# SAFETY DATA SHEET (SDS)

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

**Product Name:** **Pathfinder® HSV Type 2 Monoclonal Antibody**

**Product Number:** **30491** (5 mL)

**Intended Use:** These are kit separately purchased components, identical to those found in the kits, which are to be used exclusively with these Bio-Rad Laboratories kits: **Pathfinder® Herpes Simplex Virus Types 1 and 2 DFA** (catalog # 25215). Refer to the *Instructions For Use, Package Insert* for additional product information.

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

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

**Website:** www.bio-rad.com

**Phone Number:** 1-8001-2-BIORAD (1-800-224-6723); or (425) 881-8300 (daytime PT)

**SDS e-mail contact:** 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:** ***FRANCE :*** *Bio-Rad Laboratories*
3 boulevard Raymond Poincaré
92430 Marnes-la-Coquette
Phone: +33 (0) 1 47 95 60 00 / Fax: +33 (0) 1 47 41 91 33
[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.***

## HAZARDS IDENTIFICATION -- HAZARDOUS COMPONENTS (2):

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 |
|---|---|
| **HSV Type 2 Monoclonal Antibody,** 5 mL<br>*(Optional Materials Available)*<br>**WARNING** | - Fluorescein-conjugated murine antibody to HSV-2 in a phosphate buffered saline solution with bovine serum albumin, an inhibitor of nonspecific staining, and:<br>- **< 0.1% Evans blue counterstain** [$C_{34}H_{24}N_6O_{14}S_4 \bullet 4Na$], EC No 206-242-5, CAS# 314-13-6 [dilution not subject to GHS and EU 2008/1272/EC Regulation or 1999/45/EC Directive labeling requirements].<br>- Preserved with **0.1% sodium azide** [$NaN_3$], EC No 247-852-1 and CAS# 26628-22-8 **[**GHS / 2008/1272/EC Classification: WARNING; H303, H313; P312.**]** [EU Classification per 1999/45/EC: Harmful: Xn; R 22; S 24-35-37 (dilution < 1%, but ≥ 0.1%).] |

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

This product has been conservatively classified and labeled in accordance with applicable *United Nations (UN)* GHS, *United States* Hazard Communication Standard (HCS) and related *European Community (EC)* 2008/1272/EC guidelines. The following regulated hazardous chemical concentrations are found in product component(s):

**0.1% sodium azide** [$NaN_3$], CAS# 26628-22-8 and EC No 247-852-1 (dilution < 1%, but ≥ 0.1%).

***GHS - 2008/1272/EC Classification*** *[* denotes precautionary statements included on the product label]:*

| | |
|---|---|
| Label(s): | *No Pictogram; none required due to dilution.* |
| Signal Word: | **WARNING** |
| Label Hazard Statement: | **H303: May be harmful if swallowed.**<br>**H313: May be harmful in contact with skin.** |
| Supplemental Hazard Statement: | *None Specified*. |
| Precautionary Statement – Prevention: | **P264**: Wash thoroughly after handling. |
| Precautionary Statement – Response: | **P312**: Call a POISON CENTER or doctor/physician if you feel unwell. * |
| Precautionary Statement – Storage: | *None Specified* |
| Precautionary Statement – Disposal: | **P501**: Dispose of contents and container in accordance to local, regional, national and international regulations. |

