

KIT SAFETY DATA SHEET



Kit Product Name Bio-Plex Pro Human Cytokine Panels
Kit Catalogue Number(s) 12007283, 12007975, M50000007A, M5000005L3, M5000031YV, M500KCAF0Y, 12016960

Revision date 20-Apr-2022

Kit Contents

| Catalogue Number(s) | Product Name |
|---|---|
| 9723892, 9703892, 9704415, 10014822, 10014823 | Bio-Plex Assay Buffer |
| 171304040, 10027955, 12006121, 12005850 | Bio-Plex Pro Assays 10X Wash Buffer |
| 12007919, 12007920, 12007292 | Bio-Plex Pro Human Cytokine Screening Panel, Standards |
| 12007298 | Bio-Plex Pro Human Cytokine Screening Panel, Control |
| 12007294 | Bio-Plex Pro Human Cytokine Screening Panel, Bead Blend 48-Plex |
| 12007293 | Bio-Plex Pro Human Cytokine Screening Panel, Detection Antibodies Blend 48-Plex |
| 10032400, 10031831, 12005852 | Bio-Plex Detection Antibody Diluent HB |
| 10014641, 9704423, 9703895, 171305043, 10022628, 10041561, 12005851 | Bio-Plex Sample Diluent |
| 9703888, 9704424, 171305042, 171304080M, 10022368, 12005853 | Bio-Plex Standard Diluent |
| 171304501, 9704418, 9703887, 9703897 | Streptavidin-PE |



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
GB/T 16483-2008, GB/T 17519-2013

Product Name Bio-Plex Assay Buffer

Revision date 14-Jan-2021

Revision Number 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name Bio-Plex Assay Buffer

Catalogue Number(s) 9723892, 9703892, 9704415, 10014822, 10014823

Other means of identification

Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.
1st and 2nd Floor, Lumpini 1 Building
239/2, Rajdamri Road, Lumpini,
Pathumwan, Bangkok 10330
Thailand

Technical Service +66 2 652 8313
ctsthailand@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

SECTION 2: Hazards identification

Emergency Overview

No significant adverse health effects

Appearance aqueous solution

Physical state Liquid

Odour Odourless

Classification of the substance or mixture

Not classified

Label elements

Hazard statements

Not classified

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

Environmental hazards

Not applicable

Other hazards which do not result in classification

Not applicable

SECTION 3: Composition/information on ingredients**Substance**

Not applicable.

Mixture

Not classified.

SECTION 4: First aid measures**Description of necessary first aid measures**

| | |
|---|--|
| General advice | No hazards which require special first aid measures. |
| 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 doctor. |
| Skin contact | Wash skin with soap and water. |
| Ingestion | Rinse mouth thoroughly with water. |
| <u>Most important symptoms and effects, both acute and delayed</u> | No information available. |
| <u>For emergency responders</u> | No information available. |
| <u>Note to doctors</u> | Treat symptomatically. |

SECTION 5: Firefighting measures**Extinguishing media**

| | |
|--|--|
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | No information available. |
| <u>Specific hazards arising from the chemical</u> | No information available. |
| <u>Special protective actions for fire-fighters</u> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

| | |
|--|---|
| Personal precautions | See section 8 for more information. |
| For emergency responders | Use personal protection recommended in Section 8. |
| <u>Environmental precautions</u> | See Section 12 for additional Ecological Information. |
| <u>Methods and material for containment and cleaning up</u> | Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers. |
| <u>Precautions to prevent secondary hazards</u> | Clean contaminated objects and areas thoroughly observing environmental regulations. |

SECTION 7: Handling and storage

| | |
|--|--|
| <u>Precautions for safe handling</u> | Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment. |
| <u>Conditions for safe storage, including any incompatibilities</u> | Store according to product and label instructions. |
| Incompatible materials | None known based on information supplied. |

SECTION 8: Exposure controls/personal protection**Occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Note See section 16 for terms and abbreviations

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring and observation processes

