

SAFETY DATA SHEET

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

Revision date: 13 Feb 2024

Print date: 13 Feb 2024

Version: 13



MERCURIA
BIOFUELS BRUNSBÜTTEL GMBH & CO KG

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Technical Glycerol

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

1.1. Product identifier

Trade name/designation:

Technical Glycerol

Other means of identification:

Glycerol techn. grade

CAS No.:

56-81-5

EC No.:

200-289-5

Additional information:

The substance does not require registration according to REACH.

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

Use of the substance/mixture:

Anti-freeze and de-icing products, Cosmetics, personal care products, Binder, Density modifier, Pharmaceuticals, Laboratory chemicals

Option: Use as an energy source for biogas plants

Relevant identified uses:

Life cycle stage [LCS]

M: Manufacture

F: Formulation or re-packing

IS: Use at industrial sites

PW: Widespread use by professional workers

Sector of uses [SU]

SU 1: Agriculture, forestry, fishery

SU 4: Manufacture of food products

SU 5: Manufacture of textiles, leather, fur

SU 6b: Manufacture of pulp, paper and paper products

SU 7: Printing and reproduction of recorded media

SU 8: Manufacture of bulk, large scale chemicals (including petroleum products)

SU 9: Manufacture of fine chemicals

SU 11: Manufacture of rubber products

SU 19: Building and construction work

SU 23: Electricity, steam, gas water supply and sewage treatment

SU 24: Scientific research and development

Product Categories [PC]

PC 4: Anti-freeze and de-icing products

PC 14: Metal surface treatment products

PC 15: Non-metal surface treatment products

PC 21: Laboratory chemicals

PC 23: Leather treatment products

PC 24: Lubricants, greases, release products

PC 25: Metal working fluids

PC 26: Paper and board treatment products

PC 29: Pharmaceuticals

PC 31: Polishes and wax blends

PC 34: Textile dyes and impregnating products

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Process categories [PROC]

- PROC 1:** Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
- PROC 2:** Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
- PROC 3:** Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
- PROC 4:** Chemical production where opportunity for exposure arises
- PROC 5:** Mixing or blending in batch processes
- PROC 8a:** Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
- PROC 8b:** Transfer of substance or mixture (charging and discharging) at dedicated facilities
- PROC 9:** Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
- PROC 14:** Tableting, compression, extrusion, pelletisation, granulation
- PROC 15:** Use as laboratory reagent

Environmental release categories [ERC]

- ERC 1:** Manufacture of the substance
- ERC 2:** Formulation into mixture (mixtures)
- ERC 4:** Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
- ERC 6a:** Use of intermediate
- ERC 7:** Use of functional fluid at industrial site
- ERC 8a:** Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Mercuria Biofuels Brunsbüttel GmbH & Co. KG

Fährstr. 51
25541 Brunsbüttel
Germany

Telephone: +49 4852 836 8035

Telefax: +49 4852 836 8003

E-mail: fwerner@mercuria.com

E-mail (competent person): fwerner@mercuria.com

1.4. Emergency telephone number

GIZ Nord, 24h: +49 (5 51) 1 92 40

Company: Laboratory Manager, +49 4852 836 8035 (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

2.2. Label elements

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

According to EC directives or the corresponding national regulations the product does not have to be labelled.

Hazard components for labelling:

Glycerol

Hazard statements: none

Supplemental hazard information: none

Precautionary statements Response

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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2.3. Other hazards

No data available

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SECTION 3: Composition/information on ingredients

3.1. Substances

Description:

Glycerol from transesterification of bio-oils, neutralized and desalinated

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 56-81-5 EC No.: 200-289-5	glycerol The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP]. Additional information: (GHS) P-Sätze: P305 + P351 + P338	≥ 60 - ≤ 90 %
CAS No.: 7732-18-5 EC No.: 231-791-2	water The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	≥ 10 - ≤ 30 %
CAS No.: 7778-80-5 EC No.: 231-915-5 REACH No.: 01-2119489441-34-XXXX	potassium sulfate The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	≤ 10 %
	MONG (material organic non glycerol) The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	≤ 10 %
CAS No.: 67-56-1 EC No.: 200-659-6 Index No.: 603-001-00-X REACH No.: 01-2119433307-44-XXXX	methanol Acute Tox. 3 (H331, H311, H301), Flam. Liq. 2 (H225), STOT SE 1 (H370**)    Danger Specific concentration limit (SCL) STOT SE 1; H370: C ≥ 10% STOT SE 2; H371: 3% ≤ C < 10%	≤ 0.2 %

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

Get medical advice/attention.

