

## SAFETY DATA SHEET (SDS)

### SECTION 1: IDENTIFICATION OF PRODUCT (MIXTURE) AND SUPPLIER

**Product Name:** BioPlex® 2200 Instrument Rhodamine Solution

**Product Number:** 666-0005 (10 mL)

**Intended Use:** **Not for distribution to customers.** For Bio-Rad Service Personnel use. Intended for use with the Bio-Rad BioPlex® 2200 System. Read and follow BioPlex® 2200 System Instrument Manual instructions.

**Manufactured by:** Bio-Rad Laboratories, Inc.

**Address:** 6565 185th Avenue NE  
Redmond, WA 98052-5039, USA

**Website:** [www.bio-rad.com](http://www.bio-rad.com)

**Phone Number:** 1-800-2-BIORAD (1-800-224-6723); or 1-425-881-8300 (daytime PT)

**SDS e-mail contact:** [ro-sds@bio-rad.com](mailto:ro-sds@bio-rad.com)

**Technical Information Contacts:** Bio-Rad provides a toll free line for technical assistance, available 24 hours a day, 7 days a week. In the United States of America and Puerto Rico, call toll free 1-800-2-BIORAD (1-800-224-6723). Outside the U.S.A., please contact your regional Bio-Rad office for assistance.  
*Refer to section 16 for non-US local Bio-Rad agent contact information.*

**Authorized Representative in the European Community:** **FRANCE:** Bio-Rad  
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92430 Marnes-la-Coquette  
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[\[fds-msds.fr@bio-rad.com\]](mailto:fds-msds.fr@bio-rad.com)

**Emergency Phone Number:** **This SDS is listed with CHEMTREC 1-800-424-9300 / 1-703-527-3887.** Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product. *Refer to section 16 for non-US local Bio-Rad agent contact information.*

### SECTION 2: HAZARDS IDENTIFICATION -- HAZARDOUS COMPONENTS

This test kit should be handled only by qualified personnel trained in laboratory procedures and familiar with their potential hazards. Specific warnings are given in the instructions for use. The absence of a specific warning should not be interpreted as an indication of safety. Refer to Section 16 for the full text of any *Risk (R)* and *Safety (S)* statement provided below.

Component *	Content
<b>BioPlex® 2200 Rhodamine Solution, 10 mL</b>	<ul style="list-style-type: none"> <li>- Phosphate buffered saline solution with <b>Tween 20</b> [C<sub>58</sub>H<sub>114</sub>O<sub>26</sub>], CAS# 9005-64-5, EC No 585-580-06-X.</li> <li>- <b>&lt; 0.2% Rhodamine</b> [C<sub>28</sub>H<sub>31</sub>N<sub>2</sub>O<sub>3</sub>•Cl], CAS# 81-88-9, EC No 201-383-9 [<b>&lt; 5% dilution is not subject to GHS, US HCS and EU 2008/1272/EC Regulation or 1999/45/EC Directive labeling requirements.</b>]</li> <li>- Preserved with <b>0.034% ProClin 300</b> (&lt;0.001% active ingredient), EC Index No 613-167-00-5 with CAS# 55965-84-9 [dilution below GHS, US HCS and EU 2008/1272/EC or 1999/45/EC regulated labeling levels].</li> <li>- Preserved with <b>&lt; 0.1% sodium azide</b> [NaN<sub>3</sub>], CAS# 26628-22-8 and EC No 247-852-1 [<b>&lt; 0.1% dilution is not subject to GHS, US HCS and EU 2008/1272/EC or 1999/45/EC regulated labeling levels.</b>]</li> </ul>

\* Not for distribution to customers. For Bio-Rad Service Personnel use only.

#### Markings according to the *United Nations (UN) Globally Harmonized System (GHS), United States Hazard Communication Standard (US HCS) and European Community (EC) 2008/1272/EC guidelines:*

This product is not subject to labeling classification or identification according to GHS guidelines, *United States Hazard Communication Standard (US HCS) and EU 2008/1272/EC Regulations* or other sources of literature known to us.

### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS -- HAZARDOUS COMPONENTS

The following information is furnished for those product hazardous constituents that require regulatory control or disclosure at the concentration found in the product. Note that the information here is often based on data from the chemical raw material (LD<sub>50</sub>,

exposure limits, etc.) and that the product contains a significantly diluted concentration in an aqueous solution, thus this assessment below has taken hazard reduction processing into consideration when possible. The GHS, US HCS and EU classifications were made according to the latest editions and expanded upon from company and literature data. Refer to Section 16 for the Key / legend to abbreviations and acronyms.

Chemical Ingredient	Data / Information
<p><b>Rhodamine B dye</b> [&lt; 0.2% w/v]</p>	<p>CAS#: 81-88-9 (100%) + RTECS#: BP3675000 (100%) +                      EC No: 201-383-9 (100%) +                      Synonyms: FD and C Red No. 19, CI Food Red 15, Basic Violet 10                      Chemical Formula: C<sub>28</sub>H<sub>31</sub>N<sub>2</sub>O<sub>3</sub>•Cl (100%) + Flash Point: NE                      LD<sub>50</sub> (oral mouse): 887 mg/kg (100%) + TLV and PEL: NE                      IATA/DOT ID: NE                      HMIS Codes: H=1, F=0, R=0 ++ RCRA Code: NE                      GHS \ US HCS \ 2008/1272/EC Classification: Not subject to EU 2008/1272/EC, US HCS and GHS regulatory requirements ++                      &lt; 0.2% <b>Rhodamine B dye</b> may be detrimental if swallowed, inhaled or in contact with skin. <b>Rhodamine B</b> is certified for use as a color additive in drugs and cosmetics by the USA Food and Drug Administration. Most organic azo dyes are potential skin sensitizers; rhodamine dyes can cause phototoxic or photoallergic reactions. Possible cancer hazard based on limited animal data; no human data is available. IARC rates rhodamine B in Group 3: the agent is <i>not classifiable as to its carcinogenicity to humans</i> and it is listed as is known to the State of California to cause Cancer (Proposition 65). Suspected reproductive toxin based on limited animal evidence. The potential for adverse health effects is unknown for the highly diluted, small volume of <b>Rhodamine B</b> in this kit, but is unlikely if handled appropriately with the requisite Good Laboratory Practices and Universal Precautions. Dispose of this material in accordance with local, regional, national and international regulation.                      EU Labeling Classification for 100% chemical concentration per Table 3.2 of 2008/1272/EC - from Annex I to Directive 67/548/EEC: Not Listed</p>
<p><b>Sodium azide</b> [&lt; 0.1% w/v]</p>	<p>CAS#: 26628-22-8 (100%) + RTECS#: VY8050000 (100%)                      EC No: 247-852-1 (100%) +                      Chemical Formula: NaN<sub>3</sub> (100%) + Flash Point: NE                      LD<sub>50</sub> (oral-rat): 27 mg/kg (100%) + LC<sub>50</sub> (inhalation-rat): 37 mg/m<sup>3</sup> (100%) +                      PEL/TLV: 0.3 mg/m<sup>3</sup> (ceiling) (100%) +                      IATA/DOT ID: UN1687, Class 6.1 (undiluted, 100%) + / IATA/DOT ID: NE (dilution) ++                      HMIS Codes: H=1, F=0, R=1 ++ RCRA Code: P105 (undiluted, 100%) +                      EU Classification per 1999/45/EC: None (due to dilution, &lt; 0.1%); S 35-36 ++                      GHS \ US HCS \ 2008/1272/EC Classification: None (due to dilution, &lt; 0.1%) ++  <b>Sodium azide</b> is a biocidal preservative, which may be detrimental if enough is ingested (quantities above those found in the kit). Avoid contact with metals; sodium azide may react with lead or copper plumbing to form highly explosive metal azides; build-up in metal plumbing has led to laboratory explosions, so flush with copious water when pouring dilute solutions down the drain to prevent such explosive build-up. The potential for adverse health effects is unknown for the highly diluted, small volume of <b>sodium azide</b> in this kit, but is unlikely if handled appropriately with the requisite Good Laboratory Practices and Universal Precautions. This material and its container must be disposed of in a safe way and in accordance with local, regional, national and international regulations.                      EU Labeling Classification for 100% chemical concentration per Table 3.2 of 2008/1272/EC - from Annex I to Directive 67/548/EEC:                      Toxic: T, Environmental Danger: N                      R 28: Very toxic if swallowed.                      R 32: Contact with acids liberates very toxic gas.                      R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.                      S (1/2-): Keep locked up and out of the reach of children.                      S 28: After contact with skin, wash immediately with plenty of soap and water.                      S 45: In case of accident or if you feel unwell, seek medical advice immediately.                      S 60: This material and its container must be disposed of as hazardous waste.                      S 61: Avoid release to the environment. Refer to special instructions/safety data sheet.</p>