## COMPOSITION / INFORMATION ON INGREDIENTS -- HAZARDOUS COMPONENTS (3):

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 ($LD_{50}$, exposure limits, etc.) and that the product contains a significantly diluted concentration in an aqueous solution; thus, the assessment below has taken hazard reduction processing into consideration when possible. The GHS 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 |
|---|---|
| **Sodium Azide**<br>[0.1% w/v]<br><br>**WARNING** | CAS#: 26628-22-8 (100%) + RTECS#: VY8050000 (100%) +<br>EC No: 247-852-1 (100%) +<br>Chemical Formula: $NaN_3$ (100%) + Flash Point: NE<br>$LD_{50}$ (oral-rat): 27 mg/kg (100%) + $LC_{50}$ (inhalation-rat): 37 mg/m$^3$ (100%) +<br>PEL/TLV: 0.3 mg/m$^3$ (ceiling) (100%) +<br>IATA/DOT ID: UN1687, Class 6.1 (undiluted, 100%) + / IATA/DOT ID: NE (dilution) ++<br>HMIS Codes: H=2, F=0, R=1 ++ RCRA Code: P105 (undiluted, 100%) +<br>EU Classification per 1999/45/EC: Harmful: Xn; R 22; S 24-35-37 (< 1% and ≥ 0.1%) ++<br>*GHS / 2008/1272/EC Classification*: WARNING; H303, H313; P312 ++<br><br>**Sodium azide**, a biocidal preservative, may be harmful if swallowed [H303]; it has been evident to kill at low concentrations, if enough is ingested (more than supplied in kit). May be harmful in contact with skin. [H313]. May cause eye, skin or tissue irritation. May cause long lasting harmful effects to aquatic life. Avoid contact. Wash thoroughly after handling. Call a POISON CENTER or doctor/physician if you feel unwell [P312]. Avoid release to the environment. 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 these adverse health effects is unknown for the highly diluted, small volume of **sodium azide** 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.<br><br>EU Labeling Classification for 100% chemical concentration per Table 3.2 of 2008/1272/EC - *from Annex I to Directive 67/548/EEC*:<br>Toxic: T, Environmental Danger: N<br>R 28: Very toxic if swallowed.<br>R 32: Contact with acids liberates very toxic gas.<br>R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.<br>S (1/2-): Keep locked up and out of the reach of children.<br>S 28: After contact with skin, wash immediately with plenty of *soap and water*.<br>S 45: In case of accident or if you feel unwell, seek medical advice immediately.<br>S 60: This material and its container must be disposed of as hazardous waste.<br>S 61: Avoid release to the environment. Refer to special instructions/safety data sheet. |

| Biological Ingredient | Data / Information |
|---|---|
| **Animal proteins** | This material is of animal origin (murine and bovine) and may be a potential contact irritant. Hazard Unknown. Handle as potentially infectious. The chemical, physical and toxicological properties have not been thoroughly investigated. Handle appropriately with the requisite Good Laboratory Practices, *Standard* and *Universal Precautions*. Dispose of this material in accordance with local, regional, national and international regulations. |

+ 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* /2008/1272/EC statement coded above.
  Refer to section 16 for the full text of any *Risk (R)* and *Safety (S)* statement provided above.
- No significant adverse health effects are expected by any route for the following chemical constituents in the kit volumes and concentrations present [Not subject to GHS or EU hazard labeling]:
  - **< 0.1% Evans Blue Counterstain** [$C_{34}H_{24}N_6O_{14}S_4 \bullet 4Na$], EC No 206-242-5, CAS# 314-13-6. [NOTE: This chemical has been designated by IARC with a carcinogen Classification 3, which indicates that "the Agent is NOT CLASSIFIABLE as Carcinogenic."] The chemical, physical and toxicological properties have not been thoroughly investigated.
  - The miscellaneous salts, buffers, protein-stabilizers, antibodies, conjugates, water or other non-reactive ingredients.
- 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.

## EMERGENCY FIRST AID MEASURES (4):

| | |
|---|---|
| Health Effects: | Symptoms of over exposure may include headache, dizziness, congestion, and breathing difficulty. May be harmful if swallowed. May be harmful in contact with skin. |
| 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**.** |

## FIREFIGHTING MEASURES (5):

| | |
|---|---|
| Extinguishing Media: | Use extinguishing media appropriate for the surrounding fire. |
| Hazardous Combustion Products: | May emit toxic oxides of carbon and nitrogen under fire conditions. |
| 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. |

## ACCIDENTAL RELEASE MEASURES (6):

- 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 an appropriate inert material (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.

