

## Material Safety Data Sheet

Printing date 07/25/2013

Reviewed on 07/25/2013

**1 Identification**

- **Product identifier**
- **Trade name:** E. coli MV1190 Electro-Competent Cells
- **Catalog or product number:** 9702144
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation** 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**  
H301 Toxic if swallowed.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
Xn; Harmful  
R22: Harmful if swallowed.
- **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**  
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.  
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **Label elements**
- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials
- **Code letter and hazard designation of product:**  
 Xn Harmful
- **Hazard-determining components of labeling:**  
escherichia coli bacteria - freeze dried
- **Risk phrases:**  
22 Harmful if swallowed.

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· **Safety phrases:**

- 22 Do not breathe dust.
- 25 Avoid contact with eyes.
- 28 After contact with skin, wash immediately with plenty of water
- 36 Wear suitable protective clothing.
- 60 This material and its container must be disposed of as hazardous waste.

· **Emergency overview:**· **Routes of exposure:** Ingestion· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.**3 Composition/information on ingredients**· **Chemical characterization: Substances**· **CAS No. Description:**

escherichia coli bacteria - freeze dried

· **Chemical characterization: Mixtures**· **Description:** Mixture of the substances listed below with non-hazardous additions.· **Listing of dangerous and non-hazardous components:**

|           |                                          |        |         |
|-----------|------------------------------------------|--------|---------|
| 7732-18-5 | water                                    |        | 50-100% |
|           | escherichia coli bacteria - freeze dried | Xn R22 | 35-50%  |
| 56-81-5   | glycerol                                 |        | 5-10%   |

· **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**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation** Supply fresh air; consult doctor in case of complaints.· **After skin contact** Immediately rinse with water.· **After eye contact** Rinse opened eye for several minutes under running water.· **After swallowing** 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.**5 Fire-fighting measures**· **Extinguishing media**· **Suitable extinguishing agents**CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.· **Special hazards arising from the substance or mixture** No further relevant information available.

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- **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:** No special measures required.
- **Methods and material for containment and cleaning up:** 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**  
Prevent formation of dust.  
No special precautions are necessary if used correctly.
- **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**

|                                                                                 |                                   |
|---------------------------------------------------------------------------------|-----------------------------------|
| · <b>Components with limit values that require monitoring at the workplace:</b> |                                   |
| <b>56-81-5 glycerol</b>                                                         |                                   |
| PEL                                                                             | 15* 5** mg/m <sup>3</sup>         |
|                                                                                 | *total dust **respirable fraction |
| TLV                                                                             | 10 ppm                            |

- **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.  
Wash hands before breaks and at the end of work.

- **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.
- **Material of gloves** Synthetic gloves

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· **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:** Solid**Color:** White· **Odor:** Odorless· **Change in condition****Melting point/Melting range:** undetermined**Boiling point/Boiling range:** undetermined· **Flash point:** Not applicable· **Ignition temperature:** 400 °C· **Auto igniting:** Product is not selfigniting.· **Danger of explosion:** Product does not present an explosion hazard.· **Vapor pressure at 20 °C:** 23 hPa· **Density:** Not determined· **Solubility in / Miscibility with****Water:** Insoluble· **Solvent content:****Organic solvents:** 0.0 %**Water:** 57.0 %**Solids content:** 100.0 %· **Other information** No further relevant information available.**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

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## \* 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 shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

## · 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.

## 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

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Hand over to hazardous waste disposers.

## · Uncleaned packagings:

· Recommendation: Disposal must be made according to official regulations.

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## \* 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            |
| · 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. |
| · 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):

7732-18-5 water

56-81-5 glycerol

- 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.

- OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

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· **National regulations**· **Technical instructions (air):**

| Class | Share in % |
|-------|------------|
| NK    | 5-10       |

· **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 MSDS:** Environmental Health and Safety.· **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

· **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.**