1. Identification

Product identifier

Product Name  BioPlex 2200 Anti-CCP

Other means of identification

Catalog Number(s)  6653250

Recommended use of the chemical and restrictions on use

Recommended use  In vitro diagnostic Restricted to professional users Use according to package label instructions

Details of the supplier of the safety data sheet

Corporate Headquarters  Manufacturer Address  Legal Entity / Contact Address
Bio-Rad Laboratories Inc.  Bio-Rad Laboratories  Bio-Rad Laboratories
1000 Alfred Nobel Drive 6565-185th Ave NE 6565-185th Ave NE
Hercules, CA 94547 Redmond, WA 98052 Redmond, WA 98052
USA USA USA

Technical Service  1-800-224-6723
TechSupport.USSD@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number  CHEMTREC USA: 1 (800) 424-9300

2. Hazard(s) identification

Classification

Skin sensitization  Category 1A

Hazards not otherwise classified (HNOC)  Not applicable

Label elements

Warning

Hazard statements  May cause an allergic skin reaction

Appearance  Plastic cartridge containing
Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
Specific treatment (see .? on this label)
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

1.49757 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
1.49757 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
10.58506 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
10.58506 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
1.49757 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Other information
Contains animal source material. (Mouse). (Cattle). Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

3. Composition/information on ingredients

Substance
Not applicable.

Mixture

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEAD</td>
<td>One (1) 10 mL vial, containing dyed beads coated with Cyclic Citrullinated Peptide, plus Internal Standard beads (ISB), Serum Verification beads (SVB), and Reagent Blank beads (RBB) in buffer with glycerol and protein stabilizers (bovine). ProClin 300 (≤ 0.3%), sodium benzoate (≤ 0.1%) and sodium azide (&lt; 0.1%) as preservatives</td>
</tr>
<tr>
<td>CONJ</td>
<td>One (1) 5 mL vial, containing phycoerythrin conjugated murine monoclonal anti-human IgG antibody and phycoerythrin conjugated murine monoclonal anti-human FXIII antibody, in buffer with protein stabilizers (bovine). ProClin 300 (≤ 0.3%), sodium benzoate (≤ 0.1%) and sodium azide (&lt; 0.1%) as preservatives</td>
</tr>
<tr>
<td>DIL</td>
<td>One (1) 10 mL vial, containing buffer with protein stabilizers (bovine and murine). ProClin 300 (≤ 0.3%), sodium benzoate (≤ 0.1%) and sodium azide (&lt; 0.1%) as preservatives</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3-Propanetriol</td>
<td>56-81-5</td>
<td>5 - 10</td>
<td>*</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>7647-14-5</td>
<td>1 - 2.5</td>
<td>*</td>
</tr>
<tr>
<td>Sodium azide</td>
<td>26628-22-8</td>
<td>0.3 - 0.99</td>
<td>*</td>
</tr>
<tr>
<td>5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone</td>
<td>55965-84-9</td>
<td>0.001 - 0.01</td>
<td>*</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice
Show this safety data sheet to the doctor in attendance.
Inhalation  Remove to fresh air.
Eye contact  Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact  Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion  Rinse mouth.

Most important symptoms and effects, both acute and delayed

Indication of any immediate medical attention and special treatment needed
Note to physicians  May cause sensitization in susceptible persons. Treat symptomatically.

5. Fire-fighting measures
Suitable Extinguishing Media  Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards arising from the chemical  Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data
Sensitivity to mechanical impact  None.
Sensitivity to static discharge  None.
Special protective equipment and precautions for fire-fighters  Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures
Personal precautions, protective equipment and emergency procedures
Personal precautions  Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Methods and material for containment and cleaning up
Methods for containment  Prevent further leakage or spillage if safe to do so.
Methods for cleaning up  Pick up and transfer to properly labeled containers.

7. Handling and storage
Precautions for safe handling
Advice on safe handling  Handle in accordance with good industrial hygiene and safety practice. Avoid contact with
skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep containers tightly closed in a dry, cool and well-ventilated place. Store according to product and label instructions.

8. Exposure controls/personal protection

Control parameters

Exposure Limits
The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3-Propanetriol</td>
<td>-</td>
<td>TWA: 15 mg/m³ mist, total particulate TWA: 5 mg/m³ mist, respirable fraction (vacated) TWA: 10 mg/m³ mist, total particulate (vacated) TWA: 5 mg/m³ mist, respirable fraction</td>
<td>-</td>
</tr>
<tr>
<td>56-81-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium azide</td>
<td>Ceiling: 0.29 mg/m³ Sodium azide Ceiling: 0.11 ppm Hydrazoic acid vapor</td>
<td>(vacated) S* (vacated) Ceiling: 0.1 ppm HN3 (vacated) Ceiling: 0.3 mg/m³ NaN3</td>
<td>Ceiling: 0.1 ppm HN3 Ceiling: 0.3 mg/m³ NaN3</td>
</tr>
<tr>
<td>26628-22-8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering controls
Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear safety glasses with side shields (or goggles).

