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according to 1907/2006/EC, Article 31

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

· **1.1 Product identifier**

· **Trade name: Glycid ether 100 for electron microscopy**
· **Synonyma**
1,2,3-Propanetriol glycidyl ether
GE 100

· **Article number:** 21045
· **CAS Number:**
90529-77-4
· **EC number:**
292-011-4
· **Registration number** 01-2119978955-13
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Product category** PC21 Laboratory chemicals
· **Process category** PROC15 Use as laboratory reagent
· **Application of the substance / the mixture** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de

· **Information department:** Product Safety department Tel.: +49 6221 13840-35
· **1.4 Emergency telephone number:**
Medical Emergency Information in case of poisoning:
Poison Information Center Mainz - Phone: +49 (0) 6131 19240
(advisory service in German or English language)

*
SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

GHS08

Muta. 2	H341	Suspected of causing genetic defects.
Repr. 2	H361	Suspected of damaging fertility or the unborn child.

GHS07

Acute Tox. 4	H302	Harmful if swallowed.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
· **Hazard pictograms** GHS07, GHS08
· **Signal word** Warning

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· ***Hazard statements***
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H341 Suspected of causing genetic defects.
H361 Suspected of damaging fertility or the unborn child.
· ***Precautionary statements***

P264	*Wash thoroughly after handling.*
P280	*Wear protective gloves/protective clothing/eye protection/face protection.*
P301+P312	*IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*
P302+P352	*IF ON SKIN: Wash with plenty of water.*
P305+P351+P338	*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
P337+P313	*If eye irritation persists: Get medical advice/attention.*

· ***2.3 Other hazards***
· ***Results of PBT and vPvB assessment***
· ***PBT:*** *PBT - assessment not available.*
· ***vPvB:*** *vPvB - assessment not available.*

*
SECTION 3: Composition/information on ingredients

· ***3.1 Chemical characterisation: Substances***
· ***CAS No. Description:***
90529-77-4 1,2,3-Propanetriol, glycidyl ethers
· ***Identification number(s):***
· ***EC number:*** *292-011-4*
· ***Description:***
· ***MW:*** *306.0*

*
SECTION 4: First aid measures

· ***4.1 Description of first aid measures***
· ***After inhalation*** *Supply fresh air; consult doctor in case of complaints.*
· ***After skin contact***
Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell.
· ***After eye contact***
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.
· ***After swallowing***
Wash out mouth. Drink plenty of water and supply fresh air. Seek medical advice if discomfort occurs.
Do not induce vomiting!
· ***4.2 Most important symptoms and effects, both acute and delayed***
No further relevant information available.
· ***4.3 Indication of any immediate medical attention and special treatment needed***
No further relevant information available.

*
SECTION 5: Firefighting measures

· ***5.1 Extinguishing media***
· ***Suitable extinguishing agents***
CO_2 , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· ***5.2 Special hazards arising from the substance or mixture***
In case of fire formation of toxic vapours and gases is possible.
In case of fire, the following can be formed, but not limited to:
Hydrogen chloride (HCl)

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Carbon monoxide and carbon dioxide
Phosgene gas
(Traces)
· ***5.3 Advice for firefighters***
· ***Protective equipment:*** *Wear self-contained respiratory protective device.*

*
SECTION 6: Accidental release measures

· ***6.1 Personal precautions, protective equipment and emergency procedures***
Wear protective clothing.
Ensure adequate ventilation
Do not inhale vapours.
Avoid contact with the eyes and skin.
· ***6.2 Environmental precautions:***
Do not allow to enter sewers/ surface or ground water.
Dilute with plenty of water.
· ***6.3 Methods and material for containment and cleaning up:***
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
· ***6.4 Reference to other sections***
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

*
SECTION 7: Handling and storage

· ***7.1 Precautions for safe handling***
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Ensure good ventilation/exhaustion at the workplace.
Avoid contact with eyes and skin.
· ***Information about protection against explosions and fires:*** *Keep ignition sources away - Do not smoke.*

· ***7.2 Conditions for safe storage, including any incompatibilities***
· ***Storage***
· ***Requirements to be met by storerooms and receptacles:***
Store only in the original receptacle.
Provide solvent resistant, sealed floor.
· ***Information about storage in one common storage facility:***
Do not store together with strong acids, strong alkalis and strong oxidizing agents.
Store away from metals.
· ***Further information about storage conditions:***
Avoid contact with air / oxygen.(formation of peroxide).
Store receptacle in a well ventilated area.
Keep receptacle tightly sealed and store in dry conditions.
· ***7.3 Specific end use(s)*** *No further relevant information available.*

*
SECTION 8: Exposure controls/personal protection

· ***Additional information about design of technical systems:*** *No further data; see item 7.*

· ***8.1 Control parameters***
· ***Components with limit values that require monitoring at the workplace:*** *Not required.*
· ***DNELs***
Worker: Long term - systemic effects, dermal: 10 mg/kg
Worker: Long term - local effects, dermal: 0,8 mg/m²
Worker: Long term - systemic effects, inhalative: 500 mg/m³

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· ***PNECs*** *Industrial Sewage Treatment Plant (STP): 100 mg/l*
· ***Additional information:*** *The lists that were valid during the creation were used as basis.*

· ***8.2 Exposure controls***
· ***Personal protective equipment***
· ***General protective and hygienic measures***
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· ***Breathing equipment:***
Short term filter device:
Filter A/P2.
· ***Protection of hands:***
Protective gloves.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· ***Material of gloves***
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· ***Penetration time of glove material***
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· ***For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:***
Neoprene gloves
· ***Eye protection:***
Safety glasses
Tightly sealed goggles.
· ***Body protection:*** *Protective work clothing.*