Chemical Ingredient	Data / Information
<b>ProClin 300</b> [< 0.05% v/v (< 0.0015% Active Ingredient)]	Hazardous ingredient concentration in raw material: According to the supplier, Sigma-Aldrich, - the concentrated preservative is a mixture with 3-3.6% Active Ingredients in 3:1 ratio: 5-chlor-2-methyl-4-isothiazolin-3-one (C <sub>4</sub> H <sub>4</sub> ClNOS; CAS# 26172-55-4, EC# 247-500-7) and 2-methyl-4-isothiazolin-3-one (C <sub>4</sub> H <sub>5</sub> NOS; CAS# 2682-20-4, EC# 220-239-6), Index No. 613-167-00-5 and CAS# 55965-84-9. Also contains 91-94% glycol and 3.5-5% Modified Alkyl Carboxylate (no CAS# or formula given for last two). RTECS#: NE LD <sub>50</sub> (oral-rat): 862 mg/kg (100%) + PEL/TLV: NE IATA/DOT ID: UN3265, Class 8 (undiluted, 100%) + / IATA/DOT ID: NE (dilution) ++ HMIS Codes: H=1, F=0, R=0 ++ EU Classification per 1999/45/EC and 2001/59/EC: None (due to dilution, < 0.0015% Active Ingredient) ++ GHS \ US HCS \ 2008/1272/EC Classification: None (due to dilution, < 0.0015% Active Ingredient) ++ The chemical, physical and toxicological properties have not been thoroughly investigated. <b>ProClin 300</b> is a biocidal preservative, which may be detrimental if enough is ingested (quantities above those found in the kit). ProClin 300 is a skin sensitizer, prolonged or repeated exposure may cause allergic reaction in certain sensitive individuals. The potential for adverse health effects is unknown for the highly diluted, small volume of <b>ProClin 300</b> in this kit, but is unlikely if handled appropriately with the requisite Good Laboratory Practices and Universal Precautions. Dispose of this material in accordance with local, regional, national and international regulation. EU Labeling Classification for 100% chemical concentration per Table 3.2 of 2008/1272/EC - from Annex I to Directive 67/548/EEC: Toxic: T, Environmental Danger: N R 23/24/25: Toxic by inhalation, in contact with skin and if swallowed. R 34: Causes burns. R 43: May cause sensitisation by skin contact. R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. S (2-): Keep out of the reach of children. S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 28: After contact with skin, wash immediately with plenty of soap and water. S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection. S 45: In case of accident or if you feel unwell, seek medical advice immediately. S 60: This material and its container must be disposed of as hazardous waste. S 61: Avoid release to the environment. Refer to special instructions/safety data sheets.

+ The Kit Concentration was not tested; the values refer to the solution concentration as tested, designated by Percentage within parentheses.

++ The Kit Concentration was tested or the values given were estimated for the general diagnostic laboratory usage of the kit reagent dilution.

NE: Not Established or Unknown (unable to locate data); typically for concentrate form unless otherwise specified.

Abbreviations for component HMIS hazard ratings are as follows: H=Health, F=Flammability, R=Reactivity.

### Related product information:

- ◆ Refer to section 2 for the full text of any GHS \ US HCS \ 2008/1272/EC statement coded above.  
Refer to section 16 for the full text of any Risk (R) and Safety (S) statement for the above kit component concentration.
- ◆ No significant adverse health effects are expected by any route for the miscellaneous salts, buffers, water or other non-reactive ingredients, in the kit volumes and/or concentrations present [dilution not subject to US HCS, EU or GHS hazard labeling].
- ◆ Do not eat, drink or smoke when using this product.
- ◆ Wear protective gloves/protective clothing/eye protection/face protection. Take off contaminated clothing and wash before reuse.

