

Safety Data Sheet

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



Trade name : GS 200
Revision date : 23.09.2025
Print date : 19.11.2025

Version (Revision) : 6.0.0 (5.0.6)

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

1.1 Product identifier

GS 200

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

Technical Functions (TF)

Cleaning agent

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

2-(2-BUTOXYETHOXY)ETHYL ACETATE ; REACH No. : 01-2119475110-51-XXXX ; EC No. : 204-685-9; CAS No. : 124-17-4

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

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

Additional information

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

SECTION 4: First aid measures

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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 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. Adapt extinguishing measures to suit the environment. 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). Clean contaminated articles and floor according to the environmental legislation. 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.

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

2-(2-BUTOXYETHOXY)ETHYL ACETATE ; CAS No. : 124-17-4

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

Limit value : 10 ppm / 67 mg/m³

Peak limitation : 1,5(l)

Remark : Y, 11

Version : 23.06.2022

DNEL-/PNEC-values

DNEL/DMEL

2-(2-BUTOXYETHOXY)ETHYL ACETATE ; CAS No. : 124-17-4

Limit value type : DNEL Consumer (systemic)

Exposure route : Oral

Exposure frequency : Long-term

Limit value : 7,9 mg/kg

Limit value type : DNEL Consumer (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 60 mg/kg

Limit value type : DNEL Consumer (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 43 mg/m³

Limit value type : DNEL worker (systemic)

Exposure route : Inhalation

Exposure frequency : Long-term

Limit value : 85 mg/m³

Limit value type : DNEL worker (systemic)

Exposure route : Dermal

Exposure frequency : Long-term

Limit value : 100 mg/kg

PNEC

2-(2-BUTOXYETHOXY)ETHYL ACETATE ; CAS No. : 124-17-4

Limit value type : PNEC (Aquatic, freshwater)

Limit value : 0,108 mg/l

Limit value type : PNEC (Aquatic, intermittent release)

Limit value : 0,6 mg/l

Limit value type : PNEC (Aquatic, marine water)

Limit value : 0,0108 mg/l

Limit value type : PNEC (Sediment, freshwater)

Limit value : 0,8 mg/kg dw

Limit value type : PNEC (Sediment, marine water)

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Limit value : 0,08 mg/kg dw
Limit value type : PNEC (Soil)
Limit value : 0,29 mg/kg soil dw
Limit value type : PNEC (Secondary poisoning)
Limit value : 70 mg/kg food
Limit value type : PNEC (Sewage treatment plant)
Limit value : 100 mg/l

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-P2

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

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9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid

Colour : colourless

Odour

ester

Safety characteristics

Melting point/freezing point :	(1013 hPa)	>=	-10 °C	
Initial boiling point and boiling range :	(1013 hPa)	approx.	249 °C	
Flash point :		>=	100 °C	DIN EN ISO 2592
Auto-ignition temperature :	(Lowest value of the ingredients)	>=	190 °C	Literature value
Flammability :			flammable	
Lower explosion limit :	(2-(2-BUTOXYETHOXY)ETHYL ACETATE)		0,6 Vol-%	Literature value
Upper explosion limit :			20,4 Vol-%	
Vapour pressure :	(20 °C)	<	0,1 hPa	Calculated
Density :	(20 °C)	approx.	0,868 g/cm ³	
Solvent separation test :	(20 °C)		not relevant	
Water solubility :	(20 °C)		practically insoluble	
pH :	(20 °C)		not relevant	
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) :			12 Weight-%	
Taxable VOC content (Switzerland) :			12 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 mixture 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

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None

Acute toxicity

Acute oral toxicity

Parameter : ATEmix
Exposure route : Oral
Effective dose : > 2000 mg/kg

Acute dermal toxicity

Parameter : ATEmix
Exposure route : Dermal
Effective dose : > 2000 mg/kg

Acute inhalation toxicity

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

Corrosion

Skin corrosion/irritation

No further relevant information available.

Serious eye damage/eye irritation

Parameter : Serious eye damage/eye irritation (2-(2-BUTOXYETHOXY)ETHYL ACETATE ; CAS No. : 124-17-4)
Result : Causes serious eye irritation

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 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. Frequently or prolonged contact with skin may cause dermal irritation.

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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)ETHYL ACETATE ; CAS No. : 124-17-4)
Species : Danio rerio (zebrafish)
Evaluation parameter : Acute (short-term) fish toxicity
Effective dose : 50 - 70 mg/l
Exposure time : 96 h
Method : OECD 203

Acute (short-term) toxicity to crustacea

Parameter : LC50 (2-(2-BUTOXYETHOXY)ETHYL ACETATE ; CAS No. : 124-17-4)
Species : Daphnia magna (Big water flea)
Evaluation parameter : Acute (short-term) daphnia toxicity
Effective dose : 665 mg/l
Exposure time : 48 h

Acute (short-term) toxicity to algae and cyanobacteria

Parameter : EC50 (2-(2-BUTOXYETHOXY)ETHYL ACETATE ; CAS No. : 124-17-4)
Species : Pseudokirchneriella subcapitata
Evaluation parameter : Inhibition of biomass development
Effective dose : 520 mg/l
Exposure time : 72 h
Method : DIN 38412 / part 9
Parameter : EC0 (2-(2-BUTOXYETHOXY)ETHYL ACETATE ; CAS No. : 124-17-4)
Species : Pseudokirchneriella subcapitata
Evaluation parameter : Inhibition of biomass development
Effective dose : 300 mg/l
Exposure time : 72 h

Toxicity to microorganisms

Parameter : EC0 (2-(2-BUTOXYETHOXY)ETHYL ACETATE ; CAS No. : 124-17-4)
Species : Bacteria toxicity
Effective dose : 1575 mg/l
Exposure time : 30 min

12.2 Persistence and degradability

No information available.

Biodegradation

Parameter : BOD (% of ThOD) (2-(2-BUTOXYETHOXY)ETHYL ACETATE ; CAS No. : 124-17-4)
Inoculum : Biodegradation
Evaluation parameter : Aerobic
Degradation rate : 100 %
Test duration : 28 D
Evaluation : Readily biodegradable (according to OECD criteria).
Method : OECD 301C
Parameter : BOD (% of COD) (2-(2-BUTOXYETHOXY)ETHYL ACETATE ; CAS No. : 124-17-4)
Inoculum : Biodegradation
Evaluation parameter : Aerobic
Degradation rate : 73 %
Test duration : 20 D
Evaluation : Readily biodegradable (according to OECD criteria).
Method : OECD 301D
Parameter : CO2 formation (% of the theoretical value) (2-(2-BUTOXYETHOXY)ETHYL ACETATE ;

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CAS No. : 124-17-4)
Inoculum : Biodegradation
Evaluation parameter : Aerobic
Degradation rate : 102 %
Test duration : 20 D
Evaluation : Readily biodegradable (according to OECD criteria).
Method : OECD 301B

According to the recipe, contains no AOX.

12.3 Bioaccumulative potential

Parameter : Partition coefficient n-octanol/water (log value) (2-(2-BUTOXYETHOXY)ETHYL ACETATE ; CAS No. : 124-17-4)
Value : 1,7
20 °C
Method : OECD 117

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

None known.

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

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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

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 · 02. Label elements · 02. Labelling according to Regulation (EC) No. 1272/2008 [CLP] · 03. Hazardous ingredients · 03. Further ingredients · 09. Information on basic physical and chemical properties · 12. Ecological information

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

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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)

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.
