

Product code	Description
<b>1662801</b> <b>1662801EDU</b>	<b>Western Blot Temperature Sensitive Compts Kit</b>
Components:	
1662804	Mouse Anti-Myosin Light Chain Antibody
10004501	Goat anti-Mouse HRP, Lyophilized
10004502	Immun-Blot® Reagent A, 10 ml
10004503	Immun-Blot® Reagent B, 0.6 ml

Printing date 02/03/2015

Reviewed on 02/02/2015

**1 Identification**

- **Product identifier**
- **Trade name:** **Mouse Anti-Myosin Light Chain Antibody**
- **Catalog or product number:** 1662804, 1662804EDU, 10004499, 10005367
- **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
- **Information department:**  
Technical services, customer support  
tsg\_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 (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).
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC not applicable**
- **Information concerning particular hazards for human and environment:**  
The product does not have 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:** Void
- **Hazard pictograms:** Void
- **Hazard statements:** Void
- **Signal word:** 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.

Trade name: **Mouse Anti-Myosin Light Chain Antibody**

(Contd. of page 1)	
<b>· Listing of dangerous and non-hazardous components:</b>	
61-36-23-4 (d)-trehalose	50-100%
9048-46-8 Bovine Serum Albumin	5-10%
MLC Antibody	2.5-5%
7732-18-5 water	2.5-5%

· **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.
- **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.
- **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**

- **Precautions for safe handling:** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.

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Trade name: **Mouse Anti-Myosin Light Chain Antibody**

(Contd. of page 2)	
<b>· Conditions for safe storage, including any incompatibilities</b>	
· <b>Storage</b>	
· <b>Information to be met by storerooms and receptacles:</b> According to product specification	
· <b>Further information about storage in one common storage facility:</b> Not required.	
· <b>Further information about storage conditions:</b> None.	
· <b>Specific end use(s):</b> 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 product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **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 or 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:** Not applicable
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.

(Contd. on page 4) USA

Trade name: **Mouse Anti-Myosin Light Chain Antibody**

(Contd. of page 3)

<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
Lower:	Not determined.
Upper:	Not determined.
<b>Vapor pressure:</b>	Not determined.
<b>Density:</b>	Not determined
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with Water:</b>	Fully miscible
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
dynamic:	Not determined.
kinematic:	Not determined.
<b>Solvent content:</b>	
Organic solvents:	0.0 %
Water:	2.9 %
<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.
  - **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.

(Contd. on page 5) USA

Trade name: **Mouse Anti-Myosin Light Chain Antibody**

(Contd. of page 4)

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.

<b>Carcinogenic categories</b>	
· <b>IARC (International Agency for Research on Cancer)</b>	None of the ingredients is listed.
· <b>NTP (National Toxicology Program)</b>	None of the ingredients is listed.
· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>	None of the ingredients is listed.
<b>Target organs:</b>	Not applicable.

**12 Ecological information**

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

· <b>UN-Number</b>	Void
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>UN proper shipping name</b>	Void
· <b>ADR, ADN, IMDG, IATA</b>	Void

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Printing date 02/03/2015

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Reviewed on 02/02/2015

Trade name: **Mouse Anti-Myosin Light Chain Antibody**

Trade name: **Mouse Anti-Myosin Light Chain Antibody**

(Contd. of page 5)

· <b>Transport hazard class(es)</b>	Void
· <b>ADR, ADN, IMDG, IATA Class</b>	Void
· <b>Packing group</b>	Void
· <b>ADR, IMDG, IATA</b>	Void
· <b>Environmental hazards:</b>	No
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.

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**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
- **Diagnosis Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000**
- **Date of preparation / last revision:** 02/03/2015 / -
- **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
  - 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.**

**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):**

9048-46-8 | Bovine Serum Albumin

7732-18-5 | water

· **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:** Generally not hazardous for water.

