according to Regulation (EC) No 1907/2006



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

1.1. Product identifier

GLYKOSOL N

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

Use of the substance/mixture

Various

1.3. Details of the supplier of the safety data sheet

Company name:	pro Kühlsole GmbH	
Street:	Am Langen Graben 37	
Place:	D-52353 Düren	
Telephone:	+49 2421 59196-0	Telefax: +49 2421 59196-10
Responsible Department:	Responsible for the safety data sh	eet: sds@gbk-ingelheim.de
1.4. Emergency telephone	Notrufnummer INTERNATIONAL:	+49 (0) 6132 / 84463 (GBK GmbH, Ingelheim)
number:		

<u>number:</u>

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories: Acute toxicity: Acute Tox. 4 Specific target organ toxicity - repeated exposure: STOT RE 2 Hazard Statements: Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

ethanediol, ethylene glycol Warning

Signal word:

Pictograms:



Hazard statements

H302 H373	Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure
Precautionary sta	atements
P260	Do not breathe dust/fume/gas/mist/vapours/spray.

P270	Do not eat, drink or smoke when using this product.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.
P314	Get medical advice/attention if you feel unwell.
P501	Dispose of contents/container in accordance with local/regional/national/international/ regulations.

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Additional advice on labelling

The product is labeled in accordance with Regulation (EC) no. 1272/2008 (GHS).

2.3. Other hazards

According to Regulation (EC) No 1907/2006 (REACH), this product is regarded to be neither PBT nor vPvB. High risk of slipping due to leakage/spillage of product.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture of the following substances with non-hazardous admixtures

Hazardous components

Chemical name		Quantity	
EC No	Index No	REACH No	
Classification according to Regulat	tion (EC) No. 1272/2008 [CLP]	•	
ethanediol, ethylene glycol	ethanediol, ethylene glycol		95 - < 100 %
203-473-3		01-2119456816-28	
Acute Tox. 4, STOT RE 2; H302 H373			
	EC No Classification according to Regulat ethanediol, ethylene glycol 203-473-3	EC No Index No Classification according to Regulation (EC) No. 1272/2008 [CLP] ethanediol, ethylene glycol 203-473-3	EC No Index No REACH No Classification according to Regulation (EC) No. 1272/2008 [CLP] ethanediol, ethylene glycol 203-473-3 01-2119456816-28

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately. In the event of persistent symptoms receive medical treatment.

After inhalation

Move to fresh air in case of accidental inhalation of vapours. In the event of symptoms refer for medical treatment.

After contact with skin

Wash off immediately with soap and plenty of water. Consult a doctor if skin irritation persists.

After contact with eyes

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical treatment by eye specialist.

After ingestion

Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse out mouth and give plenty of water to drink. Seek medical treatment immediately. Symptoms of poisoning may not occur for many hours, therefore keep under medical supervision for at least 48 hours.

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

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

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

Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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Suitable extinguishing media

Alcohol-resistant foam, dry chemical, carbon dioxide (CO2), water-spray.

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

Fire may produce: carbon monoxide and carbon dioxide Under certain fire conditions traces of other toxic substances cannot be excluded. Vapours may form explosive mixture with air.

5.3. Advice for firefighters

Cool containers at risk with water spray jet. Use breathing apparatus with independent air supply. Wear full protective suit. Suppress escaping gasses/vapours with directed water spray jet.

Additional information

Collect contaminated fire-fighting water, avoid any release into the sewerage. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

In case of vapour formation use respirator. Ensure adequate ventilation. Avoid contact with eyes, skin or mucous membrane. Use personal protective clothing.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/ground water.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Shovel into suitable container for disposal.

6.4. Reference to other sections

Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use only in thoroughly ventilated areas. Avoid contact with eyes, skin or mucous membrane. Care for thoroughly room ventilation, if necessary suck off at workplace.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take measures against electrostatically charging. Vapours can form an explosive mixture with air.

Further information on handling

Avoid formation of aerosols. Do not inhale vapour/aerosol. In case of insufficient ventilation, especially in confined areas.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store only in original container at cool and aired place. Keep in a dry place.

Advice on storage compatibility

Keep away from food, drink and animal feeding stuffs.

Further information on storage conditions

Keep container tightly closed.

7.3. Specific end use(s)

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No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL

8.2. Exposure controls





Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

Protective and hygiene measures

Wash hands before breaks and immediately after handling the product.

When using do not eat, drink or smoke.

Avoid contact with skin, eyes and clothing.

Take off immediately all contaminated clothing.

Eye/face protection

Tightly fitting goggles (EN 166). Eye wash bottle with pure water (EN 15154).

Hand protection

Chemical-resistant gloves (EN 374).

Suitable materials also for extended, direct contact (recommended: protection index 6, corresponding to a permeation rate > 480 minutes according to EN 374): Nitrile rubber/nitrile latex - NBR (0,35 mm), Butyl rubber - Butyl (0,5 mm).

Follow the recommendations of the glove manufacturer for breakthrough properties especially for workplace conditions involving mechanical stress and contact duration.

Skin protection

Long sleeved clothing (EN 368).