## SECTION 4: EMERGENCY FIRST AID MEASURES

Health Effects:	Symptoms of over exposure may include headache, dizziness, congestion and breathing difficulty. Skin contact may result in dermatitis and may cause allergic skin reaction upon repeated exposure; generally at concentrations and volumes that greatly exceed that of this kit. May be harmful if enough is ingested (generally quantities above those found in the kit). Suspected of causing cancer.
Eye Contact:	Flush eyes with copious water for at least 15 minutes. Ensure adequate flushing by separating the eyelids with fingers while flushing with water. OBTAIN MEDICAL ATTENTION.

Skin Contact:	Remove contaminated clothing. Flush skin with copious water and wash affected area with soap and water. If blood-to-blood contact occurs, or if more severe symptoms develop, consult a physician.
Inhalation:	Remove person from exposure area to fresh air. If breathing becomes difficult, immediately call for emergency medical assistance. Treat symptomatically and supportively. Generally, this aqueous product is not a significant inhalation hazard in the kit volumes and concentrations present.
If Swallowed:	If ingested, rinse out mouth thoroughly with water, provided the person is conscious, and OBTAIN MEDICAL ATTENTION. Call a physician or the local poison control center. Treat symptomatically and supportively. If vomiting occurs, keep head lower than hips to prevent aspiration.
Notes to Physician:	According to the OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030), Universal Precautions apply. Persons handling human blood source samples should be offered hepatitis B vaccination prior to working with human source material.

## SECTION 5: FIREFIGHTING MEASURES

Extinguishing Media:	Use extinguishing media appropriate for the surrounding fire.
Hazardous Combustion Products:	Oxides of carbon or nitrogen may form when heated to decomposition.
Special Firefighting Procedures:	Conventional firefighting full protective equipment (with NIOSH-approved self-contained breathing apparatus) and procedures appropriate for the surrounding fire should be sufficient.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

- ◆ Avoid direct contact with skin, eyes, mucous membranes and clothing by wearing appropriate lab Personal Protective Equipment (PPE) including gloves, lab coat and eye/face protection.
- ◆ In the event of a hazardous material spill, contain the spill if it is safe to do so and immediately move to a safe area, free from potential aerosols, to decontaminate and/or safely remove any contaminated clothing, as necessary. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Isolate the hazard area and ventilate if appropriate. Ensure that appropriate spill cleanup materials and PPE are available and used.
- ◆ Follow established laboratory policy and applicable CDC/NIH biosafety and/or OSHA/WISHA hazardous material spill and/or NFPA/Fire Code guidelines for appropriate hazardous chemical and/or biological material spill response and cleanup. Avoid release to the environment.
- ◆ Wear appropriate PPE. Clean the spill area with water and wipe dry. Spills can also be absorbed with appropriate inert materials (e.g. spill pillows, absorbent pads, etc.), which are secured in an appropriate, labeled, sealed container. Material used to absorb the spill may require hazardous material waste disposal. Infectious, Chemical and Laboratory wastes must be handled and discarded in accordance with all local, regional, national and international regulations.
- ◆ Refer to Sections 8 and 13 for more specifics.

## SECTION 7: HANDLING AND STORAGE INFORMATION

Handling:	This test kit should be handled only by qualified personnel trained in laboratory procedures and familiar with their potential hazards. Follow proper Good Laboratory Practices and safety guidelines for handling chemical, biological and laboratory hazards. Do not smoke, eat, or drink in areas where patient samples and kit reagents are handled. Wash your hands after use. Wear appropriate personal protective equipment (PPE) including gloves, lab coat or equivalent and eye/face protection. Keep containers tightly closed; avoid splashing, spills and the generation of aerosols. Handle all human source materials, specimens and equipment used to perform the operations as though they were capable of transmitting infectious disease, as per <i>Standard</i> and <i>Universal Precautions</i> . All personal protective equipment should be removed before leaving the work area. Refer to Section 8 for more specifics. Avoid release to the environment. Do not allow undiluted product hazardous chemical ingredient or large quantities of it to reach ground water or water course. Consult with your Environmental Health & Safety Office for assistance.
Storage:	Store the kit components as specified in the product instructions / package insert provided with the test kit or in the instrument operation manual.

