

GLYKOSOL N 27 - 31%

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 11/7/2022 Revision date: 11/7/2022 Version: 1.0
SDS No: 11386-0003_27-31



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

1.1. Product identifier

Product form : Mixture
Product name : GLYKOSOL N 27 - 31%
UFI : KRH2-VQ7X-SX0U-UDGY
Other means of identification : Valid for the following products:
1. GLYKOSOL N 27%
2. GLYKOSOL N 28%
3. GLYKOSOL N 29%
4. GLYKOSOL N 30%
5. GLYKOSOL N 31%

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Various

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

pro Kühlsole GmbH
Am Langen Graben, 37
52353 Düren
Germany
T +49 2421 59196-0 - F +49 2421 59196-10
E-mail address of competent person responsible for the SDS: sds@gbk-ingelheim.de

1.4. Emergency telephone number

Emergency number : INTERNATIONAL: +49 (0) 6132 / 84463 (GBK GmbH, Ingelheim)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4 H302
Specific target organ toxicity – Repeated exposure, Category 2 H373
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed). Harmful if swallowed.

2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) : Warning
Contains : ethylene glycol
Hazard statements (CLP) : H302 - Harmful if swallowed.
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).

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Precautionary statements (CLP) : P260 - Do not breathe spray, mist.
P270 - Do not eat, drink or smoke when using this product.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P330 - Rinse mouth.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--|--|------------------|---|
| ethylene glycol Substance with a Community workplace exposure limit | CAS-No.: 107-21-1 EC-No.: 203-473-3 EC Index-No.: 603-027-00-1 REACH-no: 01-2119456816-28 | $\geq 25 - < 30$ | Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) STOT RE 2, H373 |

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after ingestion : Harmful if swallowed.
Chronic symptoms : May cause damage to organs through prolonged or repeated exposure.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

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Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Product does not burn, fire-extinguishing activities according to surrounding.
Explosion hazard : Product is not explosive.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with eyes, skin or mucous membrane. Evacuate the danger area. Evacuate personnel to a safe area.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Do not breathe spray, vapours, mist.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Avoid contact with eyes, skin or mucous membrane.
Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Do not breathe spray, vapours, mist.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Information on mixed storage : Keep away from food, drink and animal feeding stuffs.
Storage area : Keep out of frost.

7.3. Specific end use(s)

See Section 1.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

| ethylene glycol (107-21-1) | |
|--|--|
| EU - Indicative Occupational Exposure Limit (IOEL) | |
| Local name | Ethylene glycol |
| IOEL TWA | 52 mg/m ³ |
| IOEL TWA [ppm] | 20 ppm |
| IOEL STEL | 104 mg/m ³ 104 mg/m ³ |
| IOEL STEL [ppm] | 40 ppm 40 ppm |
| Remark | Skin Skin |
| Regulatory reference | COMMISSION DIRECTIVE 2000/39/EC COMMISSION DIRECTIVE 2000/39/EC |

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Protective goggles (EN 166). Eyewash bottle with clean water (EN 15154)

8.2.2.2. Skin protection

Skin and body protection:

Long sleeved protective clothing (DIN EN ISO 6530)

Hand protection:

Chemically resistant protective gloves

| Hand protection | | | | | |
|--|----------------------|-------------------|----------------|-------------|------------|
| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
| Chemically resistant protective gloves | Nitrile rubber (NBR) | 6 (> 480 minutes) | 0,35 | | EN ISO 374 |

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| Hand protection | | | | | |
|--|--------------|-------------------|----------------|-------------|------------|
| Type | Material | Permeation | Thickness (mm) | Penetration | Standard |
| Chemically resistant protective gloves | Butyl rubber | 6 (> 480 minutes) | 0,5 | | EN ISO 374 |

8.2.2.3. Respiratory protection

Respiratory protection:

Breathing apparatus in the event of aerosol or mist formation

| Respiratory protection | | | |
|------------------------|-------------|--------------------------|------------------|
| Device | Filter type | Condition | Standard |
| Aerosol mask | A2-P2 | Aerosols, Mist formation | EN 14387, EN 143 |

