

# Safety Data Sheet

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



Trade name : AF Clean 50  
Revision date : 16.05.2023  
Print date : 16.05.2023

Version : 1.0.0

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

### 1.1 Product identifier

AF Clean 50

### 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]

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

ETHANOL ; REACH No. : 01-2119457610-43-XXXX ; EC No. : 200-578-6 ; CAS No. : 64-17-5

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

Classification 1272/2008 [CLP] : Flam. Liq. 2 ; H225 Eye Irrit. 2 ; H319

Specific Conc. Limits : Eye Irrit. 2 ; H319: C  $\geq 50$  %

(2,2-dimethyl-1,3-dioxolan-4-yl)methanol ; REACH No. : 01-2120066005-66-XXXX ; EC No. : 202-888-7 ; CAS No. : 100-79-8

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

Classification 1272/2008 [CLP] : Eye Irrit. 2 ; H319 EUH019

#### 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

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## 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

None

## 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

In case of fire may be liberated: Carbon monoxide , Carbon dioxide (CO<sub>2</sub>) , Nitrogen oxides (NO<sub>x</sub>).

### 5.3 Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Co-ordinate fire-fighting measures to the fire surroundings. Move undamaged containers from immediate hazard area if it can be done safely.

### 5.4 Additional information

None

## 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

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## 7.1 Precautions for safe handling

Keep container tightly closed. Avoid: Inhalation of vapours or spray/mists ; Eye contact .

### Protective measures

Open windows to ensure natural ventilation.

## 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) : 10

## 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

ETHANOL ; CAS No. : 64-17-5

Limit value type (country of origin) : TRGS 900 ( D )  
Limit value : 200 ppm / 380 mg/m<sup>3</sup>  
Peak limitation : 4(II)  
Remark : Y  
Version : 23.06.2022

#### DNEL-/PNEC-values

##### DNEL/DMEL

ETHANOL ; CAS No. : 64-17-5

Limit value type : DNEL worker (local)  
Exposure route : Inhalation  
Exposure frequency : Short-term  
Limit value : 1900 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic)  
Exposure route : Inhalation  
Exposure frequency : Long-term  
Limit value : 950 mg/m<sup>3</sup>  
Limit value type : DNEL worker (systemic)  
Exposure route : Dermal  
Exposure frequency : Long-term  
Limit value : 343 mg/kg

##### PNEC

ETHANOL ; CAS No. : 64-17-5

Limit value type : PNEC (Aquatic, freshwater)  
Limit value : 0,96 mg/l  
Limit value type : PNEC (Aquatic, marine water)  
Limit value : 0,79 mg/l  
Limit value type : PNEC (Sediment, freshwater)  
Limit value : 3,6 mg/l  
Limit value type : PNEC (Sediment, marine water)  
Limit value : 2,9 mg/kg  
Limit value type : PNEC (Soil)  
Limit value : 0,63 mg/l  
Limit value type : PNEC (Secondary poisoning)  
Limit value : 0,72 mg/kg  
Limit value type : PNEC (Sewage treatment plant)  
Limit value : 580 mg/l

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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



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 : Liquid

Colour : colourless

#### Odour

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characteristic

## Safety characteristics

Melting point/freezing point :	( 1013 hPa )		not determined	
Initial boiling point and boiling range :	( 1013 hPa )	approx.	95 °C	
Flash point :			54 °C	DIN EN ISO 13736
Auto-ignition temperature :	( ETHANOL )		363 °C	Literature value
Flammability :			flammable	
Lower explosion limit :	( ETHANOL )		3,5 Vol-%	Literature value
Upper explosion limit :	( ETHANOL )		15 Vol-%	Literature value
Vapour pressure :	( 50 °C )		not determined	
Density :	( 20 °C )		0,99 g/cm <sup>3</sup>	
Solvent separation test :	( 20 °C )		not applicable	
Water solubility :	( 20 °C )		completely miscible	
pH :	( 20 °C )		9,9	
Relative vapour density :	( 20 °C )		not determined	
Maximum VOC content (EC) :			10,4 Weight-%	
Maximum VOC content (Switzerland) :			10,8 Weight-%	
Taxable VOC content (Switzerland) :			10,8 Weight-%	

## 9.2 Other information

Not sustaining combustion. UN Test L.2: Sustained combustibility test

## 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

Do not spray on naked flames or any incandescent material.

### 10.4 Conditions to avoid

No information available.

### 10.5 Incompatible materials

No information available.

### 10.6 Hazardous decomposition products

Does not decompose when used for intended uses.  
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 ( ETHANOL ; CAS No. : 64-17-5 )
Exposure route :	Oral
Species :	Rat
Effective dose :	10470 mg/kg
Method :	OECD 401
Parameter :	LD50 ( (2,2-dimethyl-1,3-dioxolan-4-yl)methanol ; CAS No. : 100-79-8 )
Exposure route :	Oral
Species :	Rat
Effective dose :	7000 mg/kg

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## Acute dermal toxicity

Parameter : LD50 ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Dermal  
Species : Rabbit  
Effective dose : 20 g/kg  
Parameter : LD50 ( (2,2-dimethyl-1,3-dioxolan-4-yl)methanol ; CAS No. : 100-79-8 )  
Exposure route : Dermal  
Species : Rat  
Effective dose : > 2000 mg/kg

## Acute inhalation toxicity

Parameter : LC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Exposure route : Inhalation  
Species : Rat  
Effective dose : 116,9 - 133,8 mg/l  
Exposure time : 4 h  
Method : OECD 403

## 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.

## 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. Frequently or prolonged contact with skin may cause dermal irritation. Has degreasing effect on the skin.