Caution, consult accompanying documents. Read and follow *BioPlex<sup>®</sup> 2200 System Instrument Manual* instructions.

Not for distribution to customers. For Bio-Rad Service Personnel use. Intended for use with the Bio-Rad BioPlex<sup>®</sup> 2200 System.

## SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION MEASURES

Control Parameters – Component chemicals with limit values that require monitoring at the workplace:

<b>Sodium Azide [CAS# 26628-22-8]:</b>		
REL (United States)	Short-term value: C 0.3** mg/m <sup>3</sup> , C 0.1* ppm	*as HN <sub>3</sub> vapor; **as NaN <sub>3</sub> ; Skin
TLV (United States)	Short-term value: C 0.29** mg/m <sup>3</sup> , C 0.11* ppm	*as HN <sub>3</sub> vapor **as NaN <sub>3</sub>
EL (Canada (LSG) English)	Short-term value: C 0,29* mg/m <sup>3</sup> , C 0,11**ppm	*sodium azide; **hydrazoic acid vapour
IOELV (European Union)	Short-term value: 0,3 mg/m <sup>3</sup> Long-term value: 0,1 mg/m <sup>3</sup>	Skin Skin
WEL (United Kingdom)	Short-term value: 0,3 mg/m <sup>3</sup> Long-term value: 0,1 mg/m <sup>3</sup>	(as NaN <sub>3</sub> ) Sk (as NaN <sub>3</sub> ) Sk
NES (AUS)	0.3* mg/m <sup>3</sup> , 0.11 ppm	*Peak limitation
VME (France)	Short-term value: 0,3 mg/m <sup>3</sup> , 0,1 ppm	risque de pénétration percutanée
VL (Belgium, (France)	Short-term value: 0,3 mg/m <sup>3</sup> Long-term value: 0,1 mg/m <sup>3</sup>	D, M D, M
AGW (Germany)	0,2 mg/m <sup>3</sup>	2(I);DFG
MAK (Austria, (Germany))	Short-term value: 0,3 mg/m <sup>3</sup> Long-term value: 0,1 mg/m <sup>3</sup>	
TWA (Italy)	Short-term value: C 0,29 mg/m <sup>3</sup> , C 0,11* ppm A4; sodio azide; *come azido idrazonico, vapore	
MAK (Switzerland, (Germany))	Short-term value: 0,4 e mg/m <sup>3</sup> Long-term value: 0,2 e mg/m <sup>3</sup>	
GV (Denmark)	0,1 mg/m <sup>3</sup>	EH
MAK (Netherlands)	Short-term value: 0,3 mg/m <sup>3</sup> Long-term value: 0,1 mg/m <sup>3</sup>	
OEL (Sweden)	Short-term value: 0,3 mg/m <sup>3</sup> Long-term value: 0,1 mg/m <sup>3</sup>	H H

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

The following personal protective equipment (PPE) is recommended to prevent blood or other potentially infectious or hazardous materials from reaching the user's work or street clothes, skin, mouth, mucous membranes and eyes, or hazardous inhalation, under normal conditions of use and for the time during which the protective equipment is utilized:

Ventilation:	Adequate lab ventilation is required.
Eye / Face Protection:	Wear ANSI approved safety glasses, goggles or face shield with safety glasses or goggles. Contact lenses should not be worn when handling lab hazards.
Protective Gloves:	Suitable gloves must be worn at all times when handling kit reagents or patient samples to provide skin protection from splash and intermittent contact. Synthetic gloves, such as Nitrile, Neoprene and Vinyl, are recommended because they are sturdy, effective and contain no natural latex ingredients associated with latex glove allergic reactions. Disposable (single use) gloves should be changed often and never be reused. Wash hands thoroughly after removing gloves.
Protective Clothing:	Wear a lab coat, clinic jacket, gown, apron and/or smock. Disposable clothing is strongly recommended when handling biohazardous material.
Respiratory Protection:	Not Required.
Other:	All personal protective equipment should be removed before leaving the work area and placed in an appropriately designated area or container for storage, processing, decontamination or disposal.