Hand protection
Wear suitable gloves.

Skin and body protection
Wear suitable protective clothing.

Respiratory protection
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state
Liquid
BioPlex 2200 Anti-CCP

Appearance
Plastic cartridge containing various bottles Dilute bead suspension in aqueous solution

Color
light brown; light pink; light yellow

Odor
No information available

Odor threshold
No information available

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>7-8</td>
<td>None known</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>215 °C / 419 °F</td>
<td>None known</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
<td>None known</td>
</tr>
</tbody>
</table>

Other information
Explosive properties
No information available

Oxidizing properties
No information available

Softening point
No information available

Molecular weight
No information available

VOC content
No information available

Liquid Density
No information available

Bulk density
No information available

10. Stability and reactivity

Reactivity
No information available.

Chemical stability
Stable under normal conditions.

Possibility of hazardous reactions
Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases.

Conditions to avoid
None known based on information supplied.

Incompatible materials
Metals.

Hazardous decomposition products
None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation
Specific test data for the substance or mixture is not available.
Eye contact

Specific test data for the substance or mixture is not available.

Skin contact

May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).

Ingestion

Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms


Acute toxicity

Numerical measures of toxicity

1.49757 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
1.49757 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
10.58506 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
10.58506 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
1.49757 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3-Propanetriol 56-81-5</td>
<td>= 12600 mg/kg (Rat)</td>
<td>&gt; 10 g/kg (Rabbit)</td>
<td>&gt; 2.75 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>Sodium chloride 7647-14-5</td>
<td>= 3 g/kg (Rat)</td>
<td>&gt; 10000 mg/kg (Rabbit)</td>
<td>&gt; 42 mg/L (Rat) 1 h</td>
</tr>
<tr>
<td>Sodium azide 26628-22-8</td>
<td>= 27 mg/kg (Rat)</td>
<td>= 20 mg/kg (Rabbit)</td>
<td>0.054 - 0.52 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone 55965-84-9</td>
<td>= 53 mg/kg (Rat)</td>
<td>= 87.12 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
</tbody>
</table>

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

May cause sensitization by skin contact.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.
**Target organ effects**
Kidney, Respiratory system, Eyes, Skin.

**Aspiration hazard**
No information available.

**Other adverse effects**
No information available.

**Interactive effects**
No information available.

---

### 12. Ecological information

#### Ecotoxicity
Harmful to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3-Propanetriol 56-81-5</td>
<td>-</td>
<td>LC50: 51 - 57mL/L (96h, Oncorhynchus mykiss)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Sodium chloride 7647-14-5</td>
<td>-</td>
<td>LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: =12946mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: =7050mg/L (96h, Pimephales promelas) LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss)</td>
<td>-</td>
<td>EC50: =1000mg/L (48h, Daphnia magna) EC50: 340.7 - 469.2mg/L (48h, Daphnia magna)</td>
</tr>
<tr>
<td>Sodium azide 26628-22-8</td>
<td>-</td>
<td>LC50: =0.8mg/L (96h, Oncorhynchus mykiss) LC50: =0.7mg/L (96h, Lepomis macrochirus) LC50: =5.46mg/L (96h, Pimephales promelas)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Persistence and degradability**
No information available.

**Bioaccumulation**

#### Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3-Propanetriol 56-81-5</td>
<td>-1.75</td>
</tr>
<tr>
<td>5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone 55965-84-9</td>
<td>0.7</td>
</tr>
</tbody>
</table>

**Other adverse effects**
No information available.

---

### 13. Disposal considerations
14. Transport information

DOT
Not regulated

TDG
Not regulated

MEX
Not regulated

IATA
Not regulated

IMDG
Not regulated

15. Regulatory information

International Inventories
Contact supplier for inventory compliance status

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide - 26628-22-8</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium azide</td>
<td>1000 lb</td>
<td>1000 lb</td>
<td>RQ 1000 lb final RQ</td>
</tr>
<tr>
<td>26628-22-8</td>
<td></td>
<td></td>
<td>RQ 454 kg final RQ</td>
</tr>
</tbody>
</table>

US State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water 7732-18-5</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>1,2,3-Propanetriol 56-81-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sodium azide 26828-22-8</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sodium phosphate dibasic 7558-79-4</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Dimethyl sulfoxide 67-68-5</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ethylenediaminetetraacetic acid 60-00-4</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special hazards</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
Ceiling Maximum limit value Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Higher Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 12-Jan-2023
Revision Note Reformatted and updated existing information.
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the
date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,
transportation, disposal and release and is not to be considered a warranty or quality specification. The information
relates only to the specific material designated and may not be valid for such material used in combination with any other
materials or in any process, unless specified in the text.

End of Safety Data Sheet