1 Identification

- **Product identifier**
- **Trade name:** EMS Glycerol Mounting Medium With DABCO
- **Article number:** 17989-50
- **Application of the substance / the mixture** Laboratory chemicals

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Electron Microscopy Sciences
    1560 Industry Road
    USA-Hatfield, PA 19440
    Tel: 215-412-8400  Fax: 215-412-8450
    email: info@emsdiasum.com
    www.emsdiasum.com

- **Information department:** Product safety department
- **Emergency telephone number:**
  - ChemTrec 1-800-424-9300 Contract CCN7661
  - 1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - **Signal word** Danger
  - **Hazard pictograms**
  - **Hazard determining components of labeling:** triethylenediamine
  - **Hazard statements**
    - Causes severe skin burns and eye damage.
  - **Precautionary statements**
    - Do not breathe dusts or mists.
    - Wash thoroughly after handling.
    - Wear protective gloves/protective clothing/eye protection/face protection.
    - If swallowed: Rinse mouth. Do NOT induce vomiting.
    - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

(Contd. on page 2)
Trade name: EMS Glycerol Mounting Medium With DABCO

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Specific treatment (see on this label). Wash contaminated clothing before reuse. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
  - NFPA ratings (scale 0 - 4)
    
    | Health | Fire | Reactivity |
    |--------|------|------------|
    | 3      | 1    | 0          |

  - HMIS-ratings (scale 0 - 4)
    
    | HEALTH | FIRE | REACTIVITY |
    |--------|------|------------|
    | *3     | 1    | 0          |

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
  - Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:
  - 56-81-5 glycerol >50-≤100%
  - 280-57-9 triethylenediamine >2.5-≤10%

4 First-aid measures

- Description of first aid measures
  - General information: Immediately remove any clothing soiled by the product.
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
  - After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.

- 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.

(Contd. on page 3)
5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures:
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
  Dilute with plenty of water.
  Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Use neutralizing agent.
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- 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.
- Protective Action Criteria for Chemicals
  - PAC-1:
    | Compound       | Concentration |
    |----------------|--------------|
    | 56-81-5 glycerol | 45 mg/m³     |
    | 280-57-9 triethylenediamine | 5.1 mg/m³   |
  - PAC-2:
    | Compound       | Concentration |
    |----------------|--------------|
    | 56-81-5 glycerol | 180 mg/m³    |
    | 280-57-9 triethylenediamine | 56 mg/m³    |
  - PAC-3:
    | Compound       | Concentration |
    |----------------|--------------|
    | 56-81-5 glycerol | 1,100 mg/m³  |
    | 280-57-9 triethylenediamine | 340 mg/m³   |

7 Handling and storage

- Handling:
  - Precautions for safe handling
    Ensure good ventilation/exhaustion at the workplace.
    Prevent formation of aerosols.
  - Information about protection against explosions and fires: No special measures required.
  - Conditions for safe storage, including any incompatibilities
  - Storage:
    - Requirements to be met by storerooms and receptacles: No special requirements.
    - Information about storage in one common storage facility: Not required.
· **Further information about storage conditions:** Keep receptacle tightly sealed.

· **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.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

  The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

  At this time, the remaining constituent has no known exposure limits.

### 56-81-5 glycerol

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
<td>Long-term value: <em><em>15</em> 5</em>* mg/m³ mist; *total dust **respirable fraction</td>
</tr>
<tr>
<td>TLV</td>
<td>TLV withdrawn-insufficient data human occup. exp.</td>
</tr>
</tbody>
</table>

· **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.

  Avoid contact with the eyes and skin.

· **Breathing equipment:**

  In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

  ![](Protective_gloves.png)

  **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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
# 9 Physical and chemical properties

## Information on basic physical and chemical properties

### General Information

- **Appearance:** Viscous
- **Color:** Colorless
- **Odor:** Pleasant
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.

### Change in condition

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** 174 °C (345.2 °F)

- **Flash point:** 160 °C (320 °F)
- **Flammability (solid, gaseous):** Not flammable.
- **Ignition temperature:** 400 °C (752 °F)
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.