Note:	Occupational exposure limit values and health hazard data were given in Section 3. Environmental Controls are included in following sections.
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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Translucent fuchsia colored aqueous liquid.		
<b>Odour:</b>	No applicable information was found.	<b>Odour Threshold:</b>	Not Established.
<b>pH:</b>	Neutral, pH between 6 and 8.		
<b>Boiling Point:</b>	Undetermined.	<b>Melting Point:</b>	Undetermined.
<b>Flash Point:</b>	Not Applicable. Flammable limits: LEL/LFL is <u>Not applicable</u> ; UEL/UFL is <u>Not applicable</u> .		
<b>Evaporation rate:</b>	No applicable information was found.		
<b>Fire Hazard:</b>	Although the components have not been tested for fire hazard and explosion data, being water-based, they are not expected to be fire hazards, but some of the kit packaging materials may burn under fire conditions.		
<b>Vapor Pressure:</b>	No applicable information was found.		
<b>Vapor Density:</b>	No applicable information was found.		
<b>Relative Density:</b>	Approximately 1.		
<b>Solubility:</b>	Miscible in water.		
<b>Partition coefficient (n-octanol/water):</b>	No applicable information was found.		
<b>Auto Igniting:</b>	Product is not known to be self-igniting.		
<b>Decomposition temperature:</b>	No applicable information was found.		
<b>Viscosity:</b>	No applicable information was found.		
<b>Danger of Explosion:</b>	<b>Sodium azide</b> may react with lead or copper plumbing to form highly explosive metal azides; build-up in metal plumbing has led to laboratory explosions, so flush with copious water when pouring dilute solutions down the drain to prevent such explosive build-up.		
No Other Standard Characteristics applicable to the identification or hazards of the product are known.			

## SECTION 10: STABILITY AND REACTIVITY INFORMATION

*NOTE:* Chemical reactions that could result in a hazardous situation (e.g. generation of flammable or toxic chemicals, fire or detonation) are listed here. Although not intended to be complete, an overview of important reactions involving common chemicals is provided to assist in the development of safe work practices.

Chemical Stability / Reactivity:	Components are stable with no known inherent significant reactivity.
Conditions and/or Materials to Avoid:	<b>Sodium azide</b> may react with lead or copper plumbing to form highly explosive metal azides; build-up in metal plumbing has led to laboratory explosions, so flush with copious water when pouring dilute solutions down the drain to prevent such explosive build-up.
Hazardous Decomposition Products:	Oxides of carbon or nitrogen may form when heated to decomposition.
Hazardous Polymerization:	Has not been reported to occur.

## SECTION 11: TOXICOLOGICAL INFORMATION -- GENERAL COMPOSITE

Refer to Sections 2 and 3 for the kit component concentrations. The composite toxicological information for this product is:

### Acute Health Effects

Toxicity:	May be detrimental in contact with skin and if enough is ingested (typically in quantities above those found in the kit).
Primary Irritant Effect:	No significant irritant effect known.
Serious Eye Damage / Irritation:	No significant irritant effect known.
STOT-Single Exposure:	No applicable information was found.
STOT-Repeated Exposure:	No applicable information was found.
Aspiration Hazard:	No applicable information was found.
Other Acute Health Effects:	No significant other acute health effect known.

### Chronic Toxicity

Sensitization:	Contains a small volume of a very dilute, sensitizing preservative ( <b>ProClin 300</b> ); though the potential for an allergic response is greatly reduced by the dilution, sensitization threshold is unknown, thus handle accordingly Contains a small volume of a very dilute, sensitizing chemical ( <b>Rhodamine B Dye</b> ); though the potential for an allergic response is greatly reduced by the dilution, sensitization threshold is unknown, thus handle accordingly.
Carcinogenicity:	<b>Rhodamine B Dye</b> is Known to the State of California to cause cancer. There is limited evidence that this material contains constituent(s) that causes cancer in laboratory animals. There is no or insufficient evidence that this material causes cancer in humans.
Germ Cell Mutagenicity:	No applicable information was found.
Reproductive hazard:	Suspected reproductive toxin based on limited animal evidence.

Additional Toxicological Information: To the best of our knowledge, the chemical, physical and toxicological properties have NOT been thoroughly investigated for some of the component chemicals and/or mixtures.

