

SAFETY DATA SHEET

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

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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 %)

Article No:

3280

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:

Exclusively technical use, production of biogas

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

C: Consumer use

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
Germany

Telephone: +49 33986 5050

Telefax: +49 33986 50599

E-mail: info@gbfgmbh.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. 5 %.

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.

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].	≥ 80 - < 85 %
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].	> 8 - < 15 %
	MONG (material organic non glycerol) The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP]. 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 The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	> 0 - < 1.24 %
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%	> 0.01 - < 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

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

No data available

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:

Use of 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

Do not empty into drains.

6.3. Methods and material for containment and cleaning up

For cleaning up:

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
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.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Below normal ambient temperatures, the material may solidify.

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Packaging materials:

Steel, Polyethylene, Polyolefins

Requirements for storage rooms and vessels:

Suitable container/equipment material: Steel, Polyethylene, Polyolefins

Store in a cool dry place.

Hints on storage assembly:

hygroscopic

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

Further information on storage conditions:

Maximum storage period (time): 12 month(s)

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) 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.

8.2.2. Personal protection equipment

Eye/face protection:

Wear eye/face protection.

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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:

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

Filtering device (EN 147)

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: yellowish - red brown

Odour: sweetish, penetrative

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	> 4 - ≤ 6	20 °C	
Melting point	-5 - 5 °C		
Freezing point	No data available		
Initial boiling point and boiling range	280 - 300 °C		② (Data apply to the main component.)
Flash point	160 - 210 °C		
Evaporation rate	No data available		
Auto-ignition temperature	No data available		
Upper/lower flammability or explosive limits	No data available		
Vapour pressure	0.003 - 0.004 hPa	50 °C	② (Data apply to the main component.)
Vapour density	No data available		
Density	1.22 - 1.27 g/cm ³	20 °C	① EN ISO 12185
Bulk density	not applicable		
Water solubility			② completely miscible
Dynamic viscosity	No data available		
Kinematic viscosity	No data available		

9.2. Other information

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

SECTION 10: Stability and reactivity

10.1. Reactivity

Possibility of hazardous reactions :

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Oxidising agent
Strong acid
Alkali (lye), concentrated

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 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 (24 h)
Evaluation: slightly irritant but not relevant for classification.

Serious eye damage/irritation:

Species: Rabbit (24 h)
Evaluation slightly irritant but not relevant for classification.

Respiratory or skin sensitisation:

No information available.

Carcinogenicity:

This substance is considered not to be CMR relevant.

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.

* 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

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

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

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

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

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

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

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

07 06 99	Wastes not otherwise specified
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Remark:

(Abfälle aus HZVA von Fetten, Schmierstoffen, Seifen, Waschmitteln, Desinfektionsmitteln und Körperpflegemitteln)

Crude glycerine.

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.

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.

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Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
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

Other regulations (EU):

This product is not assigned to a hazard category.

Named dangerous substances:

- Methanol

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

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

Störfallverordnung (12. BImSchV)

for substances contained in the product:

This product is not assigned to a hazard category.

Named dangerous substances:

- Methanol

Remark:

-

Water hazard class

WGK:

1 - slightly hazardous to water

Source:

AwSV 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.

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SECTION 16: Other information

* 16.1. Indication of changes

1.3.	Details of the supplier of the safety data sheet
8.1.	Control parameters
9.1.	Information on basic physical and chemical properties
11.2.	Information on other hazards
13.1.	Waste treatment methods
16.1.	Indication of changes

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/Rigoletto/Home/Search>).

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.

* Data changed compared with the previous version.