1 Identification

- **Product identifier**
  - **Trade name:** Fixative Enhancer Concentrate
  - **Catalog or product number:** 1610461, 1610461EDU, 9702046
  - **Relevant identified uses of the substance or mixture and uses advised against**
    - No further relevant information available.
  - **Application of the substance / the mixture** Laboratory chemicals

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    Bio-Rad Laboratories, Life Science Group
    2000 Alfred Nobel Drive
    Hercules, California 94547
    (510)741-1000
  - **Information department:**
    Technical services, customer support
    lsg_techserv_us@bio-rad.com
  - **Emergency telephone number:**
    1(800)424-9300  Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.
    510-741-1000

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - The product is not classified according to the Globally Harmonized System (GHS).

- **Label elements**
  - GHS label elements Void
  - Hazard pictograms Void
  - Signal word Void
  - Hazard statements Void
  - **Additional information:** Contact with acids may cause release of toxic gases

- **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 non-hazardous additions.

- **Listing of dangerous and non-hazardous components:**
  - 56-81-5 glycerol 35-50%
  - 7732-18-5 water 35-50%

- **Additional information** For the wording of the listed risk phrases refer to section 15.
4 First-aid measures

- Description of first aid measures
  - General information: No special measures required.
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact: Generally the product does not irritate the skin.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - After swallowing: Induce vomiting and call for medical help.

- 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: 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 clothing.
- Environmental precautions: 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).
- Reference to other sections
  - No dangerous substances are released.
  - 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: No special measures required.
- 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: According to product specification.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: None.
  - 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:**

<table>
<thead>
<tr>
<th>Component</th>
<th>PEL (mg/m³)</th>
<th>TLV (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>56-81-5 glycerol</td>
<td>15**</td>
<td>10*</td>
</tr>
<tr>
<td></td>
<td>total dust</td>
<td>Mist</td>
</tr>
<tr>
<td></td>
<td>**respirable fraction</td>
<td></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** The usual precautionary measures for handling chemicals should be followed.

- **Breathing equipment:** Not required.

- **Protection of hands:** Protective gloves.

- **Material of gloves** Synthetic gloves

- **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.

- **Eye protection:** Safety glasses

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

  - **General Information**

  - **Appearance:**

    - **Form:** Liquid
    - **Color:** Colorless
    - **Odor:** Odorless

  - **Odour threshold:** Not determined.

  - **pH-value:** Not determined.

- **Change in condition**

  - **Melting point/Melting range:** Undetermined
  - **Boiling point/Boiling range:** Undetermined

- **Flash point:** > 100 °C

- **Flammability (solid, gaseous)** Not applicable.

- **Ignition temperature:** 400 °C

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

  - **Lower:** 0.9 Vol %
### Trade name: Fixative Enhancer Concentrate

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Vapor pressure at 20 °C:</td>
<td>23 hPa</td>
</tr>
<tr>
<td>· Density at 20 °C:</td>
<td>1.11504 g/cm³</td>
</tr>
<tr>
<td>· Relative density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Vapour density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Evaporation rate</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Solubility in / Miscibility with</td>
<td>Fully miscible</td>
</tr>
<tr>
<td>Water:</td>
<td></td>
</tr>
<tr>
<td>· Partition coefficient (n-octanol/water):</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Viscosity:</td>
<td></td>
</tr>
<tr>
<td>dynamic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>kinematic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Solvent content:</td>
<td></td>
</tr>
<tr>
<td>Organic solvents:</td>
<td>50.0 %</td>
</tr>
<tr>
<td>Water:</td>
<td>50.0 %</td>
</tr>
<tr>
<td>· Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### 10 Stability and reactivity

- **Reactivity**
- **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**: No irritant effect.
    - **on the eye**: No irritant effect.
  - **Sensitization**: No sensitizing effects known.
- **Additional toxicological information**:
  The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)**
    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:** Generally not hazardous for water.
  - **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**
    Hand over to hazardous waste disposers.
    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, ADN, IMDG, IATA Void

- **UN proper shipping name**
  - DOT, ADR, ADN, IMDG, IATA Void

- **Transport hazard class(es)**
  - DOT, ADR, ADN, IMDG, IATA
    - **Class** Void

- **Packing group**
  - DOT, ADR, IMDG, IATA Void
Trade name: Fixative Enhancer Concentrate

- 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": -

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)
    - Section 302/304 (40CFR355.30 / 40CFR355.40): None of the ingredients is listed.
    - Section 313 (40CFR372.65): None of the ingredients is listed.
  - TSCA (Toxic Substances Control Act): All ingredients are listed.
  - Carcinogenic categories
    - EPA (Environmental Protection Agency): None of the ingredients is listed.
    - TLV (Threshold Limit Value established by ACGIH): None of the ingredients is listed.
    - MAK (German Maximum Workplace Concentration): None of the ingredients is listed.
  - NIOSH-Ca (National Institute for Occupational Safety and Health): None of the ingredients is listed.

- National regulations
  - Technical instructions (air):
    | Class | Share in % |
    |-------|------------|
    | NK    | 35-50      |
  - Water hazard class: Generally not hazardous for water.
  - 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.

- Department issuing SDS: Environmental Health and Safety.
Trade name: Fixative Enhancer Concentrate

- **Contact:**
  Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000
  Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

- **Date of preparation / last revision** 06/11/2015 / -

- **Abbreviations and acronyms:**
  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
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)

- *Data compared to the previous version altered.*