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

(Contd. on page 7)

USA

**1 Identification**

- **Product identifier**
- **Trade name:** Goat anti-Mouse HRP, Lyophilized
- **Catalog or product number:** 10004501, 10005369
- **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
- **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 (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).
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC not applicable**
- **Information concerning particular hazards for human and environment:**  
The product does not have 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:** 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.

(Contid. on page 2) USA

**Trade name:** Goat anti-Mouse HRP, Lyophilized

(Contid. of page 1)

· Listing of dangerous and non-hazardous components:	
6138-23-4 (L-tyrosine)	50-100%
9048-46-8 Bovine Serum Albumin	5-10%
Goat anti-mouse IgG(H+L) Horseradish Peroxidase Conjugate	2.5-5%
7732-18-5 water	2.5-5%

· **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.
- **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.
- **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:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Dispose contaminated material as waste according to item 13.
- **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**

- **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

(Contid. on page 3) USA

Trade name: Goat anti-Mouse HRP, Lyophilized

- 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.

(Contd. of page 2)

**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 product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective and hygienic equipment
- General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed.
- 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: Solid
- Form: White
- Color: Odorless
- Odor: Not determined.
- Odour threshold: Not applicable.
- pH-value:
- Change in condition
- Melting point/Melting range: undetermined
- Boiling point/Boiling range: undetermined
- Flash point: Not applicable
- Flammability (solid, gaseous) Not determined.
- Ignition temperature:
- Decomposition temperature: Not determined.
- Auto igniting: Product is not selfigniting.
- Danger of explosion: Product does not present an explosion hazard.
- Explosion limits: Not determined.
- Lower:

(Contd. on page 4)

USA

Trade name: Goat anti-Mouse HRP, Lyophilized

Upper:	Not determined.
Vapor pressure:	Not applicable.
Density:	Not determined
Relative density:	Not determined.
Vapour density:	Not applicable.
Evaporation rate:	Not applicable.
Solubility in / Miscibility with Water:	Fully miscible
Partition coefficient (n-octanol/water):	Not determined.
Viscosity: dynamic: kinematic:	Not applicable. Not applicable.
Solvent content: Organic solvents: Water:	0.0 % 2.9 %
Solids content: Other Information:	95.4 % No further relevant information available.

(Contd. of page 3)

**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.
- 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.

(Contd. on page 5)

USA

Trade name: Goat anti-Mouse HRP, Lyophilized

(Contd. of page 4)

- **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.
- **Target organs:** Not applicable.

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (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.
- **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

(Contd. on page 6)

USA

Trade name: Goat anti-Mouse HRP, Lyophilized

(Contd. of page 5)

- **Transport hazard class(es)**  
DOT, ADR, ADN, IMDG, IATA  
Void
- **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.
- **Transport/Additional information:**  
Not dangerous according to the above specifications.
- **UN "Model Regulation":**  
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**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):**  
9048-46-8 Bovine Serum Albumin  
7732-18-5 water
- **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 1 (Self-assessment): slightly hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

(Contd. on page 7)

USA

Printing date 02/03/2015

Reviewed on 02/02/2015

**Trade name:** Goat anti-Mouse HRP, Lyophilized

(Contd. of page 6)

**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

- **Diagnosis Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547:** 1(510) 724-7000

- **Date of preparation / last revision** 02/03/2015 / -

- **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.**

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USA

Printing date 02/03/2015

Reviewed on 02/02/2015

**1 Identification**

- **Product identifier**
- **Trade name:** Immuno-Blot® Reagent A, 10 ml
- **Catalog or product number:** 10004502
- **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
- **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).
- **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**
  - GHS label elements Void
  - Hazard pictograms Void
  - Signal word Void
  - Hazard statements Void
- **Additional information:** Contact with acids may cause release of toxic gases
- **Emergency overview:**
- **Routes of exposure:** Ingestion
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable
- **vPvB:** Not applicable.