No applicable information was found.

| | |
|------------------------------------|---|
| <u>Engineering controls</u> | Showers Eyewash stations Ventilation systems. |
|------------------------------------|---|

Individual protection measures, such as personal protective equipment

| | |
|---------------------------------------|--|
| Eye/face protection | Wear safety glasses with side shields (or goggles). |
| Skin and body protection | Wear suitable protective clothing. |
| Hand protection | Wear suitable gloves. |
| 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. |

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties**

| | |
|-----------------|--------------------------|
| Appearance | aqueous solution |
| Colour | colourless |
| Physical state | Liquid |
| Odour | Odourless |
| Odour threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--|----------------------|--------------------------------|
| pH | 7-8 | |
| Melting point / freezing point | 0 °C | |
| Boiling point / boiling range | 100 °C | |
| Flash point | No data available | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapour pressure | No data available | None known |
| Vapour density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | Miscible in water | |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

Additional information

| | |
|----------------------|----------------|
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |

SECTION 10: Stability and reactivity

Stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Conditions to avoid None known based on information supplied.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

Acute toxicity

Numerical measures of toxicity

| | |
|---|---|
| Skin corrosion/irritation | Based on available data, the classification criteria are not met. |
| Serious eye damage/eye irritation | Based on available data, the classification criteria are not met. |
| Respiratory or skin sensitisation | Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity | Based on available data, the classification criteria are not met. |
| Carcinogenicity | Based on available data, the classification criteria are not met. |
| Reproductive toxicity | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity — single exposure | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity — repeated exposure | Based on available data, the classification criteria are not met. |
| Aspiration hazard | Based on available data, the classification criteria are not met. |

SECTION 12: Ecological information

Ecotoxicity

Unknown aquatic toxicity 0.095 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility in soil No information available.

SECTION 13: Disposal considerations

Waste chemicals Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IMDG Not regulated
Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA Not regulated

China Not regulated

Special precautions for user
Please refer to the applicable dangerous goods regulations for additional information

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture**National regulations****Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

| | |
|---|-----------------|
| Catalogue of occupational hazard factors: | Not applicable. |
| Catalogue of occupational diseases: | Not applicable. |

Regulations on the Control over Safety of Hazardous Chemicals

| | |
|---|-----------------|
| <u>Inventory of hazardous chemicals</u> | Not applicable. |
|---|-----------------|

| | |
|---|----------------|
| <u>GB 18218-2009 Identification of major hazard installations for dangerous chemicals</u> | Not applicable |
|---|----------------|

| | |
|--|----------------|
| List of hazardous chemicals under priority management | Not applicable |
|--|----------------|

Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used

| | |
|---------------------------------|----------------|
| Inventory of highly toxic goods | Not applicable |
|---------------------------------|----------------|

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

| | |
|--|----------------|
| List of toxic chemicals severely restricted for import and export in China | Not applicable |
|--|----------------|

Measures for the Environmental Management of New Chemical Substances

| | |
|--|---|
| IECSC - China Inventory of Existing Chemical Substances | Contact supplier for inventory compliance status. |
|--|---|

International Regulations

| | |
|---|----------------|
| The Montreal Protocol on Substances that Deplete the Ozone Layer | Not applicable |
|---|----------------|

| | |
|--|----------------|
| The Stockholm Convention on Persistent Organic Pollutants | Not applicable |
|--|----------------|

| | |
|---------------------------------|----------------|
| The Rotterdam Convention | Not applicable |
|---------------------------------|----------------|

SECTION 16: Other information

| | |
|--------------------|---|
| Prepared By | Bio-Rad Laboratories, Environmental Health and Safety |
|--------------------|---|

| | |
|----------------------|-------------|
| Revision date | 14-Jan-2021 |
|----------------------|-------------|

| | |
|----------------------|--|
| Revision Note | Significant changes throughout SDS. Review all sections. |
|----------------------|--|

Abbreviations and acronyms**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