### Additional information

Preparation not tested. The statement is derived from the properties of the single components.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity

##### Acute (short-term) fish toxicity

Parameter : LC50 ( ETHANOL ; CAS No. : 64-17-5 )

Species : Pimephales promelas (fathead minnow)

Evaluation parameter : Acute (short-term) fish toxicity

Effective dose : 14,2 g/l

Exposure time : 96 h

Parameter : LC50 ( (2,2-dimethyl-1,3-dioxolan-4-yl)methanol ; CAS No. : 100-79-8 )

Species : Pimephales promelas (fathead minnow)

Evaluation parameter : Acute (short-term) fish toxicity

Effective dose : 16,7 g/l

Exposure time : 96 h

Parameter : EC50 ( (2,2-dimethyl-1,3-dioxolan-4-yl)methanol ; CAS No. : 100-79-8 )

Species : Pimephales promelas (fathead minnow)

Evaluation parameter : Acute (short-term) fish toxicity

Effective dose : 14,4 g/l

Exposure time : 96 h

##### Chronic (long-term) fish toxicity

Parameter : NOEC ( ETHANOL ; CAS No. : 64-17-5 )

Species : Danio rerio (zebrafish)

Evaluation parameter : Chronic (long-term) fish toxicity

Effective dose : 250 mg/l

Exposure time : 120 h

Method : OECD 212

Parameter : NOEC ( (2,2-dimethyl-1,3-dioxolan-4-yl)methanol ; CAS No. : 100-79-8 )

Species : Daphnia magna (Big water flea)

Evaluation parameter : Chronic (long-term) fish toxicity

Effective dose : 10 mg/l

Exposure time : 21 D

Method : OECD 211

Parameter : LOEC ( (2,2-dimethyl-1,3-dioxolan-4-yl)methanol ; CAS No. : 100-79-8 )

Species : Daphnia magna (Big water flea)

Evaluation parameter : Chronic (long-term) fish toxicity

Effective dose : > 10 mg/l

Exposure time : 21 D

Method : OECD 211

##### Acute (short-term) toxicity to crustacea

Parameter : EC50 ( ETHANOL ; CAS No. : 64-17-5 )

Species : Daphnia

Evaluation parameter : Acute (short-term) toxicity to crustacea

Effective dose : 5012 mg/l

Exposure time : 48 h

##### Chronic (long-term) toxicity to aquatic invertebrate

Parameter : NOEC ( ETHANOL ; CAS No. : 64-17-5 )

Species : Daphnia

Evaluation parameter : Chronic (long-term) toxicity to aquatic invertebrate

Effective dose : 9,6 mg/l

Exposure time : 10 D

##### Acute (short-term) toxicity to algae and cyanobacteria

Parameter : EC50 ( ETHANOL ; CAS No. : 64-17-5 )

Species : Chlorella vulgaris

Evaluation parameter : Inhibition of growth rate

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Effective dose : 675 mg/l  
Exposure time : 4 D  
Method : OECD 201  
Parameter : ErC50 ( (2,2-dimethyl-1,3-dioxolan-4-yl)methanol ; CAS No. : 100-79-8 )  
Species : Pseudokirchneriella subcapitata  
Evaluation parameter : Acute (short-term) fish toxicity  
Effective dose : > 92 mg/l  
Exposure time : 72 h  
Method : OECD 201

#### Toxicity to microorganisms

Parameter : EC50 ( ETHANOL ; CAS No. : 64-17-5 )  
Species : Bacteria toxicity  
Effective dose : 5,8 g/l  
Exposure time : 4 h

## 12.2 Persistence and degradability

According to the recipe, contains no AOX.

### Biodegradation

Parameter : Biodegradation ( ETHANOL ; CAS No. : 64-17-5 )  
Inoculum : Biodegradation  
Evaluation parameter : Aerobic  
Degradation rate : approx. 84 %  
Test duration : 20 D  
Evaluation : Readily biodegradable (according to OECD criteria).  
Parameter : DOC reduction ( (2,2-dimethyl-1,3-dioxolan-4-yl)methanol ; CAS No. : 100-79-8 )  
Inoculum : Biodegradation  
Degradation rate : 25 %  
Test duration : 28 D  
Evaluation : Not readily biodegradable (according to OECD criteria)  
Method : OECD 302B

## 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.

## 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. Handle contaminated packages in the same way as the substance itself.



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## 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

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. : 40, 55, 75

##### Restrictions of occupation

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

##### Störfallverordnung (12. BlmschV)

Category : P5b FLAMMABLE LIQUIDS

##### Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

Weight fraction (Number 5.2.4. III) : < 1 %

##### 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

None

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## 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  
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)

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
EUH019	May form explosive peroxides.

## 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.