Respiratory protection

No personal respiratory protective equipment normally required. Breathing apparatus in the event of aerosol or mist formation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Yellow, clear
Odour:	Odourless
pH-Value (at 20 °C):	
Changes in the physical	state
Melting point:	

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Initial boiling point and boiling range:	190 °C
Sublimation point:	No data available.
Softening point:	No data available.
Flash point:	116 °C
Sustaining combustion:	No data available
Flammability Solid:	No data available.
Explosive properties The product is not explosive.	
Lower explosion limits:	3,2 vol. %
Upper explosion limits:	15,3 vol. %
Ignition temperature:	410 °C
Auto-ignition temperature Solid:	No data available.
Decomposition temperature:	No data available.
Oxidizing properties The product is not self-igniting	
Vapour pressure: (at 20 °C)	0,1 hPa
Density (at 20 °C):	1,125 g/cm³
Water solubility: (at 20 °C)	Completely miscible
Solubility in other solvents No data available.	
Partition coefficient:	No data available.
Viscosity / dynamic:	No data available.
Viscosity / kinematic:	No data available.
Flow time:	No data available.
Vapour density:	No data available.
Solvent content:	95,00 %
9.2. Other information	
No data available.	

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactions with strong oxidizing agents. In use formation of flammable/explosive vapour-air mixtures possible.

10.4. Conditions to avoid

No decomposition if used as directed.

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10.5. Incompatible materials

Strong oxidizing agents, Bases.

10.6. Hazardous decomposition products

Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 526,3 mg/kg

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
107-21-1	ethanediol, ethylene glyco	bl				
		LD50 58 mg/kg	840	Rat		
		LD50 99 mg/kg	530	Rabbit		

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (ethanediol, ethylene glycol)

Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

No data available.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
107-21-1	ethanediol, ethylene glyco	bl					
	Acute fish toxicity	LC50 72 mg/l	2860	96 h	Pimephales promelas		
	Acute algae toxicity	ErC50 65 13000 mg/l	500 -		Pseudokirchneriela subcapitata		
	Acute crustacea toxicity	EC50 > mg/l	1000	48 h	Daphnia magna		

12.2. Persistence and degradability

Readily biodegradable.

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12.3. Bioaccumulative potential

No data available.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethanediol, ethylene glycol	-1,36

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

Not determined.

12.6. Other adverse effects

Not determined.

Further information

Do not release undiluted or in higher quantities into the groundwater, sewerage or waters.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Should not be disposed of with household waste. Do not flush into surface water or sanitary sewer system. Where possible recycling is preferred to disposal. The waste code number must be agreed with the disposer / manufacturer / competent authority.

Waste disposal number of waste from residues/unused products

160508 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded organic chemicals consisting of or containing hazardous substances; hazardous waste

Waste disposal number of used product

160508 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded organic chemicals consisting of or containing hazardous substances; hazardous waste

Waste disposal number of contaminated packaging

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

Contaminated packaging

Empty containers should be taken for local recycling, recovery or waste disposal. Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of like the product. Cleaning agent: Water

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number:</u> 14.2. UN proper shipping name:

14.3. Transport hazard class(es):

14.4. Packing group:

Inland waterways transport (ADN)

No dangerous good in sense of this transport regulation. No dangerous good in sense of this transport regulation. No dangerous good in sense of this transport regulation. No dangerous good in sense of this transport regulation.

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<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.	
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.	
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.	
14.4. Packing group:	No dangerous good in sense of this transport regulation.	
Marine transport (IMDG)		
<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.	
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.	
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.	
14.4. Packing group:	No dangerous good in sense of this transport regulation.	
Air transport (ICAO-TI/IATA-DGR)		
<u>14.1. UN number:</u>	No dangerous good in sense of this transport regulation.	
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.	
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.	
14.4. Packing group:	No dangerous good in sense of this transport regulation.	
14.5. Environmental hazards		
ENVIRONMENTALLY HAZARDOUS:	no	
14.6. Special precautions for user		
No dangerous good in sense of this tr	ransport regulation.	
14.7. Transport in bulk according to Annex	II of Marpol and the IBC Code	
No dangerous good in sense of this to	ransport regulation.	
SECTION 15: Regulatory information		
15.1. Safety, health and environmental reg	ulations/legislation specific for the substance or mixture	
EU regulatory information		
2004/42/EC (VOC): Information according to 2012/18/EU	95 % (1068,75 g/l) Not subject to 2012/18/EU (SEVESO III)	

EU regulatory information	
2004/42/EC (VOC): Information according to 2012/18/EU	95 % (1068,75 g/l) Not subject to 2012/18/EU (SEVESO III)
(SEVESO III):	
National regulatory information	
Employment restrictions:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).
Water contaminating class (D):	1 - slightly water contaminating
15.2. Chemical safety assessment	
Chemical safety assessments for sub	ostances in this mixture were not carried out.

SECTION 16: Other information

Changes

Update 2018

Abbreviations and acronyms

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (Agreement concerning the international carriage of Dangerous goods by Road) IMDG-Code: International Maritime Code for Dangerous Goods ICAO: International Civil Aviation Organisation (IATA: The International Air Transport Association) GHS: Globally Harmonized System of Classification, Labelling and Packaging of Chemicals

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Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]	
Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
STOT RE 2; H373	Calculation method
Relevant H and EUI	H statements (number and full text)
H302	Harmful if swallowed.

Harmful if swallowed.

May cause damage to organs through prolonged or repeated exposure.

Further Information

H373

Data of items 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.

(n.a. = not applicable; n.d. = not determined)

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)