

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/10/2015

Reviewed on 02/09/2015

## 1 Identification

- **Product identifier**
- **Trade name:** Enzyme Conjugate
- **Catalog or product number:** 1930
- **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**  
Acute Tox. 3 H301 Toxic if swallowed.  
Acute Tox. 4 H312 Harmful in contact with skin.  
Acute Tox. 4 H332 Harmful if inhaled.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
Irritant to skin.  
Xn; Harmful  
R20/21/22: Harmful by inhalation, in contact with skin and 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**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS06

- **Signal word** Danger

(Contd. on page 2)

USA

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 02/10/2015

Reviewed on 02/09/2015

Trade name: Enzyme Conjugate

(Contd. of page 1)

**· Hazard-determining components of labeling:**

Thimerosal  
disodium hydrogenorthophosphate

**· Hazard statements**

H301 Toxic if swallowed.

H312+H332 Harmful in contact with skin or if inhaled.

**· Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P280 Wear protective gloves / protective clothing.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**· Additional information:** Contact with acids may cause release of toxic gases

**· Emergency overview:**

**· Routes of exposure:**

Ingestion

Inhalation

Skin

**· 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:**

7732-18-5	water		50-100%
9048-46-8	Bovine Serum Albumin		5-10%
7647-14-5	sodium chloride	<i>Xi R36/38</i>	2.5-5%
54-64-8	Thimerosal	<i>T+ R26/27/28 R33</i>	0.1-1.0%

**· 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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

**· After skin contact** Generally the product does not irritate the skin.

**· After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.

(Contd. on page 3)

USA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/10/2015

Reviewed on 02/09/2015

Trade name: Enzyme Conjugate

(Contd. of page 2)

- **After swallowing** Immediately call a doctor.
- **Most important symptoms and effects, both acute and delayed** Breathing difficulty
- **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.
- **Advice for firefighters**
- **Protective equipment:** Mount respiratory protective device.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **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).  
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.

## 7 Handling and storage

- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.  
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:** 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.

(Contd. on page 4)

USA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 02/10/2015

Reviewed on 02/09/2015

Trade name: Enzyme Conjugate

(Contd. of page 3)

- Control parameters

- Components with limit values that require monitoring at the workplace:

**54-64-8 Thimerosal**

REL	Short-term value: C 0.1 mg/m <sup>3</sup>
TLV	0.1 mg/m <sup>3</sup>
	Skin; BEI

- 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.

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.

- 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: Blue

Odor: Odorless

pH-value at 20 °C: 7

- Change in condition

Melting point/Melting range: undetermined

Boiling point/Boiling range: undetermined

Flash point: Not applicable

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: Not miscible or difficult to mix

(Contd. on page 5)

USA

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 02/10/2015

Reviewed on 02/09/2015

Trade name: Enzyme Conjugate

(Contd. of page 4)

<b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	89.3 %
<b>Solids content:</b>	10.6 %
<b>Other information</b>	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

## 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)**

3844-45-9	C.I. Acid Blue 9	3
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- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **Target organs:**

Skin.

Respiratory tract.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

(Contd. on page 6)

USA

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 02/10/2015

Reviewed on 02/09/2015

**Trade name: Enzyme Conjugate**

(Contd. of page 5)

- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
  - Water hazard class 2 (Self-assessment): hazardous for water.
  - Do not allow product to reach ground water, water course or sewage system.
  - Danger to drinking water if even small quantities leak into the ground.
- **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

· <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>DOT, ADR, ADN, IMDG, IATA</b>	Void
· <b>Class</b>	
· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b>	Void
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	-

USA

(Contd. on page 7)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 02/10/2015

Reviewed on 02/09/2015

Trade name: Enzyme Conjugate

(Contd. of page 6)

### 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):

54-64-8 Thimerosal

- TSCA (Toxic Substances Control Act):

7732-18-5 water

9048-46-8 Bovine Serum Albumin

7647-14-5 sodium chloride

54-64-8 Thimerosal

3844-45-9 C.I. Acid Blue 9

9005-64-5 Tween 20

7558-79-4 disodium hydrogenorthophosphate

83-07-8 4-amino-2,3-dimethyl-1-phenyl-3-pyrazolin-5-one

7778-77-0 potassium dihydrogenphosphate

7447-40-7 potassium chloride

- 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

- Water hazard class: Water hazard class 2 (Self-assessment): 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.

- 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  
(Contd. on page 8)

USA

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 02/10/2015

Reviewed on 02/09/2015

**Trade name: Enzyme Conjugate**

(Contd. of page 7)

**· Date of preparation / last revision** 02/10/2015 / -**· 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)

Acute Tox. 3: Acute toxicity, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

**· \* Data compared to the previous version altered.**

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