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)
 Japan GHS Classification
 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 Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
GB/T 16483-2008, GB/T 17519-2013

Product Name Bio-Plex Pro Assays 10X Wash Buffer

Revision date 22-Jan-2021

Revision Number 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name Bio-Plex Pro Assays 10X Wash Buffer

Catalogue Number(s) 171304040, 10027955, 12006121, 12005850

Other means of identification

Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.
1st and 2nd Floor, Lumpini 1 Building
239/2, Rajdamri Road, Lumpini,
Pathumwan, Bangkok 10330
Thailand

Technical Service +66 2 652 8313
ctsthailand@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

SECTION 2: Hazards identification

Emergency Overview

No significant adverse health effects

Appearance aqueous solution **Physical state** Liquid **Odour** Odourless

Classification of the substance or mixture

| | |
|--|------------|
| Hazardous to the Aquatic Environment - Acute Hazard | Category 3 |
| Hazardous to the Aquatic Environment - Chronic Hazard | Category 3 |

Label elements

Hazard statements

Harmful to aquatic life with long lasting effects

Precautionary statements

Prevention

Avoid release to the environment

Disposal

Dispose of contents/container to an approved waste disposal plant

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

Environmental hazards

This material is a water pollutant. Keep out of drains, sewers, ditches and waterways. Minimise use of water to prevent environmental contamination

Other hazards which do not result in classification

Not applicable

SECTION 3: Composition/information on ingredients**Substance**

Not applicable.

Mixture

| Chemical name | Weight-% | CAS No |
|---------------|-------------|-----------|
| Water | 50 - 100 | 7732-18-5 |
| Trade secret | 5 - 10 | - |
| Trade secret | 1 - 2.5 | - |
| Trade secret | 0.3 - 0.999 | - |

SECTION 4: First aid measures**Description of necessary first aid measures**

| | |
|---|---|
| General advice | No hazards which require special first aid measures. |
| 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 doctor. |
| Skin contact | Wash skin with soap and water. |
| Ingestion | Rinse mouth thoroughly with water. |
| <u>Most important symptoms and effects, both acute and delayed</u> | No information available. |
| <u>For emergency responders</u> | No information available. |
| <u>Note to doctors</u> | Treat symptomatically. |

SECTION 5: Firefighting measures**Extinguishing media**

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the

surrounding environment.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical No information available.

Special protective actions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions See section 8 for more information.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions See Section 12 for additional Ecological Information.

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

Precautions to prevent secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

SECTION 7: Handling and storage

Precautions for safe handling Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.

Conditions for safe storage, including any incompatibilities Store according to product and label instructions.

Incompatible materials Metals.

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

Note See section 16 for terms and abbreviations

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring and observation processes

No applicable information was found.

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).

| | |
|---------------------------------------|--|
| Skin and body protection | Wear suitable protective clothing. |
| Hand protection | Wear suitable gloves. |
| 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. |

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| | |
|------------------------|--------------------------|
| Appearance | aqueous solution |
| Colour | colourless |
| Physical state | Liquid |
| Odour | Odourless |
| Odour threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|---|-------------------|-------------------------|
| pH | 7-8 | |
| Melting point / freezing point | No data available | None known |
| Boiling point / boiling range | 100 °C | |
| Flash point | No data available | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapour pressure | No data available | None known |
| Vapour density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | Miscible in water | |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

Additional information

| | |
|-----------------------------|----------------|
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |

SECTION 10: Stability and reactivity

| | |
|--|---|
| <u>Stability</u> | Stable under normal conditions. |
| <u>Possibility of hazardous reactions</u> | 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. |
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge | None. |
| <u>Conditions to avoid</u> | None known based on information supplied. |
| <u>Incompatible materials</u> | Metals. |
| <u>Hazardous decomposition products</u> | None known based on information supplied. |

SECTION 11: Toxicological information**Acute toxicity****Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

| | |
|-----------------|-----------------|
| ATEmix (oral) | 32,364.60 mg/kg |
| ATEmix (dermal) | 95,260.40 mg/kg |