Following inhalation:

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

If breathing is irregular or stopped, administer artificial respiration.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap.

IF ON CLOTHING: Immediately remove any contaminated clothing, shoes or stockings.

After eye contact:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion:

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Never give anything by mouth to an unconscious person or a person with cramps.

4.2. Most important symptoms and effects, both acute and delayed

The following symptoms may occur: Nausea Headache Vomiting

4.3. Indication of any immediate medical attention and special treatment needed

No data available

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water mist
alcohol resistant foam
Dry extinguishing powder
Carbon dioxide (CO₂)

5.2. Special hazards arising from the substance or mixture

Carbon monoxide
Carbon dioxide (CO₂)
Acrolein

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Wear protective gloves/protective clothing.
Do not breathe vapour.
Provide adequate ventilation.

Protective equipment:

Refer to section 5.3

Emergency procedures:

-

6.1.2. For emergency responders

Personal protection equipment:

Refer to section 5.3

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

For containment:

Provide for retaining containers, e.g. floor pan without outflow.

For cleaning up:

Soak up inert absorbent and dispose as waste requiring special attention.
Collect in closed and suitable containers for disposal.

6.4. Reference to other sections

No data available

6.5. Additional information

If appropriate sections 8 and 13 shall be referred to.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Avoid contact with eyes and skin. Do not breathe gas/vapour. Usual measures for fire prevention.
Keep away from heat.

Fire prevent measures:

Keep away from sources of ignition - No smoking.

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7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Store in a cool dry place.

Requirements for storage rooms and vessels:

Ensure adequate ventilation of the storage area.

Keep container tightly closed.

Hints on storage assembly:

Do not store together with: Oxidising substances

Storage class (TRGS 510, Germany): 10 - Combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions:

Information on basic physical and chemical properties: hygroscopic

7.3. Specific end use(s)

Recommendation:

No special technical protective measures are necessary.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
TRGS 900 (DE) from 7 Jun 2017	glycerol CAS No.: 56-81-5 EC No.: 200-289-5	① 200 mg/m ³ ② 400 mg/m ³ ⑤ (einatembare Fraktion) DFG, Y
IOELV (EU)	methanol CAS No.: 67-56-1 EC No.: 200-659-6	① 200 ppm (260 mg/m ³) ⑤ (may be absorbed through the skin)
TRGS 900 (DE) from 13 Mar 2020	methanol CAS No.: 67-56-1 EC No.: 200-659-6	① 100 ppm (130 mg/m ³) ② 200 ppm (260 mg/m ³) ⑤ (kann über die Haut aufgenommen werden) DFG, EU, H, Y

8.1.2. Biological limit values

Limit value type (country of origin)	Substance name	Limit value	① Parameter ② Test material ③ Time of sampling: ④ Remark
TRGS 903 (DE) from 13 Mar 2020	methanol CAS No.: 67-56-1 EC No.: 200-659-6	15 mg/L	① Methanol ② Urin ③ bei Langzeitexposition, Expositionsende bzw. Schichtende

8.1.3. DNEL-/PNEC-values

No data available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Wash hands before breaks and after work.

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8.2.2. Personal protection equipment



Eye/face protection:

Wear eye/face protection.

Skin protection:

Wash hands and face before breaks and after work and take a shower if necessary.