## SECTION 12: ECOLOGICAL INFORMATION

This product was not tested. The following assessment is based on information for the ingredients.	
Ecotoxicity:	<b>100% Sodium Azide [CAS# 26628-22-8]*:</b> Fish LC <sub>50</sub> - Lepomis macrochirus - 0.68 mg/l - 96 h Daphnia EC <sub>50</sub> - Daphnia pulex (Water flea) - 4.2 mg/l - 48 h <i>* Source: Raw Material Vendor Safety Data Sheet</i>
Persistence and degradability:	No information found.
Bioaccumulation potential:	No information found.
Mobility in soil:	No information found.
PBT and vPvB assessment:	No information found.
Other adverse affects:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Avoid release to the environment.

*General notes:* Water hazard class 1 (Self-assessment): slightly hazardous for water.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Disposal of hazardous and/or laboratory wastes, product or packaging must be conducted in accordance with all applicable local, regional, national and international regulations. This section specifies the general and United States RCRA requirements. Processing, use or contamination of the kit components may change waste management requirements and options. Contact your Environmental Health & Safety Office for your specific disposal procedures.

**Recommended Product Disposal:** Sodium azide may react with lead or copper plumbing to form highly explosive metal azides; build-up in metal plumbing has led to laboratory explosions, so flush with copious water when pouring dilute solutions down the drain to prevent such explosive build-up; check your applicable ordinances accordingly.

Do not allow undiluted product or large quantities of it to reach ground water or water course.

**Recommended Unclean Packaging Disposal:** Dispose in accordance with all applicable local, regional, national and international regulations.

**SECTION 14: TRANSPORT INFORMATION**

Shipping of product, packaging and waste must be conducted in accordance with all applicable local, regional, national and international regulations. Processing, use or contamination of the kit components may change shipping requirements and options. Contact your Environmental Health & Safety Office for your specific shipping procedures.

**Recommended Unused Product Multi-Modal Transportation:** According to US DOT, IATA and UN "Model Regulations", the product must be transported as follows: No known transport restrictions.

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

**SECTION 15: REGULATORY INFORMATION**

**Composite HMIS Rating:** Health: 1 Flammability: 0 Reactivity: 1

**California Proposition 65:** WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

Chemical(s) Known to cause Cancer: **Rhodamine B** aqueous solution, EC No. 201-383-9, CAS# 81-88-9

Chemicals known to cause reproductive Toxicity: The Product does not contain listed substances.

**Carcinogenicity Categories:**

IARC (International Agency for Research on Cancer): **IARC Group 3**, *The Agent is NOT CLASSIFIABLE as Carcinogenic to Humans*: **Rhodamine B**, CAS# 81-88-9.

NTP (National Toxicity Program): The Product does not contain listed ingredients. The Product does not contain listed ingredients.

ACGIH TLV-CAR (Threshold Limit Value established by American Conference of Governmental Industrial Hygienists): The Product does not contain listed ingredients.

OSHA Subpart Z (Occupational Safety and Health Administration, U.S. Department of Labor) The Product does not contain listed ingredients.

**US Food and Drug Administration:** **Rhodamine B** is certified for use as a color additive in drugs and cosmetics by the USA Food and Drug Administration.

**National Regulations:**

**WHMIS Classification:** This SDS contains the required information in accordance with the **Workplace Hazardous Materials Information System (WHMIS) Canadian Standard** for the hazard classification criteria for this product.

**Mexican Standard:** This SDS contains the required information for preparation in accordance with the **Mexican Standard (NMX-R-019-SCFI-2011) SISTEMA ARMONIZADO DE CLASIFICACIÓN Y COMUNICACIÓN DE PELIGROS DE LOS PRODUCTOS QUÍMICOS GLOBALLY HARMONIZED SYSTEM (GHS)**.



**Australian Code:** This SDS contains the required information for preparation in accordance with the *Australian Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals* under Section 274 of the **Work Health and Safety Act**. *Australian Inventory of Chemical Substances:* All pertinent ingredients are listed.

**Korean Code:** This SDS contains the required information in accordance with the **Korean Public Notice 2008-26** for the hazard classification criteria for this product.

**Water hazard class:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

**Markings according to European Community 1999/45/EC, 2001/59/EC, 2001/60/EC, 2006/102/EC guidelines:**

This product is not subject to EU labeling classification or identification according to EU Directives 1999/45/EC, 2001/59/EC, 2001/60/EC, 2006/102/EC and other sources of literature known to us.

