

Safety Data Sheet

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



Trade name : Bio-Circle STAR US 6
Revision date : 02.10.2025
Print date : 02.10.2025

Version (Revision) : 1.0.3 (1.0.2)

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

1.1 Product identifier

Bio-Circle STAR US 6

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

Relevant identified uses

Sectors of use [SU]

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Industrial uses

Products Category [PC]

PC-CLN-2 - All-purpose (or multi-purpose) non-abrasive cleaners

1.3 Details of the supplier of the safety data sheet

Supplier

Bio-Circle Surface Technology GmbH

Street : Berensweg 200

Postal code/City : 33334 Gütersloh

Telephone : +49 5241 9443 0

Telefax : +49 5241 9443 44

Information contact : 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]

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

ALCOHOLS, ETHOXYLATED, C9-C11 (5.5 EO) ; REACH No. : 01-2119980051-45-XXXX ; EC No. : 614-482-0; CAS No. : 68439-46-3

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

Classification 1272/2008 [CLP] : Acute Tox. 4 ; H302 Eye Irrit. 2 ; H319

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

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

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

Additional information

Safety Data Sheet

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



Trade name : Bio-Circle STAR US 6
Revision date : 02.10.2025
Print date : 02.10.2025

Version (Revision) : 1.0.3 (1.0.2)

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

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

Following inhalation

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

In case of skin contact

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

After eye contact

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

Following ingestion

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

4.2 Most important symptoms and effects, both acute and delayed

No information available.

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)

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. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. 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

Safety Data Sheet

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



Trade name : Bio-Circle STAR US 6
Revision date : 02.10.2025
Print date : 02.10.2025

Version (Revision) : 1.0.3 (1.0.2)

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep container tightly closed.

7.2 Conditions for safe storage, including any incompatibilities

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

Hints on joint storage

Storage class (TRGS 510) : 12

7.3 Specific end use(s)

Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

DNEL-/PNEC-values

DNEL/DMEL

ALCOHOLS, ETHOXYLATED, C9-C11 (5.5 EO) ; CAS No. : 68439-46-3

Limit value type : DNEL worker (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 294 mg/m³

Limit value type : DNEL worker (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 2080 mg/kg

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

Limit value type : DNEL Consumer (local)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 2 mg/m³

Limit value type : DNEL Consumer (local)

Exposure route : Dermal

Exposure frequency : Short-term

Limit value : 400 mg/cm²

Limit value type : DNEL Consumer (local and systemic)

Exposure route : Inhalation

Exposure frequency : Short-term

Limit value : 20 mg/m³

Limit value type : DNEL Consumer (systemic)

Exposure route : Oral

Exposure frequency : Short-term

Limit value : 85 mg/kg bw/day

Limit value type : DNEL Consumer (systemic)

Exposure route : Oral

Exposure frequency : Long-term

Limit value : 17 mg/kg bw/day

Limit value type : DNEL Consumer (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Safety Data Sheet

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



Trade name : Bio-Circle STAR US 6
Revision date : 02.10.2025
Print date : 02.10.2025

Version (Revision) : 1.0.3 (1.0.2)

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

PNEC

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

Limit value type : PNEC (Soil)
Limit value : 2,5 mg/kg dw

8.2 Exposure controls

Personal protection equipment

Eye/face protection



Wear suitable safety goggles in case of splash.

Suitable eye protection
EN 166.

Skin protection

Hand protection



Suitable gloves type : EN 374.

Safety Data Sheet

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



Trade name : Bio-Circle STAR US 6
Revision date : 02.10.2025
Print date : 02.10.2025

Version (Revision) : 1.0.3 (1.0.2)

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.

General information

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

8.3 Additional information

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid

Colour : yellow

Odour

characteristic

Safety characteristics

Solidifying point : (1013 hPa) approx. 0 °C

Initial boiling point and boiling range (1013 hPa) approx. 99 °C

Flash point : not relevant 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 relevant

Density : (20 °C) approx. 1,01 g/cm³

Water solubility : (20 °C) completely miscible

pH : (20 °C) approx. 11

Cinematic viscosity : (20 °C) < 30 mm²/s

Relative vapour density : (20 °C) not determined

Maximum VOC content (EC) : 0 Weight-%

Maximum VOC content (Switzerland) : 0 Weight-%

Taxable VOC content (Switzerland) : 0 Weight-%

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Safety Data Sheet

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



Trade name : Bio-Circle STAR US 6
Revision date : 02.10.2025
Print date : 02.10.2025

Version (Revision) : 1.0.3 (1.0.2)

No known hazardous reactions.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

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

SECTION 11: Toxicological information

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

Acute toxicity

Acute oral toxicity

Parameter : LD50 (ALCOHOLS, ETHOXYLATED, C9-C11 (5.5 EO) ; CAS No. : 68439-46-3)
Exposure route : Oral
Species : Rat
Effective dose : 300 - 2000 mg/kg
Method : OECD 401

Acute dermal toxicity

Parameter : LD50 (ALCOHOLS, ETHOXYLATED, C9-C11 (5.5 EO) ; CAS No. : 68439-46-3)
Exposure route : Dermal
Species : Rat
Effective dose : > 2000 mg/kg
Method : OECD 402

Acute inhalation toxicity

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

Corrosion

Skin corrosion/irritation

No further relevant information available.