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|-----------------------|--------------------------|-------------------------|
| Water | > 90 mL/kg (Rat) | - | - |
| Trade secret | = 3 g/kg (Rat) | > 10000 mg/kg (Rabbit) | > 42 mg/L (Rat) 1 h |
| Trade secret | = 8290 mg/kg (Rat) | > 7940 mg/kg (Rabbit) | > 0.83 mg/L (Rat) 4 h |
| Trade secret | = 37000 mg/kg (Rat) | - | > 5.1 mg/L (Rat) 4 h |

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity — single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity — repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Unknown aquatic toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Algae/aquatic plants | Fish | Crustacea |
|---------------|----------------------|--|--|
| Trade secret | - | LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: 6420 - 6700mg/L (96h, Pimephales promelas) | EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) EC50: =1000mg/L (48h, Daphnia magna) |

| | | | |
|--|--|---|--|
| | | LC50: =12946mg/L (96h, Lepomis macrochirus) LC50: =7050mg/L (96h, Pimephales promelas) | |
|--|--|---|--|

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility in soil No information available.

SECTION 13: Disposal considerations

Waste chemicals Flush pipes with water frequently if discarding solutions containing Sodium azide into metal piping systems. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IMDG Not regulated
Transport in bulk according to No information available
Annex II of MARPOL and the IBC
Code

IATA Not regulated

China Not regulated

Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

| | |
|---|-----------------|
| Catalogue of occupational hazard factors: | Not applicable. |
| Catalogue of occupational diseases: | Not applicable. |

Regulations on the Control over Safety of Hazardous Chemicals

| | |
|--|--|
| <u>Inventory of hazardous chemicals</u> | The table below indicates ingredients above the cut-off threshold considered as relevant which are listed. Weight-% 1 |
|--|--|

| | |
|--|----------------|
| <u>GB 18218-2009 Identification of major hazard installations for dangerous chemicals</u> | Not applicable |
|--|----------------|

| | |
|--|----------------|
| List of hazardous chemicals under priority management | Not applicable |
|--|----------------|

Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used

| | |
|--|----------------|
| Inventory of highly toxic goods | Not applicable |
|--|----------------|

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

| | |
|---|----------------|
| List of toxic chemicals severely restricted for import and export in China | Not applicable |
|---|----------------|

Measures for the Environmental Management of New Chemical Substances**IECSC - China Inventory of Existing Chemical Substances** Contact supplier for inventory compliance status.**International Regulations****The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable**The Stockholm Convention on Persistent Organic Pollutants** Not applicable**The Rotterdam Convention** Not applicable**SECTION 16: Other information****Prepared By** Bio-Rad Laboratories, Environmental Health and Safety**Revision date** 22-Jan-2021**Revision Note** Significant changes throughout SDS. Review all sections.**Abbreviations and acronyms****Legend** Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

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)
Japan GHS Classification
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 Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Disclaimer

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End of Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
GB/T 16483-2008, GB/T 17519-2013

Product Name Bio-Plex Pro Human Cytokine Screening Panel, Standards

Revision date 28-Oct-2021

Revision Number 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name Bio-Plex Pro Human Cytokine Screening Panel, Standards

Catalogue Number(s) 12007919, 12007920, 12007292

Other means of identification

Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.
1st and 2nd Floor, Lumpini 1 Building
239/2, Rajdamri Road, Lumpini,
Pathumwan, Bangkok 10330
Thailand

Technical Service +66 2 652 8313
ctsthailand@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

SECTION 2: Hazards identification

Emergency Overview

No significant adverse health effects

Appearance No information available

Physical state Solid

Odour Odourless

Classification of the substance or mixture

Not classified

Label elements

Hazard statements

Not classified

Precautionary statements

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

Environmental hazards

Not applicable

Other hazards which do not result in classification

Not applicable

SECTION 3: Composition/information on ingredients

Substance

Not applicable.

