 - < 5$ %

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

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 severe skin burns and eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

None

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

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. Fire fighting water forms corrosive alkaline solutions - slip hazard! 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. 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

Do not breathe gas/fumes/vapour/spray. Keep container tightly closed.

7.2 Conditions for safe storage, including any incompatibilities

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

Hints on joint storage

Storage class (TRGS 510) : 8B

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(l)

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

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

DNEL-/PNEC-values

DNEL/DMEL

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

Limit value type : DNEL Consumer (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 1,55 mg/m³
Limit value type : DNEL Consumer (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 0,74 mg/kg bw/day
Limit value type : DNEL Consumer (systemic)
Exposure route : Oral
Exposure frequency : Long-term
Limit value : 0,74 mg/kg bw/day
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 6,22 mg/m³
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 1,49 mg/kg

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 : Short-term
Limit value : 101,2 mg/m³
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 67,5 mg/m³

POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1

Limit value type : DNEL Consumer (local)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 0,048 mg/cm²

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

Limit value type : DNEL Consumer (local)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 0,048 mg/cm²
Limit value type : DNEL Consumer (systemic)

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 6,6 mg/m³
POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1
Limit value type : DNEL Consumer (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 6,6 mg/m³
Limit value type : DNEL Consumer (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 68,1 mg/kg bw/day
SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5
Limit value type : DNEL Consumer (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 68,1 mg/kg bw/day
Limit value type : DNEL Consumer (systemic)
Exposure route : Oral
Exposure frequency : Long-term
Limit value : 3,8 mg/kg bw/day
POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1
Limit value type : DNEL Consumer (systemic)
Exposure route : Oral
Exposure frequency : Long-term
Limit value : 3,8 mg/kg bw/day
Limit value type : DNEL worker (local)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 0,096 mg/cm²
SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5
Limit value type : DNEL worker (local)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 0,096 mg/cm²
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 37,4 mg/m³
POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 37,4 mg/m³
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 191 mg/kg bw/day
SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5
Limit value type : DNEL worker (systemic)
Exposure route : Dermal
Exposure frequency : Long-term
Limit value : 191 mg/kg bw/day
ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2
Limit value type : DNEL Consumer (local)
Exposure route : Inhalation

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

Exposure frequency : Long-term
Limit value : 2 mg/m³
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 worker (local)
Exposure route : Inhalation
Exposure frequency : Short-term
Limit value : 40 mg/m³
Limit value type : DNEL worker (local)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 4 mg/m³
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Short-term
Limit value : 40 mg/m³
Limit value type : DNEL worker (systemic)
Exposure route : Inhalation
Exposure frequency : Long-term
Limit value : 40 mg/m³

PNEC

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

Limit value type : PNEC (Aquatic, freshwater)
Limit value : 7,5 mg/l
Limit value type : PNEC (Aquatic, intermittent release)
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

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)

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

Limit value : 0,32 mg/kg dw
Limit value type : PNEC (Secondary poisoning)
Limit value : 56 mg/kg food
POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1
Limit value type : PNEC (Aquatic, freshwater)
Limit value : 0,1 mg/l
SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5
Limit value type : PNEC (Aquatic, freshwater)
Limit value : 0,1 mg/l
Limit value type : PNEC (Aquatic, intermittent release)
Limit value : 1 mg/l
POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1
Limit value type : PNEC (Aquatic, intermittent release)
Limit value : 1 mg/l
Limit value type : PNEC (Aquatic, marine water)
Limit value : 0,01 mg/l
SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5
Limit value type : PNEC (Aquatic, marine water)
Limit value : 0,01 mg/l
Limit value type : PNEC (Sediment, freshwater)
Limit value : 0,372 mg/kg dw
POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1
Limit value type : PNEC (Sediment, freshwater)
Limit value : 0,372 mg/kg dw
Limit value type : PNEC (Sediment, marine water)
Limit value : 0,0372 mg/l
SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5
Limit value type : PNEC (Sediment, marine water)
Limit value : 0,0372 mg/kg dw
Limit value type : PNEC (Soil)
Limit value : 0,016 mg/kg dw
POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1
Limit value type : PNEC (Soil)
Limit value : 0,016 mg/kg dw
Limit value type : PNEC (Sewage treatment plant)
Limit value : 100 mg/l
SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5
Limit value type : PNEC (Sewage treatment plant)
Limit value : 100 mg/l
ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2
Limit value type : PNEC (Aquatic, freshwater)
Limit value : 2 mg/l
Limit value type : PNEC (Aquatic, marine water)
Limit value : 0,2 mg/l
Limit value type : PNEC (Sediment, freshwater)
Limit value : 24 mg/kg dw
Limit value type : PNEC Soil, Freshwater
Limit value : 2,5 mg/kg

