1 Identification

- Product identifier
  - Trade name: Glycid ether 100 for electron microscopy
  - Article number: 21045
  - CAS Number:
    - 90529-77-4
  - EC number:
    - 292-011-4
  - Application of the substance / the mixture: Laboratory chemicals

- 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
  - 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)

2 Hazard(s) identification

- Classification of the substance or mixture
  - GHS08
    - Mut. 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. 2A H319 Causes serious eye irritation.

- Label elements
  - GHS label elements
    - The substance is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms GHS07, GHS08
  - Signal word Warning
  - Hazard statements
    - Harmful if swallowed.
    - Causes skin irritation.
    - Causes serious eye irritation.
    - Suspected of causing genetic defects.
    - Suspected of damaging fertility or the unborn child.
  - Precautionary statements
    - Wash thoroughly after handling.
    - Wear protective gloves/protective clothing/eye protection/face protection.
Trade name: Glycid ether 100 for electron microscopy

* Classification system:
- NFPA ratings (scale 0 - 4)
  - Health = 1
  - Fire = 1
  - Reactivity = 0
- HMIS-ratings (scale 0 - 4)
  - Health = 1
  - Fire = 1
  - Reactivity = 0

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

3 Composition/information on ingredients
- Chemical characterization: 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

4 First-aid measures
- 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!
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed: No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5 Fire-fighting measures
- Extinguishing media
- Suitable extinguishing agents:
  - CO₂ extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Trade name: Glycid ether 100 for electron microscopy

- **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 released:
    - Hydrogen chloride (HCl)
    - Carbon monoxide and carbon dioxide
    - Phosgene gas
    - (Traces)
- **Advice for firefighters**
- **Protective equipment**: Wear self-contained respirator protective device.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - Wear protective clothing.
  - Ensure adequate ventilation.
  - Do not inhale vapours.
  - Avoid contact with the eyes and skin.
- **Environmental precautions:**
  - Do not allow to enter sewers/surface or ground water.
  - Dilute with plenty of water.
- **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.
- **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.

### 7 Handling and storage

- **Handling:**
- **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.
- **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.
- **Specific end use(s)**
  - No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems**: No further data; see item 7.
Trade name: Glycid ether 100 for electron microscopy

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.

- **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

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
  - Form: Liquid
  - Color: Yellowish
  - Odor: Odorless
  - Odor threshold: Not determined.
- **pH-value (10 g/l) at 20 °C (68 °F):** 6 - 8
- **Change in condition**
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: > 180 °C (> 356 °F)
- **Flash point:** ca. 175 °C (ca. 347 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** ca. 270 - 310 °C (ca. 518 - 590 °F)
- **Decomposition temperature:** > 180 °C (> 356 °F)
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- Auto igniting: Not determined.
- Danger of explosion: Product does not present an explosion hazard.
- Explosion limits:
  Lower: Not determined.
  Upper: Not determined.
- Vapor pressure: Not determined.
- Density at 20 °C (68 °F): 1.22 g/cm³ (10.181 lbs/gal)
- Relative density: Not determined.
- Vapor density: Not determined.
- Evaporation rate: Not determined.
- Solubility in / Miscibility with:
  Water at 20 °C (68 °F): 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 (77 °F): 100 - 200 mPas
  Kinematic: Not determined.
- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity: No further relevant informations available
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions
  Reacts with acids, alkalis and oxidizing agents.
  Polymerization.
  Reacts with powdered metals.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: In case of fire: See Section 5
- Additional information:
  This substance is very reactive. 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.

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
  - 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:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: Irritating effect.
  - Sensitization: No sensitizing effects known.
Trade name: Glycid ether 100 for electron microscopy

**12 Ecological information**

- **Toxicity**
  - **Aquatic toxicity:**
    - EC50/48h > 100 mg/l (Daphnia magna)
  - **Persistence and degradability:** No further relevant information available.
  - **Behavior in environmental systems:**
  - **Bioaccumulative potential:**
    - Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
  - **Mobility in soil:** No further relevant information available.
  - **Additional ecological information:**
    - **General notes:**
      - Water hazard class 1 (Assessment by list): slightly hazardous for water
      - Do not allow product to reach ground water, water course or sewage system.
    - **Results of PBT and vPvB assessment**
      - PBT: Not applicable.
      - vPvB: Not applicable.
    - **Other adverse effects:** No further relevant information available.

**13 Disposal considerations**

- **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.

**14 Transport information**

- **UN-Number**
  - DOT, ADR, ADN, IMDG, IATA: Void
- **UN proper shipping name**
  - DOT, ADR, ADN, IMDG, IATA: Void
- **Transport hazard class(es)**
  - DOT, ADN: Void
Trade name: Glycid ether 100 for electron microscopy

- ADR
- Class Void
- Label

- IMDG, IATA
- Class Void
- Label

- Packing group
- DOT, ADR, IMDG, IATA Void

- Environmental hazards:
- Marine pollutant: No

- Special precautions for user: Not applicable.

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

- Transport/Additional information: Not dangerous according to the above specifications.

- UN "Model Regulation": Void

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- Proposition 65 Substance is not listed.
- Chemicals known to cause cancer: Substance is not listed.
- Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- Chemicals known to cause developmental toxicity: Substance is not listed.

- Cancerogenity categories
- EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value established by ACGIH) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- GHS label elements
  The substance is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms GHS07, GHS08
- Signal word Warning
- Hazard statements
  Harmful if swallowed.
  Causes skin irritation.
  Causes serious eye irritation.
  Suspected of causing genetic defects.
  Suspected of damaging fertility or the unborn child.

- Precautionary statements
  Wash thoroughly after handling.
  Wear protective gloves/protective clothing/eye protection/face protection.
  IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
  IF ON SKIN: Wash with plenty of water.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  If eye irritation persists: Get medical advice/attention.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.
Trade name: Glycid ether 100 for electron microscopy

**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
- **Date of preparation / last revision:** 05/03/2018

- **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
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - NIOSH: National Institute for Occupational Safety
  - OSHA: Occupational Safety & Health
  - TLV: Threshold Limit Value
  - REL: Recommended Exposure Limit
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  - Muta. 2: Germ cell mutagenicity – Category 2
  - Repr. 2: Reproductive toxicity – Category 2

* Data compared to the previous version altered.