Serious eye damage/eye irritation

No further relevant information available.

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.

Trade name : Bio-Circle STAR US 6
Revision date : 02.10.2025
Print date : 02.10.2025

Version (Revision) : 1.0.3 (1.0.2)

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.

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, ETHOXYLATED, C9-C11 (5.5 EO) ; CAS No. : 68439-46-3)
Species : Oncorhynchus mykiss (Rainbow trout)
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : 5 - 7 mg/l
Exposure time : 96 h

Chronic (long-term) fish toxicity

Parameter : NOEC (ALCOHOLS, ETHOXYLATED, C9-C11 (5.5 EO) ; CAS No. : 68439-46-3)
Species : Pimephales promelas (fathead minnow)
Evaluation parameter : Chronic (long-term) fish toxicity
Effective dose : 0,11 - 0,28 mg/l
Exposure time : 30 D

Acute (short-term) toxicity to crustacea

Parameter : EC50 (ALCOHOLS, ETHOXYLATED, C9-C11 (5.5 EO) ; CAS No. : 68439-46-3)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : 2,5 mg/l
Exposure time : 48 h

Chronic (long-term) toxicity to aquatic invertebrate

Parameter : NOEC (ALCOHOLS, ETHOXYLATED, C9-C11 (5.5 EO) ; CAS No. : 68439-46-3)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Chronic (long-term) daphnia toxicity
Effective dose : 0,77 - 1,75 mg/l
Exposure time : 21 D

Acute (short-term) toxicity to algae and cyanobacteria

Parameter : EC50 (ALCOHOLS, ETHOXYLATED, C9-C11 (5.5 EO) ; CAS No. : 68439-46-3)
Species : Pseudokirchneriella subcapitata
Evaluation parameter : Acute (short-term) algae toxicity
Effective dose : 1,4 mg/l
Exposure time : 96 h

Toxicity to microorganisms

Parameter : EC50 (ALCOHOLS, ETHOXYLATED, C9-C11 (5.5 EO) ; CAS No. : 68439-46-3)
Species : Pseudomonas putida
Evaluation parameter : Bacteria toxicity
Effective dose : > 10 g/l
Exposure time : 16,9 h

Safety Data Sheet

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



Trade name : Bio-Circle STAR US 6
Revision date : 02.10.2025
Print date : 02.10.2025

Version (Revision) : 1.0.3 (1.0.2)

Method : DIN 38412 / part 8
Parameter : EC10 (ALCOHOLS, ETHOXYLATED, C9-C11 (5.5 EO) ; CAS No. : 68439-46-3)
Species : Pseudomonas putida
Evaluation parameter : Bacteria toxicity
Effective dose : > 10 g/l
Exposure time : 16,9 h
Method : DIN 38412 / part 8

12.2 Persistence and degradability

According to the recipe, contains no AOX. 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 (ALCOHOLS, ETHOXYLATED, C9-C11 (5.5 EO) ; CAS No. : 68439-46-3)
Inoculum : Biodegradation
Degradation rate : > 60 %
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

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

20 01 30 (Detergents other than those mentioned in 20 01 29)

Other disposal recommendations

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

13.2 Additional information

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

SECTION 14: Transport information

14.1 UN number or ID number

No dangerous good in sense of these transport regulations.

14.2 UN proper shipping name

No dangerous good in sense of these transport regulations.

Safety Data Sheet

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



Trade name : Bio-Circle STAR US 6
Revision date : 02.10.2025
Print date : 02.10.2025

Version (Revision) : 1.0.3 (1.0.2)

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

Other regulations (EU)

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

< 5 % non-ionic surfactants

< 5 % cationic surfactants

National regulations

Water hazard class

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

01. Relevant identified uses · 08. PNEC

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

Safety Data Sheet

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



Trade name : Bio-Circle STAR US 6
Revision date : 02.10.2025
Print date : 02.10.2025

Version (Revision) : 1.0.3 (1.0.2)

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 not hazardous according to regulation (EC) No 1272/2008 [CLP].

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

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H319	Causes serious eye 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.