Hand protection: Check leak tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Suitable material:

NR (natural rubber, Natural latex) 0.5 mm

CR (polychloroprene, chloroprene rubber) 0.5 mm

NBR (Nitrile rubber) 0.35 mm

Butyl caoutchouc (butyl rubber) 0.5 mm

FKM (fluoro rubber) 0.4 mm

PVC (polyvinyl chloride) 0.5 mm

Thickness of the glove material: Breakthrough times and swelling properties of the material must be taken into consideration.

Reference: ≥ 8 h (EN 374)

Respiratory protection:

generation/formation of aerosols: If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Combination filtering device, A - (P2)

Other protection measures:

Protective clothing: Check leak tightness/impermeability prior to use.

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid:

Colour: brown

Odour: characteristic-sweetish

Odour threshold: Different assessments
(depending on MONG content)

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	$\geq 5 - \leq 7$	20 °C	
Melting point	≈ -10 °C		
Freezing point	<i>not applicable</i>		
Initial boiling point and boiling range	100 - 300 °C		
Decomposition temperature	> 130 °C		
Flash point	$\geq 160 - \leq 210$ °C		
Evaporation rate	<i>No data available</i>		
Auto-ignition temperature	≥ 400 °C		
Upper/lower flammability or explosive limits	$> 2.6 - < 11.3$ Vol-%		
Vapour pressure	< 8 hPa	20 °C	
Vapour density	<i>not applicable</i>		
Density	$\approx 1.28 - 1.32$ g/cm ³	40 °C	
Bulk density	<i>not applicable</i>		

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Parameter	Value	at °C	① Method ② Remark
Water solubility			② completely miscible
Partition coefficient: n-octanol/water	≈ -1.76	20 °C	① calc. ② log Pow
Dynamic viscosity	≈ 1,000 mPa* s	20 °C	
Kinematic viscosity	No data available		

9.2. Other information

Flammability: Not readily flammable, > Flam. Liq. 4

Oxidising properties: Not oxidising.

Vapours can form explosive mixtures with air.

SECTION 10: Stability and reactivity

10.1. Reactivity

Possibility of hazardous reactions:

Oxidising agent

Strong acid

Alkali (lye), concentrated

The compound forms an explosive mixture when heated with air.

10.2. Chemical stability

Substance is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3. Possibility of hazardous reactions

Refer to section 10.1

10.4. Conditions to avoid

Undue heating (> Flash point -15 K)

10.5. Incompatible materials

-

10.6. Hazardous decomposition products

Carbon monoxide

Acrolein

SECTION 11: Toxicological information

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

glycerol CAS No.: 56-81-5 EC No.: 200-289-5
LD₅₀ oral: 12,600 mg/kg (Rat) OECD
LD₅₀ dermal: 10,000 mg/kg (Rabbit) OECD
methanol CAS No.: 67-56-1 EC No.: 200-659-6
LD₅₀ oral: 5,628 mg/kg (Rat) OECD
LD₅₀ dermal: 17,100 mL/kg (Rabbit) OECD
LC₅₀ Acute inhalation toxicity (gas): 85.26 mg/L 4 h (Rat) OECD

Skin corrosion/irritation:

Species: Rabbit

Evaluation: slightly irritant (24 h)

Serious eye damage/irritation:

Species: Rabbit

Evaluation: slightly irritant (24 h)

Respiratory or skin sensitisation:

No information available.

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Carcinogenicity:

No CMR properties are expected.

Additional information:

Specific symptoms in animal studies: No information available.

Repeated dose toxicity (subacute, subchronic, chronic): No information available.

Observations relevant to classification: No information available.

Other observations: The following symptoms may occur: Nausea Headache Vomiting

* 11.2. Information on other hazards

Endocrine disrupting properties:

This substance does not have endocrine disrupting properties with respect to humans.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity:

LC₅₀ - Carassius auratus: > 5000 mg/l

LC₅₀ - Pimephales promelas: 44000 mg/l

LC₅₀ - Oncorhynchus mykiss: 67500 mg/l (96h)

EC5 - Entosiphon sulcatum: 3200 mg/l/72h

EC5 - Pseudomonas putida: > 10000 mg/l/16h

EC₅₀ - Daphnia magna (water flea): > 10000 mg/l/24h

IC5 - Scenedesmus quadricauda: > 10000 mg/l/7 d

Terrestrial toxicity:

No information available.

