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

1.1 Product identifier
Power Cleaner 150

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-4 - Descaling products
PC-CLN-11.1 - Bathroom cleaners
Uses advised against
Do not use for medical-clinical purposes.

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 :

Product application:	ae@bio-circle.de
Orders:	www.bio-circle.de service@bio-circle.de
Current safety data sheet:	www.bio-circle.de [DE + EN] service@bio-circle.de
Questions about the contents of the safety data sheet:	ehs@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
Adverse human health effects and symptoms
This product does not contain any substance in concentrations of 0.1% or more that exhibits endocrine-disrupting properties in humans.
Adverse environmental effects
This product does not contain any substance in concentrations of 0.1% or more that exhibits endocrine-disrupting

properties toward non-target organisms.
This product does not contain any substance classified as a PBT or vPvB in concentrations of 0.1% or more.
This product does not contain any substance classified as a PMT or vPvM in concentrations of 0.1% or more.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients

CITRIC ACID ; REACH No. : 01-2119457026-42-XXXX ; EC No. : 201-069-1; CAS No. : 77-92-9

Weight fraction :	≥ 1 - < 5 %
Classification 1272/2008 [CLP] :	Eye Irrit. 2 ; H319 STOT SE 3 ; H335

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

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

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 spray jet ; Foam ; Extinguishing powder ; Carbon dioxide (CO2) ; Sand

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

The product itself does not burn. Co-ordinate fire-fighting measures to the fire surroundings.

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

Keep container tightly closed.

7.2 Conditions for safe storage, including any incompatibilities

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

Requirements for storage rooms and vessels

The floor should be leak tight, jointless and not absorbent.
Suitable container/equipment material: Stainless steel ; Polyethylene (PE)

Hints on joint storage

Storage class (TRGS 510) : 12

Do not store together with
Food and feedingstuffs

Further information on storage conditions

Storage temperature : 2°C - 35°C

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

CITRIC ACID ; CAS No. : 77-92-9

Limit value type (country of origin) :	TRGS 900 (D)
Parameter :	E: inhalable fraction
Limit value :	2 mg/m^3
Peak limitation :	2(I)
Remark :	DFG, Y
Version :	01.05.2018

DNEL-/PNEC-values

PNEC

CITRIC ACID ; CAS No. : 77-92-9

Limit value type :	PNEC (Aquatic, freshwater)
Limit value :	0,44 mg/l
Limit value type :	PNEC (Aquatic, marine water)
Limit value :	0,044 mg/l
Limit value type :	PNEC (Sediment, freshwater)
Limit value :	34,6 mg/kg
Limit value type :	PNEC (Sediment, marine water)

Limit value :	3,46 mg/kg
Limit value type :	PNEC (Soil)
Limit value :	33,1 mg/kg

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. 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. 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

Usually no personal respirative protection necessary.

Suitable respiratory protection apparatus

Combination filtering device

Type : P2

Remark

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (DGUV 112-190).

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

The minimum requirements for safety and health protection when employees use personal protective equipment at work (89/656/EEC) must be observed.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid

Colour : colourless

Odour

characteristic

Safety characteristics

Melting point/freezing point :	(1013 hPa)		-1,7	°C	
Initial boiling point and boiling range :	(1013 hPa)	>	100	°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 determined		
Density :	(20 °C)	approx.	1,05	g/cm³	
Solvent separation test :	(20 °C)		not relevant		
Water solubility :	(20 °C)		completely miscible		
pH :	(20 °C)		2,2		
Cinematic viscosity :	(20 °C)	<	30	mm²/s	
Relative vapour density :	(20 °C)		not determined		
Maximum VOC content (2010/75/EC) :			0	Weight-%	
Maximum VOC content (Switzerland VOCV; SR 814.018) :			0,5	Weight-%	
Taxable VOC content (Switzerland VOCV; SR 814.018 Annex 1) :			0,5	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

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

No further relevant information available.

Acute toxicity

Acute oral toxicity

Parameter :	LD50 (CITRIC ACID ; CAS No. : 77-92-9)
Exposure route :	Oral
Species :	Rat
Effective dose :	> 2000 mg/kg

Corrosion

Skin corrosion/irritation

No further relevant information available.

Serious eye damage/eye irritation

Parameter :	Serious eye damage/eye irritation (CITRIC ACID ; CAS No. : 77-92-9)
Species :	Rabbit
Result :	Causes serious eye irritation
Method :	OECD 405

Result / Evaluation

Based on available data, the classification criteria are not met.

Irritation to respiratory tract

Parameter :	Irritation to respiratory tract (CITRIC ACID ; CAS No. : 77-92-9)
Result :	Irritant

Assessment/classification

Based on available data, the classification criteria are not met.

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 any substance in concentrations of 0.1% or more that exhibits endocrine-disrupting properties in humans.

Toxicokinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

Other adverse effects

Frequently or prolonged contact with skin may cause dermal irritation.