*
SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***	
· ***General Information***	
· ***Appearance:***	
Form:	*Liquid*
Colour:	*Yellowish*
· ***Odour:***	*Odourless*
· ***Odour threshold:***	*Not determined.*
· ***pH-value (10 g/l) at 20 °C:***	*6 - 8*
· ***Change in condition***	
Melting point/freezing point:	*undetermined*
Initial boiling point and boiling range:	*> 180 °C*
· ***Flash point:***	*ca. 175 °C*
· ***Flammability (solid, gaseous)***	*Not applicable.*
· ***Ignition temperature:***	*ca. 270 - 310 °C*
· ***Decomposition temperature:***	*> 180 °C*
· ***Self igniting:***	*Not determined.*

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· ***Explosive properties:***	*Product does not present an explosion hazard.*
· ***Explosion limits:***	
Lower:	*Not determined.*
Upper:	*Not determined.*
· ***Vapour pressure:***	*Not determined.*
· ***Density at 20 °C:***	*1.22 g/cm³*
· ***Relative density***	*Not determined.*
· ***Vapour density***	*Not determined.*
· ***Evaporation rate***	*Not determined.*
· ***Solubility in / Miscibility with***	
Water at 20 °C:	*20 - 30 g/l*
· ***Organic solvents:***	*Soluble in many organic solvents*
· ***Partition coefficient: n-octanol/water:***	*-1.94 - -1.78 log POW (calc.)*
· ***Viscosity:***	
dynamic at 25 °C:	*100 - 200 mPas*
kinematic:	*Not determined.*
· ***9.2 Other information***	*No further relevant information available.*

*
SECTION 10: Stability and reactivity

· ***10.1 Reactivity*** *No further relevant informations available*
· ***10.2 Chemical stability***
· ***Thermal decomposition / conditions to be avoided:*** *No decomposition if used according to specifications.*
· ***10.3 Possibility of hazardous reactions***
Reacts with acids, alkalis and oxidizing agents
Polymerisation
Reacts with powdered metals
· ***10.4 Conditions to avoid*** *No further relevant information available.*
· ***10.5 Incompatible materials:*** *No further relevant information available.*
· ***10.6 Hazardous decomposition products:*** *In case of fire: See Section 5*
· ***Additional information:***
This substance is very reactiv. In the presence of strong acids and bases or non-ferrous metals hazardous, maybe explosive polymerisation may occur. Hazardous or explosive polymerisation may also occur in case of overheating.

*
SECTION 11: Toxicological information

· ***11.1 Information on toxicological effects***
· ***Acute toxicity***
Harmful if swallowed.

· ***LD/LC50 values that are relevant for classification:***

Oral	*LD50*	*5000 mg/kg (rat)*
Dermal	*LD50*	*> 2000 mg/kg (rabbit)*
	LC50/96h	*50 - 100 mg/l (Forelle)*

· ***Primary irritant effect:***
· ***Skin corrosion/irritation***
Causes skin irritation.
· ***Serious eye damage/irritation***
Causes serious eye irritation.
· ***Respiratory or skin sensitisation*** *Based on available data, the classification criteria are not met.*

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· ***Additional toxicological information:***
AMES-Test: Mutagenic effect
OECD 471
Salmonella typhimurium
· ***CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)***
· ***Germ cell mutagenicity***
Suspected of causing genetic defects.
· ***Carcinogenicity*** *Based on available data, the classification criteria are not met.*
· ***Reproductive toxicity***
Suspected of damaging fertility or the unborn child.
· ***STOT-single exposure*** *Based on available data, the classification criteria are not met.*
· ***STOT-repeated exposure*** *Based on available data, the classification criteria are not met.*
· ***Aspiration hazard*** *Based on available data, the classification criteria are not met.*

*
SECTION 12: Ecological information

· ***12.1 Toxicity***

· ***Aquatic toxicity:***	
EC50/48h	*> 100 mg/l (Daphnia magna)*

· ***12.2 Persistence and degradability*** *No further relevant information available.*
· ***Other information:*** *The product is not easily biodegradable.*
· ***12.3 Bioaccumulative potential***
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
· ***12.4 Mobility in soil*** *No further relevant information available.*
· ***Additional ecological information:***
· ***General notes:***
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** *PBT - assessment not available.*
· ***vPvB:*** *vPvB - assessment not available.*
· ***12.6 Other adverse effects*** *No further relevant information available.*

*
SECTION 13: Disposal considerations

· ***13.1 Waste treatment methods***
· ***Recommendation***
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.

· ***Uncleaned packagings:***
· ***Recommendation:***
Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.
· ***Recommended cleansing agent:*** *Water, if necessary with cleansing agents.*

*
SECTION 14: Transport information

· ***14.1 UN-Number***	
· ***ADR, ADN, IMDG, IATA***	*Void*
· ***14.2 UN proper shipping name***	
· ***ADR***	*Void*
· ***ADN, IMDG, IATA***	*Void*

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· **14.3 Transport hazard class(es)**	
· **ADR**	
· **Class**	Void
· **Label**	-
· **ADN/R Class:**	Void
· **IMDG, IATA**	
· **Class**	Void
· **Label**	-
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.
· **UN "Model Regulation":**	Void

*
SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **National regulations**

· **Water hazard class:** Water hazard class 1 (Assessment by list): slightly hazardous for water.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*
SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Product safety department
· **Contact:** +49 6221 13840-35
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
PBT: persistent, bioaccumulative, toxic substance (REACH)
vPvB: very persistent, very bioaccumulative substance (REACH)
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP: Regulation on classification, labelling and packaging of substances and mixtures
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4

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Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Muta. 2: Germ cell mutagenicity – Category 2
Repr. 2: Reproductive toxicity – Category 2

· **** Data compared to the previous version altered.***