Effects in sewage plants:

No experimental data available but good biodegradability expected based on conclusion by analogy.

12.2. Persistence and degradability

Biodegradation:

Readily biodegradable: 60 % / 14 d (OECD 301C)

Additional information:

Further ecological information: No information available.

12.3. Bioaccumulative potential

Partition coefficient: n-octanol/water:

≈ -1.76 at °C: 20; Method: calc.; Remark: log Pow

Accumulation / Evaluation:

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

glycerol CAS No.: 56-81-5 EC No.: 200-289-5
Results of PBT and vPvB assessment: —
potassium sulfate CAS No.: 7778-80-5 EC No.: 231-915-5
Results of PBT and vPvB assessment: —
water CAS No.: 7732-18-5 EC No.: 231-791-2
Results of PBT and vPvB assessment: —
methanol CAS No.: 67-56-1 EC No.: 200-659-6
Results of PBT and vPvB assessment: —

No experimental data available but good biodegradability expected based on conclusion by analogy.

* 12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to humans.

12.7. Other adverse effects

Chemical oxygen demand (COD): 1100 mg/g (ca.)

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Biochemical oxygen demand: 1000 mg/g (ca.)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

14 06 03 *	other solvents and solvent mixtures
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*: Evidence for disposal must be provided.

Waste treatment options

Appropriate disposal / Product:

Incineration is recommended.

Appropriate disposal / Package:

Handle contaminated packages in the same way as the substance itself. Wash with plenty of water.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.2. UN proper shipping name			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.3. Transport hazard class(es)			
not relevant	not relevant	not relevant	not relevant
14.4. Packing group			
not relevant	not relevant	not relevant	not relevant
14.5. Environmental hazards			
not relevant	not relevant	not relevant	not relevant
14.6. Special precautions for user			
not relevant	not relevant	not relevant	not relevant

14.7. Maritime transport in bulk according to IMO instruments

IBC Code/2014: Pollution Category Z

SECTION 15: Regulatory information

* 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation

Authorisations:

Application-specific industry requirements

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds:

Volatile organic compounds (VOC) content in percent by weight: 0.2 weight-%

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

No

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Water hazard class

WGK:

1 - slightly hazardous to water

Source:

AwSV, Nr. 116 (Rigoletto)

Remark:

(self-assessment)

Other regulations, restrictions and prohibition regulations

No

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

11.2.	Information on other hazards
12.6.	Endocrine disrupting properties
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture

16.2. Abbreviations and acronyms

Abbreviations:

CSA: Chemical Safety Assessment

PBT: Substance with persistent, bioaccumulative and toxic properties.

vPvB: Substance with very persistent and very bioaccumulative properties.

MFSU: Manufacture, formulation, supply and use

Rigoletto: Database of the German Federal Environmental Agency, which contains the classification of substances according to their water hazard class (<https://web.rigoletto.uba.de/Rigoletto/Home/Search>).

MONG (material organic non glycerol): MONG is the collective name for organic constituents separable in a distillation of crude glycerol, which are not glycerol. It consists of free fatty acids, triglycerides, polymeric glycerol and other organic residues.

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

Hazard statements	
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H370	Causes damage to organs.
H371	May cause damage to organs.

16.6. Training advice

No data available

16.7. Additional information

This SDS is not required by Article 31 of Regulation 1907/2006/EU as the substance is not classified as hazardous, however, to comply with Article 32 of REACH and provide customers with relevant information the format of the SDS (according to Regulation 2015/830/EU) has been used.

Given data sheets are based on our present experiences, however they are no assurance of product properties and do not justify a contractual legal relationship.

The safety data sheet is designed in accordance with the requirements of Regulation (EU) 2020/878.

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* Data changed compared with the previous version.