Mixture

Not classified.

| Chemical name | Weight-% | CAS No |
|---------------|-------------|---------|
| Trade secret | 5 - 10 | - |
| Acetic acid | 0.1 - 0.299 | 64-19-7 |

SECTION 4: First aid measures

Description of necessary first aid measures

General advice

No hazards which require special first aid measures.

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 doctor.

Skin contact

Wash skin with soap and water.

Ingestion

Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed

No information available.

For emergency responders

No information available.

Note to doctors

Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

No information available.

Specific hazards arising from the

No information available.

chemical

Special protective actions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions See section 8 for more information.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions See Section 12 for additional Ecological Information.

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

Precautions to prevent secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

SECTION 7: Handling and storage

Precautions for safe handling Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.

Conditions for safe storage, including any incompatibilities Store according to product and label instructions.

Incompatible materials None known based on information supplied.

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

| Chemical name | China | ACGIH TLV |
|-----------------------|---|-----------------------------|
| Acetic acid - 64-19-7 | TWA: 10 mg/m ³ STEL: 20 mg/m ³ | STEL: 15 ppm TWA: 10 ppm |

Note See section 16 for terms and abbreviations

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring and observation processes

No applicable information was found.

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).

| | |
|---------------------------------------|--|
| Skin and body protection | Wear suitable protective clothing. |
| Hand protection | Wear suitable gloves. |
| 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. |

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

| | |
|------------------------|--------------------------|
| Colour | white |
| Physical state | Solid |
| Odour | Odourless |
| Odour threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--|--------------------|-------------------------|
| pH | | None known |
| Melting point / freezing point | No data available | None known |
| Boiling point / boiling range | No data available | None known |
| Flash point | No data available | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapour pressure | No data available | None known |
| Vapour density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | Insoluble in water | |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | 463 | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

Additional information

| | |
|-----------------------------|----------------|
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |

SECTION 10: Stability and reactivity

| | |
|--|---|
| <u>Stability</u> | Stable under normal conditions. |
| <u>Possibility of hazardous reactions</u> | None under normal processing. |
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge | None. |
| <u>Conditions to avoid</u> | None known based on information supplied. |
| <u>Incompatible materials</u> | None known based on information supplied. |
| <u>Hazardous decomposition products</u> | None known based on information supplied. |

SECTION 11: Toxicological information

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 33,333.30 mg/kg

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|----------------------|--------------------------|-------------------------|
| Trade secret | = 3 g/kg (Rat) | > 10000 mg/kg (Rabbit) | > 42 mg/L (Rat) 1 h |
| Acetic acid | = 3310 mg/kg (Rat) | = 1060 mg/kg (Rabbit) | = 11.4 mg/L (Rat) 4 h |

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity — single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity — repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

Ecotoxicity

Unknown aquatic toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Algae/aquatic plants | Fish | Crustacea |
|---------------|----------------------|---|--|
| Trade secret | - | LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: 6420 - 6700mg/L (96h, Pimephales promelas) LC50: =12946mg/L (96h, Lepomis macrochirus) LC50: =7050mg/L (96h, Pimephales promelas) | EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) EC50: =1000mg/L (48h, Daphnia magna) |

| | | | |
|-------------|---|--|------------------------------------|
| Acetic acid | - | LC50: =75mg/L (96h, Lepomis macrochirus) LC50: =79mg/L (96h, Pimephales promelas) | EC50: =65mg/L (48h, Daphnia magna) |
|-------------|---|--|------------------------------------|

Persistence and degradability No information available.

Bioaccumulative potential There is no data for this product.

Component Information

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| Acetic acid | -0.31 |

Mobility in soil No information available.