USA  
(Contd. on page 2)



Trade name: **Immun-Biot® Reagent A, 10 ml**

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**3 Composition/information on ingredients**

- **Chemical characterization: Substances**
  - **CAS No. Description:**  
111-46-6 2,2'-oxybisethanol
  - **Identification number(s):**
  - **EC number:** 203-872-2
  - **Index number:** 603-140-00-6
  - **Chemical characterization: Mixtures**
  - **Description:** Mixture of the substances listed below with non-hazardous additions.
- |   |        |         |
|---|--------|---------|
| · <b>Listing of dangerous and non-hazardous components:</b> | Xn R22 | 50-100% |
|---|--------|---------|
- **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:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Immediately call a 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.  
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 of 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.

(Contd. on page 3) USA

Trade name: **Immun-Biot® Reagent A, 10 ml**

See Section 13 for disposal information.

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**7 Handling and storage**

- **Precautions for safe handling:** 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**
- **Components with limit values that require monitoring at the workplace:**  
111-46-6 2,2'-oxybisethanol  
WEEL (1) 10 mg/m<sup>3</sup>
- **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:** 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:** Nearly odorless
- **Odour threshold:** Not determined.
- **pH-value:** Not determined.

(Contd. on page 4) USA

Trade name: **Immun-Biot® Reagent A, 10 ml**

(Contd. of page 3)

· <b>Change in condition</b> Melting point/Melting range: Boiling point/Boiling range:	-8,5 °C 2,45 °C > 100 °C
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous)</b>	225 °C
· <b>Ignition temperature:</b>	Not determined.
· <b>Decomposition temperature:</b>	Product is not selfigniting.
· <b>Auto igniting:</b>	Product does not present an explosion hazard.
· <b>Danger of explosion:</b>	
· <b>Explosion limits:</b> Lower: Upper:	0,7 Vol % 22 Vol %
· <b>Vapor pressure at 20 °C:</b>	0,03 hPa
· <b>Density at 20 °C:</b> Relative density Vapour density Evaporation rate	1,12 g/cm <sup>3</sup> Not determined. Not determined. Not determined.
· <b>Solubility in / Miscibility with</b> Water:	Fully miscible
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b> dynamic: kinematic:	Not determined. Not determined.
· <b>Solvent content:</b> Organic solvents:	99,7 %
· <b>Solids content:</b>	0,3 %
· <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

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Trade name: **Immun-Biot® Reagent A, 10 ml**

(Contd. of page 4)

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values for hazardous components per OSHA criteria:**  
111-46-6 2,2'-oxybisethanol
- Oral LD50 12565 mg/kg (rat)
- Dermal LD50 11890 mg/kg (rbt)
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:**  
No irritant effect.  
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.
- **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.
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

(Contd. on page 6) USA

Printing date 02/03/2015

Reviewed on 02/02/2015

Printing date 02/03/2015

Reviewed on 02/02/2015

Trade name: **Immun-Blot® Reagent A, 10 ml**

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**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	Void
· DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	Void
· DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	Void
· DOT, ADR, ADN, IMDG, IATA	Void
· Class	Void
· Packing group	Void
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	No
· Marine pollutant:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk, according to Annex II of MARPOL 73/78 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):**  
All ingredients are listed.

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Reviewed on 02/02/2015

Trade name: **Immun-Blot® Reagent A, 10 ml**

(Contd. of page 6)

- **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	50-100

- **Water hazard class:** Water hazard class 1 (Self-assessment); slightly 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
- **Date of preparation / last revision:** Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000
- **Diagnosis 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)
- **IMO:** International Maritime Code for Dangerous Goods
- **DOT:** Department of Transportation
- **IATA:** International Air Transport Association
- **ACGIH:** American Conference of Governmental Industrial Hygienists
- **EINECS:** European Inventory of Existing Commercial Substances
- **ELINCS:** European List of Notified Chemical Substances
- **CAS:** Chemical Abstracts Service (division of the American Chemical Society)
- **LC50:** Lethal concentration, 50 percent
- **LD50:** Lethal dose, 50 percent

