

SAFETY DATA SHEET

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

Revision date: 22-Jan-2018

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Technical Glycerol (80%)

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

1.1. Product identifier

Trade name/designation:

Technical Glycerol (80%)

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:

Purification to glycerol techn. grade or pharma grade, production of biogas

Relevant identified uses:

Sector of uses [SU]

- SU 3:** Industrial uses: Uses of substances as such or in preparations at industrial sites
- SU 5:** Manufacture of textiles, leather, fur
- SU 6b:** Manufacture of pulp, paper and paper products
- SU 8:** Manufacture of bulk, large scale chemicals (including petroleum products)
- SU 9:** Manufacture of fine chemicals
- SU 10:** Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
- SU 11:** Manufacture of rubber products
- SU 19:** Building and construction work
- 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 19:** Intermediate (precursor)
- 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, finishing and impregnating products; including bleaches and other processing aids

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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)

Uses advised against:

Sector of uses [SU]

- SU 1:** Agriculture, forestry, fishery
- SU 4:** Manufacture of food products

1.3. Details of the supplier of the safety data sheet

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

German Biofuels GmbH

Am Hünengrab 9
16928 Pritzwalk/Germany

Telephone: +49 33986 5050

Telefax: +49 33986 50599

E-mail: qm@gbf-gmbh.de

1.4. Emergency telephone number

Produktion/Production, 24h: +49 172 56 82 831, +49 33986 50582 (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].

Additional information:

Additional information: The toxicologic properties of methanol are not relevant due to the low residual concentration. The overall properties are dominated by the main constituent glycerol.

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.

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

SECTION 3: Composition / information on ingredients

3.1. Substances


Description:

The substance contains also water and inorganic salts; ash content max. 10%.

Additional information:

The toxicologic properties of methanol are not relevant due to the low residual concentration. The overall properties are dominated by the main constituent glycerol.

Ingredients / 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	≥ 80 - < 85 %
CAS No.: 7732-18-5 EC No.: 231-791-2	water	> 8 - < 15 %
	MONG (material organic non glycerol) Additional information: 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.	> 2 - < 4 %
	sodium salts	> 0 - < 2 %
CAS No.: 67-56-1 EC No.: 200-659-6	methanol Flam. Liq. 2, Acute Tox. 3, STOT SE 1  Danger H225-H301-H311-H331-H370	> 0.001 - < 0.01 %

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

Seek medical advice.

Following inhalation:

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide 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:

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After 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.

5.4. Additional information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Wear personal protection equipment.
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

Do not empty into drains.

6.3. Methods and material for containment and cleaning up

For cleaning up:

Soak up inert absorbent and dispose as waste requiring special attention.
Collect in closed 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.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Below normal ambient temperatures material can start to solidify.

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Packaging materials:

Steel, Polyethylene, Polyolefine

Requirements for storage rooms and vessels:

Suitable container/equipment material: Steel, Polyethylene, Polyolefine

Store in a cool dry place.

Hints on storage assembly:

hygroscopic

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

Recommendation:

No information available.

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)	glycerol CAS No.: 56-81-5	① 200 mg/m ³ ② 400 mg/m ³ ⑤ (einatembare Fraktion)
IOELV (EU)	methanol CAS No.: 67-56-1	① 200 ppm (260 mg/m ³) ⑤ (May be absorbed through the skin.)
TRGS 900 (DE)	methanol CAS No.: 67-56-1	① 200 ppm (270 mg/m ³) ② 800 ppm (1,080 mg/m ³) ⑤ (Kann über die Haut aufgenommen werden.)

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)	methanol CAS No.: 67-56-1	30 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.

8.2.2. Personal protection equipment

Eye/face protection:

Tightly sealed safety glasses.

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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: PVC (Polyvinyl chloride)

NBR (Nitrile rubber)

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

Respiratory protection:

Combination filtering device (DIN EN 141).

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Other protection measures:

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

8.2.3. Environmental exposure controls

No data available

8.3. Additional information

No relevant control limits.

No recommended monitoring procedures.

No applicable occupational exposure limit values and/or biological limit values.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid:

Colour: red brown

Odour: sweetish, penetrative

Safety relevant basis data

parameter		at °C	Method	Remark
pH	> 4 - ≤ 6	20 °C		
Melting point	-5 - 5 °C			
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	280 - 300 °C			(Data apply to the main component.)
Decomposition temperature (°C):	<i>not determined</i>			
Flash point	160 - 210 °C			
Evaporation rate	<i>not determined</i>			
Ignition temperature in °C	<i>not determined</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	0.003 - 0.004 hPa	50 °C		(Data apply to the main component.)
Vapour density	<i>not determined</i>			
Relative density	1.22 - 1.27 g/cm ³	20 °C	EN ISO 12185	
Bulk density	<i>not determined</i>			
Water solubility (g/L)				completely miscible
Partition coefficient: n-octanol/water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>			

9.2. Other information

Danger of explosion: Vapours can form explosive mixtures with air.

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SECTION 10: Stability and reactivity

10.1. Reactivity

Possibility of hazardous reactions :

Oxidising agent

Strong acid

strong alkalis

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

10.5. Incompatible materials

-

10.6. Hazardous decomposition products

Carbon monoxide

Acrolein

SECTION 11: Toxicological information

11.1. Information on toxicological effects

CAS No.	Substance name	Toxicological information
56-81-5	glycerol	LD₅₀ oral: 12,600 mg/kg (Rat) OECD LD₅₀ dermal: 10,000 mg/kg (Rabbit) OECD
67-56-1	methanol	LD₅₀ oral: 5,628 mg/kg (Ratte) OECD LD₅₀ dermal: 17,100 ml/kg (Kaninchen) OECD LC₅₀ inhalative: 85.26 mg/l 4 h (Ratte) OECD

Skin corrosion/irritation:

Irritant effect on the skin: Species: Rabbit
evaluation mild irritant. (24 h)

Irritant effect on the eye: Species: Rabbit
evaluation mild irritant. (24 h)

Respiratory or skin sensitisation:

No information available.

Carcinogenicity:

This substance does not meet the criteria for classification as CMR category 1 or 2.

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

Other information: The toxicologic properties of methanol are not relevant due to the low residual concentration. The overall properties are dominated by the main constituent glycerol.

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)

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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

Additional information:

Further ecological information: No information available.

12.3. Bioaccumulative potential

Accumulation / Evaluation:

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

CAS No.	Substance name	Results of PBT and vPvB assessment
56-81-5	glycerol	—
67-56-1	methanol	—
7732-18-5	water	—

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

12.6. Other adverse effects

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

Biochemical oxygen demand (BOD): 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:

07 06 99	Wastes not otherwise specified
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Remark:

Crude glycerol.

Die Entsorgung ist NICHT nachweispflichtig.

Waste treatment options

Appropriate disposal / Package:

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

13.2. Additional information

No data available

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.

not relevant

14.2. UN proper shipping name

not relevant

14.3. Transport hazard class(es)

not relevant

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14.4. Packing group

not relevant

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

not relevant

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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

No data available

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

No

Störfallverordnung

Remark:

-

Water hazard class (WGK)

WGK:

1 - schwach wassergefährdend

Source:

AwVS Nr. 116 (Rigoletto)

Remark:

Self-classification (mixture; calculation rule).

15.2. Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

15.3. Additional information

No data available

SECTION 16: Other information

16.1. Indication of changes

No data available

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://webrigoletto.uba.de>)

16.3. Key literature references and sources for data

No data available

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

Classification 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. Relevant R-, H- and EUH-phrases (Number and full text)

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. (...)

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 453/2010/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.