### Explosion limits

- **Lower:** Not determined.
- **Upper:** Not determined.

- **Vapor pressure at 20 °C (68 °F):** 0.1 hPa

- **Density at 20 °C (68 °F):** 1.25388 g/cm³ (10.46363 lbs/gal)
- **Relative density**
- **Vapor density**
- **Evaporation rate**

- **Solubility in / Miscibility with**
  - **Water:** Fully miscible.

- **Partition coefficient (n-octanol/water):** Not determined.

### Viscosity

- **Dynamic:** Not determined.
- **Kinematic:** Not determined.
Trade name: EMS Glycerol Mounting Medium With DABCO

- **Solvent content:**
  - **Organic solvents:** 94.9 %
  - **VOC content:** 0.00 %
  - 0.0 g/l / 0.00 lb/gal
- **Solids content:** 5.1 %
- **Other information**
  - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
  - No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
  - No dangerous reactions known.
- **Conditions to avoid**
  - No further relevant information available.
- **Incompatible materials:**
  - No further relevant information available.
- **Hazardous decomposition products:**
  - No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** Strong caustic effect on skin and mucous membranes.
  - **on the eye:**
  
    Strong caustic effect.
    Strong irritant with the danger of severe eye injury.
  - **Sensitization:**
  - **Additional toxicological information:**
  
    The product shows the following dangers according to internally approved calculation methods for preparations:
    - **Corrosive**
    - **Irritant**
    
    Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**

  - **IARC (International Agency for Research on Cancer)**
    - None of the ingredients is listed.

  - **NTP (National Toxicology Program)**
    - None of the ingredients is listed.

  - **OSHA-Ca (Occupational Safety Health Administration)**
    - None of the ingredients is listed.
### 12 Ecological information

- **Toxicity**
  - Aquatic toxicity: No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
  - Bioaccumulative potential No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
  - **General notes:**
    Water hazard class 1 (Self-assessment): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
    Must not reach bodies of water or drainage ditch undiluted or unneutralized.
  - **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.
- **Uncleaned packagings:**
  - **Recommendation:** Disposal must be made according to official regulations.
  - **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- **UN-Number**
  - DOT, ADR, IMDG, IATA Void
- **UN proper shipping name**
  - DOT, ADR, IMDG, IATA Void
- **Transport hazard class(es)**
  - DOT, ADR, ADN, IMDG, IATA Void
- **Packing group**
  - DOT, ADR, IMDG, IATA Void
- **Environmental hazards:** Not applicable.
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  No further relevant information available.
- Sara
  - Section 355 (extremely hazardous substances):
    None of the ingredients is listed.
  - Section 313 (Specific toxic chemical listings):
    None of the ingredients is listed.
- TSCA (Toxic Substances Control Act):
  All components have the value ACTIVE.
- Hazardous Air Pollutants
  None of the ingredients is listed.
- Proposition 65
  - Chemicals known to cause cancer:
    None of the ingredients is listed.
  - Chemicals known to cause reproductive toxicity for females:
    None of the ingredients is listed.
  - Chemicals known to cause reproductive toxicity for males:
    None of the ingredients is listed.
  - Chemicals known to cause developmental toxicity:
    None of the ingredients is listed.
- Carcinogenic categories
  - EPA (Environmental Protection Agency)
    None of the ingredients is listed.
  - TLV (Threshold Limit Value)
    None of the ingredients is listed.
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    None of the ingredients is listed.
- GHS label elements
  The product is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms

GHS05

- Signal word Danger
Hazard-determining components of labeling:
triethylenediamine

Hazard statements
Causes severe skin burns and eye damage.

Precautionary statements
Do not breathe dusts or mists.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment:
A Chemical Safety Assessment has not been carried out.

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.

Date of preparation / last revision 01/27/2023

Abbreviations and acronyms:
ADR: Accord relatif au transport international 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
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
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
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
Eye Damage 1: Serious eye damage/eye irritation – Category 1