## HANDLING AND STORAGE INFORMATION (7):

| | |
|---|---|
| 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 specimens, materials and equipment used to perform the operations as though they were capable of transmitting infectious disease, as per *Standard* and *Universal Precautions*. 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 on the product label and/or in the product instructions provided with the test kit. |
| Caution, consult accompanying documents. Read and follow all the Precautions and Warnings in the kit product instructions. | |
| These are kit separately purchased components, identical to those found in the kits, which are to be used exclusively with the Bio-Rad Laboratories kits listed in Section 1. | |

## EXPOSURE CONTROL / PERSONAL PROTECTION MEASURES (8):

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

| ***Sodium Azide [CAS# 26628-22-8]:*** | | |
|---|---|---|
| | | |
| *REL (United States)*<br>*TLV (United States)* | *Short-term value: C 0.3** mg/m³, C 0.1* ppm*<br>*Short-term value: C 0.29** mg/m³, C 0.11* ppm* | **as $HN_3$ vapor; **as $NaN_3$; Skin*<br>**as $HN_3$ vapor **as $NaN_3$* |
| *EL (Canada )* | *Short-term value: C 0,29* mg/m³, C 0,11**ppm* | **sodium azide;**hydrazoic acid vapour* |
| *IOELV (European Union)* | *Short-term value: 0,3 mg/m³*<br>*Long-term value: 0,1 mg/m³* | *Skin*<br>*Skin* |
| *WEL (United Kingdom)* | *Short-term value: 0,3 mg/m³*<br>*Long-term value: 0,1 mg/m³* | *(as $NaN_3$) Sk*<br>*(as $NaN_3$) Sk* |
| *NES (AUS)* | *0.3* mg/m³, 0.11 ppm* | **Peak limitation* |
| *VME (France)* | *Short-term value: 0,3 mg/m³, 0,1 ppm* | *risque de pénétration percutanée* |
| *VL (Belgium, (France)* | *Short-term value: 0,3 mg/m³*<br>*Long-term value: 0,1 mg/m³* | *D, M*<br>*D, M* |

| *Sodium Azide [CAS# 26628-22-8]:* | | |
|---|---|---|
| | | |
| *AGW (Germany)* | 0,2 mg/m³ | 2(I);DFG |
| *MAK (Austria, (Germany))* | *Short-term value: 0,3 mg/m³*<br>*Long-term value: 0,1 mg/m³* | |
| *TWA (Italy)* | *Short-term value: C 0,29 mg/m³, C 0,11* ppm*<br>*A4; sodio azide; *come azido idrazonico, vapore* | |
| *MAK (Switzerland, (Germany))* | *Short-term value: 0,4 e mg/m³*<br>*Long-term value: 0,2 e mg/m³* | |
| *GV (Denmark)* | *0,1 mg/m³* | *EH* |
| *MAK (Netherland)* | *Short-term value: 0,3 mg/m³*<br>*Long-term value: 0,1 mg/m³* | |
| *OEL (Sweden)* | *Short-term value: 0,3 mg/m³*<br>*Long-term value: 0,1 mg/m³* | *H*<br>*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, and to prevent hazard 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 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: | Do not breathe mist / vapours / spray. |
| 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 the following sections. |

## PHYSICAL AND CHEMICAL PROPERTIES (9):

| | | | |
|---|---|---|---|
| **Appearance:** | Blue aqueous liquid. | | |
| **Odour:** | No applicable information was found. | **Odour threshold:** | Not established. |
| **pH:** | Neutral, pH between 6 and 8. | | |
| **Boiling point:** | Not Established. | **Melting point:** | Not established. |
| **Flash Point:** | Not applicable.<br>Flammable limits: LEL/LFL is Not applicable; UEL/UFL is Not applicable. | | |
| **Evaporation rate:** | No applicable information was found. | | |
| **Fire hazard:** | 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. | | |
| **Vapor pressure:** | No applicable information was found. | | |

| | |
|---|---|
| **Vapor density:** | No applicable information was found. |
| **Relative density:** | Not established. |
| **Solubility:** | Miscible in water. |
| **Partition coefficient (n-octanol/water):** | No applicable information was found. |
| **Auto igniting** | Product is not known to be self-igniting. |
| **Decomposition temperature:** | No applicable information was found. |
| **Viscosity:** | No applicable information was found. |
| **Danger of explosion:** | **Sodium azide** may react with lead or copper plumbing to form highly explosive metal azides; buildup in metal plumbing has led to laboratory explosions, so flush with copious water when pouring dilute solutions down the drain to prevent such explosive buildup. |
| No other standard characteristics are known to be applicable to the identification or hazards of the product are known. | |