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

USA

**1 Identification**

- Product identifier
- Trade name: **Immun-Blot® Reagent B, 0.6 ml**
- Catalog or product number: 10004503
- 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
- 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).
- Classification according to Directive 67/548/EEC or Directive 1999/45/EC not applicable
- Information concerning particular hazards for human and environment:  
The product does not have 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 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: Substances
- CAS No. Description:  
7732-18-5 water

Trade name: **Immun-Blot® Reagent B, 0.6 ml**

- Identification number(s):  
EC number: 231-791-2
  - Chemical characterization: Mixtures
  - Description: Mixture of the substances listed below with non-hazardous additions.
  - Listing of dangerous and non-hazardous components:  
7722-84-1 | hydrogen peroxide solution
- |                                 |         |
|---------------------------------|---------|
| C R35<br>Xn R2/02<br>O R8<br>R5 | 2.5-5%  |
| 7732-18-5   water               | 50-100% |
- 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.
- 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  
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.
- 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.  
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.
- 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.

Trade name: **Immun-Blot® Reagent B, 0.6 ml**

See Section 13 for disposal information.

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**7 Handling and storage**

- **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:**
- 7722-84-1 hydrogen peroxide solution
 

PEL ( )	1.4 mg/m <sup>3</sup> , 1 ppm
REL ( )	1.4 mg/m <sup>3</sup> , 1 ppm
TLV ( )	1.4 mg/m <sup>3</sup> , 1 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** 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.

(Contd. on page 4)

USA

Trade name: **Immun-Blot® Reagent B, 0.6 ml**

(Contd. of page 3)

· <b>Change in condition</b>	0 °C
· <b>Melting point/ Melting range:</b>	undetermined
· <b>Boiling point/ Boiling range:</b>	Not applicable
· <b>Flash point:</b>	Not applicable
· <b>Flammability (solid, gaseous)</b>	Not applicable
· <b>Ignition temperature:</b>	Not determined.
· <b>Decomposition temperature:</b>	Product is not selfigniting.
· <b>Auto igniting:</b>	Product does not present an explosion hazard.
· <b>Danger of explosion:</b>	
· <b>Explosion limits:</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Vapor pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C:</b>	1.0094 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
· <b>Water:</b>	Fully miscible
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
· <b>dynamic:</b>	Not determined.
· <b>kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	0.0 %
· <b>Water:</b>	97.0 %
· <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

(Contd. on page 5)

USA

Trade name: **Immun-Blot® Reagent B, 0.6 ml**

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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.  
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)**  
7722-84-1 | hydrogen peroxide solution | 3
- **NTP (National Toxicology Program)**  
None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**  
None of the ingredients is listed.
- **Target organs:** Not applicable.

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (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.
- **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.

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USA

Trade name: **Immun-Blot® Reagent B, 0.6 ml**

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- **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**  
· ADR, ADN, IMDG, IATA | Void
- **UN proper shipping name**  
· ADR, ADN, IMDG, IATA | Void
- **Transport hazard class(es)**  
· ADR, ADN, IMDG, IATA | Void
- **Class**  
· ADR, ADN, IMDG, IATA | Void
- **Packing group**  
· ADR, IMDG, IATA | Void
- **Environmental hazards:**  
· Marine pollutant: No
- **Special precautions for user**  
Not applicable.
- **Transport in bulk according to Annex II of MARPOL7378 and the IBC Code**  
Not applicable.
- **Transport/Additional information:**  
Not dangerous according to the above specifications.

**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):  
7722-84-1 | hydrogen peroxide solution
- **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)**  
7722-84-1 | hydrogen peroxide solution | A3
- **MAK (German Maximum Workplace Concentration)**  
7722-84-1 | hydrogen peroxide solution | 4

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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **National regulations**· **Water hazard class:** Water hazard class 1 (Self-assessment); slightly 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

· **Date of preparation / last revision:** 02/03/2015 / -· **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

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial 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.**

USA