

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



Trade name : ALUSTAR 100  
Revision date : 05.07.2019  
Print date : 05.07.2019

Version (Revision) : 6.0.1 (6.0.0)

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

**1.1 Product identifier**

ALUSTAR 100

**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 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

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

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

None

**2.2 Label elements**

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

**Special rules for supplemental label elements for certain mixtures**

EUH210 Safety data sheet available on request.

**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 :  $\geq 1 - < 5 \%$

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

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

Weight fraction :  $\geq 1 - < 3 \%$

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

**Further ingredients**

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

Weight fraction :  $\geq 1 - < 3 \%$

**Additional information**

Full text of H- and EUH-phrases: see section 16.

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## 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

No known symptoms to date.

### 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 (CO<sub>2</sub>) 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 (CO<sub>2</sub>) 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. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Special danger of slipping by leaking/spilling product.

### 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

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Keep container tightly closed.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep/Store only in original container. Protect against Frost

#### Hints on joint storage

Storage class (TRGS 510) : 12

### 7.3 Specific end use(s)

Observe technical data sheet. Observe instructions for use.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limit values

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

Limit value type (country of origin) : TRGS 900 ( D )

Limit value : 10 ppm / 67 mg/m<sup>3</sup>

Peak limitation : 1,5(l)

Remark : Y

Version : 07.06.2018

Limit value type (country of origin) : STEL ( EC )

Limit value : 15 ppm / 101,2 mg/m<sup>3</sup>

Version : 31.01.2018

Limit value type (country of origin) : TWA ( EC )

Limit value : 10 ppm / 67,5 mg/m<sup>3</sup>

Version : 31.01.2018

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

Limit value type (country of origin) : TRGS 900 ( D )

Parameter : E: inhalable fraction

Limit value : 1 mg/m<sup>3</sup>

Peak limitation : 1(l)

Remark : Y

Version : 07.06.2018

#### 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<sup>3</sup>

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<sup>3</sup>

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<sup>3</sup>

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

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## 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

**Physical state** : Liquid

**Colour** : colourless

#### Odour

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characteristic

## Safety relevant basis data

Initial boiling point and boiling range :	( 1013 hPa )	approx.	100	°C
Flash point :			not relevant	
Lower explosion limit :			not relevant	
Upper explosion limit :			not relevant	
Vapour pressure :	( 50 °C )		not relevant	
Density :	( 20 °C )	approx.	1,01	g/cm <sup>3</sup>
Solvent separation test :	( 20 °C )		not relevant	
pH :			9,6	
Flow time :	( 20 °C )		not relevant	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 stable under storage at normal ambient temperatures.

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

No information available.

### 10.5 Incompatible materials

No information available.

### 10.6 Hazardous decomposition products

No information available.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute effects

##### Acute oral toxicity

Parameter :	ATEmix calculated
Exposure route :	Oral
Effective dose :	> 2000 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
Parameter :	LD50 ( ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; CAS No. : 68154-97-2 )
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg

##### Acute dermal toxicity

Parameter :	ATEmix calculated
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Exposure route : Dermal  
Effective dose : > 2000 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

Parameter : ATEmix calculated  
Exposure route : Inhalation  
Effective dose : > 20 mg/l

#### Irritant and corrosive effects

##### Primary irritation to the skin

No further relevant information available.

##### Irritation to eyes

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

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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

#### 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

#### 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

#### 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

## 12.2 Persistence and degradability

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

### Biodegradation

Parameter : Biodegradation ( 2-(2-BUTOXYETHOXY)ETHANOL ; CAS No. : 112-34-5 )  
Inoculum : Biodegradation  
Degradation rate : 90 - 100 %  
Test duration : 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 duration : 8 d  
Evaluation : Readily biodegradable (according to OECD criteria).  
Method : OECD 302B

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Parameter : Biodegradation ( ALCOHOLS, C10-C12, ETHOXYLATED, PROPOXYLATED ; 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

## 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

This substance does not meet the PBT/vPvB criteria of 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



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None

## 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

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. : 55

##### Other regulations (EU)

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

< 5 % non-ionic surfactants

< 5 % phosphates

##### National regulations

AT: Labelling according to Austrian regulations (Chemikaliengesetz/ChemV).

CH: Chemikalienverordnung (ChemV) and Chemikalien-Risikoreduktions-Verordnung (Chem RRV) are complied.

##### Technische Anleitung Luft (TA-Luft)

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

##### Water hazard class (WGK)

Classification according to AwSV - Class : 1 (Slightly hazardous to water)

### 15.2 Chemical safety assessment

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

## SECTION 16: Other information

### 16.1 Indication of changes

03. Hazardous ingredients

### 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)

VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe

WGK: Wassergefährdungsklasse

### 16.3 Key literature references and sources for data

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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)**

H319 Causes serious eye irritation.

**16.6 Training advice**

None

**16.7 Additional information**

None

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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.

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