## STABILITY AND REACTIVITY INFORMATION (10):

*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:: | Stable under ordinary conditions of use and storage. |
| Conditions and/or Materials to Avoid: | **Sodium azide** may react with lead or copper plumbing to form highly explosive metal azides. Buildup in metal plumbing has led to laboratory explosions, so flush with copious water when pouring dilute solutions down the drain to prevent such explosive buildup. |
| Hazardous Decomposition Products: | May emit toxic oxides of carbon and nitrogen under fire conditions. |
| Hazardous Polymerization: | Has not been reported to occur. |

## TOXICOLOGICAL INFORMATION -- GENERAL COMPOSITE (11):

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 harmful if swallowed. May be harmful in contact with skin. |
| Primary Irritant Effect: | May slightly irritate eyes or skin, depending on amount and contact time. |
| Serious Eye Damage / Irritation: | May slightly irritate eyes depending on amount and contact time. |
| 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: | No sensitization effect known. |
| Carcinogenicity: | IARC designates **Evans Blue** (CAS# 314-13-6) in the carcinogen Group 3, which specifies, "the Agent is NOT CLASSIFIABLE as Carcinogenic." |
| Germ Cell Mutagenicity: | No applicable information was found. |
| Reproductive Hazard: | No reproductive toxic effect known. |

Additional Toxicological Information: The chemical, physical and toxicological properties have not been thoroughly investigated.

## ECOLOGICAL INFORMATION (12):

| This product was not tested. The following assessment is based on information for the ingredients. | |
|---|---|
| Toxicity: | **100% Sodium Azide [CAS# 26628-22-8]* :**<br>Fish $LC_{50}$ - Lepomis macrochirus - 0.68 mg/l - 96 h<br>Daphnia $EC_{50}$ - Daphnia pulex (Water flea) - 4.2 mg/l - 48 h<br>** Source: Raw Material Vendor Safety Data Sheet* |
| 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.

## DISPOSAL CONSIDERATIONS (13):

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; buildup in metal plumbing has led to laboratory explosions, so flush with copious water when pouring dilute solutions down the drain to prevent such explosive buildup; check your international, national, regional and local ordinances accordingly.

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

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

## TRANSPORT INFORMATION (14):

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.

## REGULATORY INFORMATION (15):

**Composite HMIS Rating:** Health: 2 Flammability: 0 Reactivity: 1

**California Proposition 65**: 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: **Evans Blue,** CAS# 314-13-6.

NTP (National Toxicity Program): 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 Health and Safety Administration, U.S. Department of Labor): The product does not contain listed ingredients.

**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 according to 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.

***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 has been classified and labeled in accordance with applicable European Community (EC) Directives (refer to 1999/45/EC, 2001/59/EC, 2001/60/EC and 2006/102/EC).

Hazard Designation of Composite Product: HARMFUL: Xn 

Hazard Determining Substance(s) of Labeling (rated under 1999/45/EC unless otherwise specified):

**0.1% Sodium Azide**, EC No: 247-852-1 and CAS# 26628-22-8 [Harmful: Xn; R 22; S 24-35-37 (< 1% and ≥ 0.1%)].

## OTHER INFORMATION (16):

**Risk Phrases:**

| | |
|---|---|
| R 22 | Harmful if swallowed. |

**Safety Phrases:**

| | |
|---|---|
| S 24 | Avoid contact with skin. |
| S 35 | This material and its container must be disposed of in a safe way. |
| S 37 | Wear suitable gloves. |

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.