Additional information

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

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Acute (short-term) fish toxicity

Parameter :	LC50 (CITRIC ACID ; CAS No. : 77-92-9)
Species :	Leuciscus idus (golden orfe)
Evaluation parameter :	Acute (short-term) fish toxicity
Effective dose :	440 mg/l
Exposure time :	48 h
Method :	OECD 203

Acute (short-term) toxicity to crustacea

Parameter :	EC50 (CITRIC ACID ; CAS No. : 77-92-9)
Species :	Daphnia magna (Big water flea)
Evaluation parameter :	Acute (short-term) toxicity to crustacea
Effective dose :	1535 mg/l
Exposure time :	24 h

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

Parameter :	NOEC (CITRIC ACID ; CAS No. : 77-92-9)
Species :	Scenedesmus quadricauda
Evaluation parameter :	Chronic (long-term) toxicity to aquatic algae and cyanobacteria
Effective dose :	425 mg/l
Exposure time :	8 D
Method :	OECD 201

Toxicity to microorganisms

Parameter :	EC5 (CITRIC ACID ; CAS No. : 77-92-9)
Species :	Pseudomonas putida
Effective dose :	> 10000 mg/l
Exposure time :	16 h

12.2 Persistence and degradability

Biodegradation

Parameter :	CO2 formation (% of the theoretical value) (CITRIC ACID ; CAS No. : 77-92-9)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	97 %
Test duration :	28 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301B
Parameter :	DOC reduction (CITRIC ACID ; CAS No. : 77-92-9)
Inoculum :	Biodegradation
Evaluation parameter :	Aerobic
Degradation rate :	100 %
Test duration :	19 D
Evaluation :	Readily biodegradable (according to OECD criteria).
Method :	OECD 301E

12.3 Bioaccumulative potential

Parameter :	Partition coefficient n-octanol/water (log value) (CITRIC ACID ; CAS No. : 77-92-9)
Value :	-1,72

No indication of bioaccumulation potential.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

This product does not contain any substance classified as a PBT or vPvB in concentrations of 0.1% or more.

12.6 Endocrine disrupting properties

This product does not contain any substance in concentrations of 0.1% or more that exhibits endocrine-disrupting

properties toward non-target organisms.

12.7 Other adverse effects

No further relevant 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 (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.

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. : 55, 75

Other regulations (EU)

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

< 5 % non-ionic surfactants
< 5 % anionic surfactants

National regulations

Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

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

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. Unique Formula Identifier · 01. Relevant identified uses · 02. Other hazards · 07. Conditions for safe storage, including any incompatibilities · 08. Occupational exposure limit values · 08. PNEC · 09. Safety characteristics

16.2 Abbreviations and acronyms

ADR: Agreement concerning the International Carriage of Dangerous Goods by Road AOX: Adsorbed Organically Bound Halogens
AwSV: German Regulations on Facilities for the Handling of Substances Hazardous to Water
CAS: Chemical Abstracts Service (Department of American Chemical Society)
CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL: Derived No Effect Level
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances
EWC/AVV: European Waste Classification Catalog / Waste List Regulation (german integration) GHS: Globally Harmonized System of Classifiaction and Labelling of Chemicals
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Code for Dangerous Goods
IMO: International Maritime Organization
Index No.: Identification number in Annex VI of the CLP
PBT: persistent, bioaccumulative and toxic according to REACH
PMT: persistent, mobile and toxic according to REACH
PNEC:Predicted No Effect Concentration
REACH: Regulation (EC) No. 1907/2006
RID: Regulations for the International Transport of Dangerous Goods by Rail (Règlement concernant le transport international ferroviaire de marchandises dangereuses)
STEL: (Short-Term Exposure Limit)
TLV: Threshold Limit Value
TRGS: German Technical Rules for Hazardous Substances ("Technische Regel für den Umgang mit Gefahrstoffen")
TWA: Time-Weighted Average
UFI: Unique Formula Identifier
VOC: volatile organic compound
vPvB: very persistent and very bioaccumulative according to REACH
vPvM: very persistent and very mobile according to REACH
WGK: German Water Hazard Class ("Wassergefährdungsklasse")

16.3 Key literature references and sources for data

AwSV: German Regulations on Facilities for the Handling of Substances Hazardous to Water
DGUV: GESTIS-Stoffdatenbank
Directive 2004/42/EC (on the limitation of emissions of volatile organic compounds resulting from the use of organic solvents in certain paints and varnishes and in vehicle refinishing products)
Directive 2010/75/EU (on emissions from industrial and livestock farming activities)
Directive 92/85/EEC (on maternity protection)
Directive 94/33/EC (on the protection of young people at work)
EC_Safety Data Sheet of Suppliers
ECHA: Classification And Labelling Inventory
ECHA: Registered Substances
GDL: Gefahrstoffdatenbank der Länder
Industrial Safety Regulation – BetrSichV
Major Accidents Ordinance – 12th BImSchV
Regulation (EC) No 1223/2009 (on cosmetic products – Annex III)
Regulation (EC) No 2019/1021 (on persistent organic pollutants)
Regulation (EC) No 2019/1148 (on the marketing and use of explosives precursors)

Regulation (EC) No 528/2012 (on the making available on the market and use of biocidal products)
Regulation (EC) No 648/2004 (on detergents)
Regulation (EC) No 649/2012 (on the export and import of dangerous chemicals)
Regulation (EC) No. 1272/2008 of the European Parliament and of the Council Regulation (EC) No. 1907/2006
|-> REGULATION (EU) 2020/878 of 18 June 2020
Technical Instructions on Air Quality Control – TA Luft
UBA Rigoletto: Wassergefährdende Stoffe

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)

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.