8.2 Exposure controls

Personal protection equipment

Eye/face protection

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)



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. 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 : translucent

Odour

odourless

Safety characteristics

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

Melting point/freezing point :	(1013 hPa)		not determined	
Initial boiling point and boiling range :	(1013 hPa)	approx.	95 °C	
Flash point :			not relevant	DIN EN ISO 13736
Auto-ignition temperature :			not relevant	
Flammability :			non-flammable	
Lower explosion limit :			not relevant	
Upper explosion limit :			not relevant	
Density :	(20 °C)	approx.	1,09 g/cm ³	
Water solubility :	(20 °C)		Weight-%	
pH :	(20 °C)		13 - 14	
Cinematic viscosity :	(20 °C)	<	30 mm ² /s	
Relative vapour density :	(20 °C)		not determined	
Maximum VOC content (EC) :			0 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

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 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 (ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED >= 2.5 EO/PO ; CAS No. : 68154-97-2)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg
Method :	OECD 423
Parameter :	LD50 (ALANINE N,N-BIS(CARBOXYMETHYL), -TRINATRIUMSALT IN WATER ; CAS No. : 164462-16-2)

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

Exposure route : Oral
Species : Rat
Effective dose : > 4000 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 (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-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Exposure route : Oral
Species : Mouse
Effective dose : 5530 mg/kg
Method : OECD 401

Acute dermal toxicity
Parameter : ATEmix
Exposure route : Dermal
Effective dose : > 2000 mg/kg
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
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 (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Exposure route : Dermal
Species : Rat
Effective dose : > 5000 mg/kg
Parameter : LD50 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Exposure route : Dermal
Species : Rabbit
Effective dose : 2764 mg/kg
Method : OECD 402

Acute inhalation toxicity

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

Parameter : ATEmix
Exposure route : Inhalation (vapour)
Effective dose : > 20 mg/l
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 (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

Corrosion

Skin corrosion/irritation

Parameter : Skin corrosion/irritation (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Species : Rabbit
Result : Causes burns
Method : OECD 404

Causes severe burns.

Serious eye damage/eye irritation

Parameter : Serious eye damage/eye irritation (DISODIUM METASILICATE ; CAS No. : 6834-92-0)
Result : Causes serious eye damage
Parameter : Serious eye damage/eye irritation (ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED >= 2.5 EO/PO ; CAS No. : 68154-97-2)
Species : Rabbit
Result : Causes serious eye irritation Reversible.
Method : OECD 405
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 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Species : Rabbit
Result : Causes serious eye irritation
Method : OECD 405
Parameter : Serious eye damage/eye irritation (SODIUM CUMENESULPHONATE ; CAS No. : 15763-76-5)
Species : Rabbit
Result : Causes serious eye irritation
Method : OECD 405

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

Causes serious eye damage.

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

May be absorbed through the skin. Has degreasing effect on the skin.