These are separately purchased kit components, identical to those found in the kits, which are to be used exclusively with the Bio-Rad Laboratories kits listed in Section 1.

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 (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 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 sheet:
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, USA
$EC_{50}$ – half maximal effective concentration
EU – European Union
GHS – Globally Harmonized System
HCS – Hazard Communication Standard, USA
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
$LC_{50}$ – median lethal concentration, 50%
$LD_{50}$ – 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 OSHA – Occupational Safety and Health Administration, U.S. Department of Labor
WHMIS –Workplace Hazardous Materials Information System, Canada
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 GHS information.

---

**Bio-Rad Laboratories:**

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

***Contact for general SDS information***: Redmond Operations, Environmental Health & Safety, 6565 185th Ave. NE, Redmond, WA 98052, USA, Phone: 425-881-8300 (8 am to 5 pm PT), 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

***Contact Local Bio-Rad Agents for general information:***

**Australia**, Bio-Rad Laboratories Pty. Ltd., Level 5, 446 Victoria Road, Gladesville NSW 2111 • Phone 61-2-9914-2800 • Telefax 61-2-9914-2888
**Austria**, Bio-Rad Laboratories Ges.m.b.H., Hummelgasse 88/3-6, A-1130 Vienna • Phone 43-1-877-8901 • Telefax 43-1-876-5629
**Belgium**, Bio-Rad S.A.-N.V. Begoniastraat 5, B-9810 Nazareth Eke • Phone 3293855511 • Telefax 3293856554
**Brazil**, Bio-Rad do Brasil, Praia de Botafogo, 440-3rd Floor, Botafogo, RJ CEP 22250-040, Rio de Janeiro • Phone 5521-3237-9400 • Telefax 55 21 2527-3099
**Canada**, Bio-Rad Laboratories, Ltd., 2403 Guénette Street, Montréal, Québec H4R 2E9 • Phone 1-514-334-4372 or 1-800-361-1808 • Telefax 1-514-334-4415
**China**, Bio-Rad Laboratories Shanghai Ltd. 3rd Floor, #18 Dong Fang Road, Bldg E, Poly Plaza, Pudong, Shanghai PRC • Phone 86-21-64260808 • Telefax 86-21-64264988
**Czech Republic**, Bio-Rad spol. s r.o., Nad ostrovem 1119/7, 147 00 Prague 4 • Phone 420-241-430-532 • Telefax 420-241-431-642
**Denmark**, Bio-Rad Laboratories, Symbion Science Park, Fruebjergvej 3, DK-2100 Copenhagen East • Phone +45 44 52-10 00 • Telefax +45 44 52-10 01
**Finland**, Bio-Rad Laboratories, Linnanherrankuja 16, FIN-00950 Helsinki • Phone 358-9-804-22-00 • Telefax 3589-7597 5010
**France**, Bio-Rad Laboratories, 3 boulevard Raymond Poincaré, 92430 Marnes-la-Coquette • Phone +33 (0)1 47 95 60 00• Telefax +33 (0)1 47 41 91 33
**Germany**, Bio-Rad Laboratories GmbH, Heidemannstrasse 164, D-80939 Munich • Phone +49-(0)89-318840 • Telefax +49-(0)89-31884100
**Greece**, Bio-Rad Laboratories M.EPE, 2-4 Mesogeion Street, Fourth Floor 115 27 Athens • Phone 30-210-7774396 • Telefax 30-210-7774376
**Hong Kong**, Bio-Rad Pacific Ltd., Unit 1101, 11/F DCH Commercial