

**Material Safety Data Sheet**

Printing date 02/24/2012

Reviewed on 11/21/2011

**1 Identification of the substance/mixture and of the company/undertaking**

- **Product identifier**
- **Trade name:** TG Enzyme Conjugate
- **Catalog or product number:** 425-1040
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Bio-Rad Laboratories, Diagnostic Group  
4000 Alfred Nobel Drive  
Hercules, California 94547 1(510)724-7000
- **Information department:**  
Technical services, customer support  
TechsupportUSSD@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.

**2 Composition/information on ingredients**

- **Chemical characterization: Substances**
- **CAS No. Description:**  
7732-18-5 water
- **Identification number(s):**
- **EC number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 15.

· **Listing of dangerous and non-hazardous components:**

|            |   |                       |          |
|------------|---|-----------------------|----------|
| 9048-46-8  | Bovine Serum Albumin                      |                       | 0.1-1.0% |
| 25322-68-3 | Polyethylene glycol (includes 3000, 4500) |                       | 0.1-1.0% |
|            | boric acid                                | T Repr. Cat. 2 R60-61 | 0.1-1.0% |
| 1403-66-3  | Gentamicin                                | T R61<br>Xn R20/21/22 | 0.1-1.0% |

· **SVHC**

boric acid

**3 Hazards identification**

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Void
- **Information concerning particular hazards for human and environment:** not applicable
- **Classification system:**  
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

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- **Label elements**
- **Labelling according to EU guidelines:**  
Observe the general safety regulations when handling chemicals  
The substance is not subject to classification according to EU lists and other sources of literature known to us.

(Contd. on page 2)

**Material Safety Data Sheet**

Printing date 02/24/2012

Reviewed on 11/21/2011

**Trade name: TG Enzyme Conjugate**

(Contd. of page 1)

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

**4 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.

**5 Firefighting measures**

- **Suitable extinguishing agents**  
CO2, 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.
- **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment (See section 8). Keep unprotected persons away.
- **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.

**7 Handling and storage**

- **Handling**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **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.
- **Components with limit values that require monitoring at the workplace:**

**25322-68-3 Polyethylene glycol (includes 3000, 4500)**

WEEL (United States) 10 mg/m<sup>3</sup>

(Contd. on page 3)

**Material Safety Data Sheet**

Printing date 02/24/2012

Reviewed on 11/21/2011

**Trade name: TG Enzyme Conjugate**

(Contd. of page 2)

**boric acid**

|                     |   |
|---------------------|---|
| TLV (United States) | Short-term value: 6* mg/m <sup>3</sup><br>Long-term value: 2* mg/m <sup>3</sup><br>*as inhalable fraction |
|---------------------|---|

- **Additional information:** The lists that were valid during the creation were used as basis.
- **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**

- **General Information**
- **Appearance:**
  - Form: liquid
  - Color: Colorless
  - Odor: Odorless
- **Change in condition**
  - Melting point/Melting range: 0°C
  - Boiling point/Boiling range: 100°C
- **Flash point:** Not applicable
- **Danger of explosion:** Product does not present an explosion hazard.
- **Vapor pressure at 20°C:** 23 hPa
- **Density at 20°C:** 1 g/cm<sup>3</sup>
- **Solubility in / Miscibility with**
  - Water: Fully miscible
- **Solvent content:**
  - Organic solvents: 0.0 %
  - Water: 95.8 %
- **Solids content:** 4.2 %
- **Other information** No further relevant information available.

**10 Stability and reactivity**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

**Material Safety Data Sheet**

Printing date 02/24/2012

Reviewed on 11/21/2011

**Trade name: TG Enzyme Conjugate**

(Contd. of page 3)

**11 Toxicological information**

- **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:**  
 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.  
 The substance is not subject to classification according to the latest version of the EU lists.
- **Target organs:** Not applicable.

**12 Ecological information**

- **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.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

**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**

- |                                     |      |
|-------------------------------------|------|
| · <b>UN-Number</b>                  |      |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>  | Void |
| · <b>UN proper shipping name</b>    |      |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>  | Void |
| · <b>Transport hazard class(es)</b> |      |
| · <b>ADR, ADN, IMDG, IATA</b>       |      |
| · <b>Class</b>                      | Void |
| · <b>Packing group</b>              |      |
| · <b>DOT, ADR, IMDG, IATA</b>       | Void |

(Contd. on page 5)

**Material Safety Data Sheet**

Printing date 02/24/2012

Reviewed on 11/21/2011

**Trade name: TG Enzyme Conjugate**

(Contd. of page 4)

- **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.

**15 Regulatory information**

· **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   |
| 9048-46-8  | Bovine Serum Albumin                                    |
| 25322-68-3 | Polyethylene glycol (includes 3000, 4500)               |
| 7647-14-5  | sodium chloride   |
|            | boric acid  |
| 75277-39-3 | sodium 4-(2-hydroxyethyl)piperazin-1-ylethanesulphonate |
| 9007-43-6  | Cytochrome c  |
| 7791-10-8  | strontium chlorate                                      |

· **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.

· **National regulations**

· **Water hazard class:** Generally not hazardous for water.

**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

(Contd. on page 6)

**Material Safety Data Sheet**

Printing date 02/24/2012

Reviewed on 11/21/2011

**Trade name: TG Enzyme Conjugate**

(Contd. of page 5)

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000  
\* **Data compared to the previous version altered.**

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