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 (ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED >= 2.5 EO/PO ; CAS No. : 68154-97-2)
Species :	Danio rerio (zebrafish)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	> 1 - 10 mg/l
Exposure time :	96 h
Method :	OECD 203
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 (POTASSIUM CUMENESULFONATE ; CAS No. : 164524-02-1)
Species :	Cyprinus carpio (Common Carp)

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

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 (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 (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

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) toxicity to crustacea
Parameter : EC50 (ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED >= 2.5 EO/PO ; CAS No. : 68154-97-2)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) toxicity to crustacea
Effective dose : > 1 - 10 mg/l
Exposure time : 48 h
Method : OECD 202
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 (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 (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 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) toxicity to crustacea

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

Effective dose : > 100 mg/l
Exposure time : 48 h
Method : OECD 202
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 (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

Acute (short-term) toxicity to algae and cyanobacteria

Parameter : ErC50 (ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED >= 2.5 EO/PO ; CAS No. : 68154-97-2)
Species : Selenastrum capricornutum
Evaluation parameter : Acute (short-term) toxicity to algae and cyanobacteria
Effective dose : > 1 - 10 mg/l
Exposure time : 72 h
Method : Regulation (EC) No. 440/2008, Annex C.3

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 (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 (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 : 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 (ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED >= 2.5 EO/PO ; CAS No. : 68154-97-2)
Species : Selenastrum capricornutum

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

Evaluation parameter : Chronic (long-term) toxicity to aquatic algae and cyanobacteria
Effective dose : 1,7 mg/l
Exposure time : 72 h
Method : Regulation (EC) No. 440/2008, Annex C.3

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
Parameter : EC10 (2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5)
Species : Toxicity to microorganisms
Effective dose : > 1995 mg/l
Exposure time : 30 min

12.2 Persistence and degradability

Biodegradation

Parameter : Biodegradation (ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED \geq 2.5 EO/PO ; CAS No. : 68154-97-2)
Inoculum : Biodegradation
Evaluation parameter : Aerobic
Degradation rate : > 60 %
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 : 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
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 %

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

Test duration : 28 D
Evaluation : Readily biodegradable (according to OECD criteria).
Method : OECD 301B
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

According to the recipe, contains no AOX. The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

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

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

P501 - Dispose of contents/container to industrial incineration plant. 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

UN 1760

14.2 UN proper shipping name

Land transport (ADR/RID)

CORROSIVE LIQUID, N.O.S. (DISODIUM TRIOXOSILICATE)

Sea transport (IMDG)

CORROSIVE LIQUID, N.O.S. (DISODIUM TRIOXOSILICATE)

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

Air transport (ICAO-TI / IATA-DGR)
CORROSIVE LIQUID, N.O.S. (DISODIUM TRIOXOSILICATE)

14.3 Transport hazard class(es)

Land transport (ADR/RID)

Class(es) : 8
Classification code : C9
Hazard identification number (Kemler No.) : 80
Tunnel restriction code : E
Special Provisions : LQ 5 I · E 1
Hazard label(s) :



8

Sea transport (IMDG)

Class(es) : 8
EmS-No. : F-A / S-B
Special Provisions : LQ 5 I · E 1
Hazard label(s) :



8

Air transport (ICAO-TI / IATA-DGR)

Class(es) : 8
Special Provisions : E 1
Hazard label(s) :



8

14.4 Packing group

III

14.5 Environmental hazards

Land transport (ADR/RID) : No
Sea transport (IMDG) : No
Air transport (ICAO-TI / IATA-DGR) : No

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

Restrictions of occupation

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

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 - 15 % non-ionic surfactants
- 5 - 15 % anionic surfactants

National regulations

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

01. Product identifier · 11. Acute oral toxicity - Mixtures · 11. Acute dermal toxicity - Mixtures · 11. Acute inhalation toxicity - Mixtures

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 Classification 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].

Safety Data Sheet

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



Trade name : Bio-Circle ALUSTAR 300
Revision date : 22.08.2024
Print date : 05.09.2024

Version (Revision) : 5.2.1 (5.2.0)

Evaluation :
Skin Corr. 1B : Calculation method.
Eye Dam. 1 : Calculation method.

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

H290	May be corrosive to metals.
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.