Centre, 25 Westlands Road, Quarry Bay • Phone 852-2789-3300 • Telefax 852 2789-1290
**Hungary**, Bio-Rad Hungary Ltd., Futó Street 47-53, H-1082 Budapest, Hungary • Phone + 36-1-459-6100 • Telefax + 36-1-459-6101
**India**, Bio-Rad Laboratories (India) Pvt. Ltd., Bio-Rad House, 86-87, Udyog Vihar, Phase - IV, Gurgaon, Haryana 122 015 • Phone 91-124-4029300 • Telefax 91-124-2398115
**Israel**, Bio-Rad Laboratories Ltd., 14 Homa Street, New Industrial Area, Rishon Le Zion 75655 • Phone 972-3-9636050 • Telefax 972-3-9514129
**Italy**, Bio-Rad Laboratories S.r.l., Via Cellini 18/A, 20090 Segrate, Milan • Phone +39-02-216091 • Telefax +39-02-21609-398
**Japan**, Bio-Rad Laboratories K.K., Tennoz Central Tower 20F, 2-2-24 Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-0002 • Phone 81-3-6361-7070 • Telefax 81-3-5463-8483
**Korea**, Bio-Rad Korea Ltd., 10th Floor, Hyunjuk Building, 832-41, Gangnam-gu, Seoul 135-080 • Phone 82-2-3473-4460 • Telefax 82-2-3472-7003
**Mexico**, Bio-Rad, S.A., Avenida Eugenia 197, Piso 10-A, Col. Narvarte, Delegacion Benito Juarez, C.P. 03020 Mexico, D.F. • Phone +52 (55) 5488-7670 • Telefax +52 (55) 1107-7246
**The Netherlands**, Bio-Rad Laboratories B.V., Fokkerstraat 2-8, 3905 KV Veenendaal • Phone +31-318-540666 • Telefax +31-318542216
**New Zealand**, Bio-Rad New Zealand, 189 Bush Road Unit B, Albany, Auckland • Phone 6494152280 • Telefax 6494152284
**Norway**, Bio-Rad Laboratories, Johan Scharffenbergs vei 91, N-0694 Oslo • Phone 4723384130 • Telefax 4723384139
**Poland**, Bio-Rad Polska Sp. z o.o., Nakielska Str. 3, 01-106 Warsaw • Phone 48-22-3319999 • Telefax 48-22-3319988
**Portugal**, Bio-Rad Laboratories, Lda., Edificio Prime, Av. Quinta Grande, 53 – Fracção 3B Alfragide 26114-521 Amadora • Phone 351-21-472-7700 • Telefax 351-21-472-7777
**Russia**, Bio-Rad Laboratorii, Business Centre "West Bridge", Leningradsky pr-t H.37A Bld. 14, 125167 Moscow • Phone 7-495-72114 04 • Telefax 7-495-721-14-12
**Singapore**, Bio-Rad Laboratories (Singapore) Pte. Ltd., 27 International Business Park, #01-02 iQuest @IBP, Singapore 609924 • Phone 65-6415-3170 • Telefax 656415-3189
**South Africa**, Bio-Rad Laboratories (Pty) Ltd., 34 Bolton Road, Parkwood, Johannesburg 2193 • Phone 27-11-442-85-08 • Telefax 27-11-442-85-25
**Spain**, Bio-Rad Laboratories, S.A., C/ Caléndula, 95, Edificio M. Miniparc II, El Soto de la Moraleja, 28109 Madrid • Phone 34-91-590-5200 • Telefax 34-91-590-5211
**Sweden**, Bio-Rad Laboratories A.B., Vintergatan 1, Box 1097, S-172 22 Sundbyberg • Phone 46-8-555-127-00 • Telefax 46-8-555-127-80
**Switzerland**, Bio-Rad Laboratories AG, Nenzlingerweg 2, CH-4153 Reinach BL• Phone 41-61-717-95-55 • Telefax 41-61-717-95-50
**Thailand**, Bio-Rad Laboratories Ltd., 1st & 2nd Floor, Lumpini I Bldg., 239/2 Rajdamri Rd., Lumpini, Pathumwan, Bangkok 10330 • Phone 662-651-8311 • Telefax 662-651-8312
**United Kingdom**, Bio-Rad Laboratories Ltd., Bio-Rad House, Maxted Road, Hemel Hempstead, Herts HP2 7DX • Phone +44-(0)20-8328-2000 • Telefax +44-(0)20-8328-2550