### SECTION 16: OTHER INFORMATION

**Risk Phrases:** None, due to dilution

**Safety Phrases:** None, due to dilution

This test kit should be handled only by qualified personnel trained in laboratory procedures and familiar with their potential hazards. Specific warnings are given in the instructions for use. The absence of a specific warning should not be interpreted as an indication of safety.

Not for distribution to customers. For Bio-Rad Service Personnel use. This product is intended for use with the Bio-Rad BioPlex<sup>®</sup> 2200 System.

Sources of key data used to compile the Safety Data Sheet:

Raw Material Vendor Safety Data Sheets

*United Nations* (UN) Globally Harmonized System (GHS)

*United States OSHA* Hazard Communication Standard (US HCS) 1910.1200

*Canadian* Workplace Hazardous Materials Information System (WHMIS)

*European Community* (EC) Regulations 2008/1272/EC, 2010/453/EC, 2006/1907/EC

*Mexican* Standard (NMX-R-019-SCFI-2011)

*Australian* Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Section 274 of the Work Health and Safety Act)

EU Directives 1999/45/EC, 2001/59/EC, 2001/60/EC, 2006/102/EC

Registry of Toxic Effects of Chemical Substances (RTECS)

International Agency for Research on Cancer (IARC)

American Conference of Governmental Industrial Hygienists (ACGIH)

Occupational Safety and Health Administration, U.S. Department of Labor (OSHA)

National Toxicity Program (NTP)

National Institute for Occupational Safety and Health (NIOSH)

World Health Organization. *Laboratory Biosafety Manual*

CDC/NIH *Biosafety in Microbiological and Biomedical Laboratories*

*Australian Inventory of Chemical Substances* (ACIS) [7-27-2012]

California Proposition 65

**Chemical safety assessment:** Mixtures covered in this SDS were classified using the US HCS, EU Regulation 1272/2008/EC and/or UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Fourth edition unless otherwise specified.

Key / legend to abbreviations and acronyms used in the safety data:

ACGIH – American Conference of Governmental Industrial Hygienists

ACIS – Australian Inventory of Chemical Substances

ANSI – American National Standards Institute

CAS – Chemical Abstracts Service

CDC – Centers for Disease Control, USA

CNS – Central Nervous System

DOT – Department of Transportation

EC<sub>50</sub> – half maximal effective concentration

EU – European Union

GHS – Globally Harmonized System

IARC – International Agency for Research on Cancer

IATA – International Air Transport Association  
ICAO - International Civil Aviation Organization  
IDLH – Immediately Dangerous to Life or Health  
IMDG – International Maritime Dangerous Goods  
IPCS – International Programme on Chemical Safety  
LC<sub>50</sub> – median lethal concentration, 50%  
LD<sub>50</sub> – median lethal dose, 50%  
NIOSH – National Institute for Occupational Safety and Health  
NTP – National Toxicity Program  
OEL – Occupational Exposure Limit  
PEL – Permissible Exposure Limit  
ppm – parts per million  
RTECS – Registry of Toxic Effects of Chemical Substances  
SDS – Safety Data Sheet  
STEL – Short Term Exposure Limit  
TLV/TWA – Threshold Limit Value / Time-Weighted Average  
UN – United Nations  
US EPA – United States Environmental Protection Agency  
US HCS – Hazard Communication Standard, USA  
US OSHA – Occupational Safety and Health Administration, U.S. Department of Labor  
WHMIS – Workplace Hazardous Materials Information System (Canadian)  
WHO – World Health Organization (United Nations)

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

**This Revision:** Updated, reformatted and added new US HCS/GHS information.

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**Bio-Rad Laboratories:**

**Department issuing SDS:** Environmental Health and Safety.

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Redmond, WA 98052, USA, Phone: 425-881-8300 (8 am to 5 pm PT), [ro-sds@bio-rad.com](mailto:ro-sds@bio-rad.com)

**Customer support contact:** Clinical Diagnostics Group, 4000 Alfred Nobel Drive, Hercules, CA 94547, USA  
Phone: 1-800-224-6723, [www.bio-rad.com/diagnostics](http://www.bio-rad.com/diagnostics)

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