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | : Liquid |
| Colour | : Yellow. Clear. |
| Odour | : odourless. |
| Odour threshold | : Not available |
| Melting point | : Not available |
| Freezing point | : Not available |
| Boiling point | : > 100 °C |
| Flammability (solid, gas) | : Not applicable |
| Explosive properties | : Product is not explosive. |
| Oxidising properties | : Non oxidizing. |
| Explosive limits | : Not available |
| Lower explosive limit (LEL) | : Not available |
| Upper explosive limit (UEL) | : Not available |
| Flash point | : Not available |
| Auto-ignition temperature | : Not available |
| Decomposition temperature | : Not available |
| pH | : 8 – 9 (20 °C) |
| Viscosity, kinematic | : Not available |
| Solubility | : Water: completely miscible |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : ≈ 23 hPa (20 °C) |
| Vapour pressure at 50°C | : Not available |
| Density | : 1.039 – 1.045 g/cm ³ (20 °C) |
| Relative density | : Not available |
| Relative vapour density at 20°C | : Not available |
| Particle characteristics | : Not applicable |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

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9.2.2. Other safety characteristics

VOC content : 26 – 30 % (266,5 - 307,8 g/l)
Additional information : Solvent content 26 - 30 %

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong oxidizing agent.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

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|----------------------------|---------------------------|
| ATE CLP (oral) | 1697.793 mg/kg bodyweight |
| ethylene glycol (107-21-1) | |
| LD50 oral | 6140 mg/kg |
| LD50 dermal | 9530 mg/kg |
| ATE CLP (oral) | 500 mg/kg bodyweight |

Skin corrosion/irritation : Not classified
pH: 8 – 9 (20 °C)
Serious eye damage/irritation : Not classified
pH: 8 – 9 (20 °C)
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : May cause damage to organs (kidneys) through prolonged or repeated exposure (if swallowed).

| ethylene glycol (107-21-1) | |
|----------------------------|--|
| STOT-repeated exposure | May cause damage to organs (kidneys) through prolonged or repeated exposure (Ingestion). |

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Aspiration hazard : Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

European List of Waste (LoW) code : 16 05 08* - discarded organic chemicals consisting of or containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

| ADR | IMDG | IATA | ADN | RID |
|---|---------------|---------------|---------------|---------------|
| 14.1. UN number or ID number | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.2. UN proper shipping name | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.3. Transport hazard class(es) | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |

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| ADR | IMDG | IATA | ADN | RID |
|--|---------------|---------------|---------------|---------------|
| 14.4. Packing group | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| 14.5. Environmental hazards | | | | |
| Not regulated | Not regulated | Not regulated | Not regulated | Not regulated |
| No supplementary information available | | | | |

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

VOC Directive (2004/42)

VOC content : 26 – 30 % (266,5 - 307,8 g/l)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

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Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

| Abbreviations and acronyms: | |
|-----------------------------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BLV | Biological limit value |
| BOD | Biochemical oxygen demand (BOD) |
| COD | Chemical oxygen demand (COD) |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC-No. | European Community number |
| EC50 | Median effective concentration |
| EN | European Standard |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| OEL | Occupational Exposure Limit |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| ThOD | Theoretical oxygen demand (ThOD) |
| TLM | Median Tolerance Limit |

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| Abbreviations and acronyms: | |
|-----------------------------|---|
| VOC | Volatile Organic Compounds |
| CAS-No. | Chemical Abstract Service number |
| N.O.S. | Not Otherwise Specified |
| vPvB | Very Persistent and Very Bioaccumulative |
| ED | Endocrine disrupting properties |
| DOT | Department of Transport |
| TDG | Transportation of Dangerous Goods |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| GHS | Globally Harmonized System of Classification, Labelling and Packaging of Chemicals |
| CAS | CAS (Chemical Abstracts Service) number |
| IBC-Code | International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| MARPOL 73/78 | MARPOL 73/78: International Convention for the Prevention of Pollution From Ships |
| ADG | Transport of Australian Dangerous Goods |

Other information

: Data of sections 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities. The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge. The delivery specifications are contained in the corresponding product sheet. This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

| Full text of H- and EUH-statements: | |
|-------------------------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| H302 | Harmful if swallowed. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| STOT RE 2 | Specific target organ toxicity – Repeated exposure, Category 2 |

| Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]: | | |
|---|------|--------------------|
| Acute Tox. 4 (Oral) | H302 | Calculation method |
| STOT RE 2 | H373 | Calculation method |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should therefore not be construed as guaranteeing any specific property of the product.