SECTION 13: Disposal considerations

Waste chemicals Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IMDG Not regulated
Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA Not regulated

China Not regulated

Special precautions for user
Please refer to the applicable dangerous goods regulations for additional information

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors: Listed. Chemical hazards.
Catalogue of occupational diseases: Listed. Occupational poisoning.

| Chemical name | Category |
|---------------|------------------|
| Acetic acid | Chemical hazards |

Regulations on the Control over Safety of Hazardous Chemicals

Inventory of hazardous chemicals
The table below indicates ingredients above the cut-off threshold considered as relevant which are listed.
Weight-% 0

| Chemical name | Inventory of hazardous chemicals |
|---------------|----------------------------------|
| Acetic acid | Listed |

GB 18218-2009 Identification of major hazard installations for dangerous chemicals

Not applicable

List of hazardous chemicals under priority management

Not applicable

Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used

Inventory of highly toxic goods

Not applicable

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

List of toxic chemicals severely restricted for import and export in China

Not applicable

Measures for the Environmental Management of New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances Contact supplier for inventory compliance status.

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

SECTION 16: Other information

Prepared By

Bio-Rad Laboratories, Environmental Health and Safety

Revision date

28-Oct-2021

Revision Note

SDS sections updated. 1.

Abbreviations and acronyms

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

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)
Japan GHS Classification
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 Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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

Product Name Bio-Plex Pro Human Cytokine Screening
Panel, Standards

Revision date 28-Oct-2021

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



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
GB/T 16483-2008, GB/T 17519-2013

Product Name Bio-Plex Pro Human Cytokine Screening Panel, Control

Revision date 28-Oct-2021

Revision Number 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name Bio-Plex Pro Human Cytokine Screening Panel, Control

Catalogue Number(s) 12007298

Other means of identification

Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.
1st and 2nd Floor, Lumpini 1 Building
239/2, Rajdamri Road, Lumpini,
Pathumwan, Bangkok 10330
Thailand

Technical Service +66 2 652 8313
ctsthailand@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

SECTION 2: Hazards identification

Emergency Overview

No significant adverse health effects

Appearance No information available

Physical state Solid

Odour Odourless

Classification of the substance or mixture

Not classified

Label elements

Hazard statements

Not classified

Precautionary statements

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

Environmental hazards

Not applicable

Other hazards which do not result in classification

Not applicable

SECTION 3: Composition/information on ingredients

Substance

Not applicable.

Mixture

Not classified.

| Chemical name | Weight-% | CAS No |
|---------------|-------------|---------|
| Trade secret | 5 - 10 | - |
| Acetic acid | 0.1 - 0.299 | 64-19-7 |

SECTION 4: First aid measures

Description of necessary first aid measures

General advice

No hazards which require special first aid measures.

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 doctor.

Skin contact

Wash skin with soap and water.

Ingestion

Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed

No information available.

For emergency responders

No information available.

Note to doctors

Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

No information available.

Specific hazards arising from the

No information available.

chemical

Special protective actions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions See section 8 for more information.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions See Section 12 for additional Ecological Information.

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

Precautions to prevent secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

SECTION 7: Handling and storage

Precautions for safe handling Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment.

Conditions for safe storage, including any incompatibilities Store according to product and label instructions.

Incompatible materials None known based on information supplied.

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

| Chemical name | China | ACGIH TLV |
|-----------------------|---|-----------------------------|
| Acetic acid - 64-19-7 | TWA: 10 mg/m ³ STEL: 20 mg/m ³ | STEL: 15 ppm TWA: 10 ppm |

Note See section 16 for terms and abbreviations

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring and observation processes

No applicable information was found.

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).

| | |
|---------------------------------------|--|
| Skin and body protection | Wear suitable protective clothing. |
| Hand protection | Wear suitable gloves. |
| 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. |

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

| | |
|------------------------|--------------------------|
| Colour | white |
| Physical state | Solid |
| Odour | Odourless |
| Odour threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|---|--------------------|-------------------------|
| pH | | None known |
| Melting point / freezing point | No data available | None known |
| Boiling point / boiling range | No data available | None known |
| Flash point | No data available | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapour pressure | No data available | None known |
| Vapour density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | Insoluble in water | |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | 463 | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

Additional information

| | |
|-----------------------------|----------------|
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |

SECTION 10: Stability and reactivity

| | |
|--|---|
| <u>Stability</u> | Stable under normal conditions. |
| <u>Possibility of hazardous reactions</u> | None under normal processing. |
| <u>Sensitivity to mechanical impact</u> | None. |
| <u>Sensitivity to static discharge</u> | None. |
| <u>Conditions to avoid</u> | None known based on information supplied. |
| <u>Incompatible materials</u> | None known based on information supplied. |
| <u>Hazardous decomposition products</u> | None known based on information supplied. |

SECTION 11: Toxicological information

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 33,333.30 mg/kg

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|----------------------|--------------------------|-------------------------|
| Trade secret | = 3 g/kg (Rat) | > 10000 mg/kg (Rabbit) | > 42 mg/L (Rat) 1 h |
| Acetic acid | = 3310 mg/kg (Rat) | = 1060 mg/kg (Rabbit) | = 11.4 mg/L (Rat) 4 h |

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity — single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity — repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

Ecotoxicity

Unknown aquatic toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Algae/aquatic plants | Fish | Crustacea |
|---------------|----------------------|---|--|
| Trade secret | - | LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: 6420 - 6700mg/L (96h, Pimephales promelas) LC50: =12946mg/L (96h, Lepomis macrochirus) LC50: =7050mg/L (96h, Pimephales promelas) | EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) EC50: =1000mg/L (48h, Daphnia magna) |

Product Name Bio-Plex Pro Human Cytokine Screening Panel, Control

Revision date 28-Oct-2021

| | | | |
|-------------|---|--|------------------------------------|
| Acetic acid | - | LC50: =75mg/L (96h, Lepomis macrochirus) LC50: =79mg/L (96h, Pimephales promelas) | EC50: =65mg/L (48h, Daphnia magna) |
|-------------|---|--|------------------------------------|

Persistence and degradability No information available.

Bioaccumulative potential There is no data for this product.

Component Information

| Chemical name | Partition coefficient |
|---------------|-----------------------|
| Acetic acid | -0.31 |

Mobility in soil No information available.

SECTION 13: Disposal considerations

Waste chemicals Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IMDG Not regulated
Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA Not regulated

China Not regulated

Special precautions for user
Please refer to the applicable dangerous goods regulations for additional information

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors: Listed. Chemical hazards.
Catalogue of occupational diseases: Listed. Occupational poisoning.

| Chemical name | Category |
|---------------|------------------|
| Acetic acid | Chemical hazards |

Regulations on the Control over Safety of Hazardous Chemicals

Inventory of hazardous chemicals
The table below indicates ingredients above the cut-off threshold considered as relevant which are listed.
Weight-% 0

| Chemical name | Inventory of hazardous chemicals |
|---------------|----------------------------------|
| Acetic acid | Listed |

GB 18218-2009 Identification of major hazard installations for dangerous chemicals

Not applicable

Product Name Bio-Plex Pro Human Cytokine Screening
Panel, Control

Revision date 28-Oct-2021

List of hazardous chemicals under priority management

Not applicable

Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used

Inventory of highly toxic goods

Not applicable

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

List of toxic chemicals severely restricted for import and export in China

Not applicable

Measures for the Environmental Management of New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances Contact supplier for inventory compliance status.

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

SECTION 16: Other information

Prepared By Bio-Rad Laboratories, Environmental Health and Safety

Revision date 28-Oct-2021

Revision Note SDS sections updated. 1.

Abbreviations and acronyms

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

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)
Japan GHS Classification
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 Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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

Product Name Bio-Plex Pro Human Cytokine Screening
Panel, Control

Revision date 28-Oct-2021

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



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
GB/T 16483-2008, GB/T 17519-2013

Product Name Bio-Plex Pro Human Cytokine Screening Panel, Bead Blend 48-Plex

Revision date 25-Mar-2021

Revision Number 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name Bio-Plex Pro Human Cytokine Screening Panel, Bead Blend 48-Plex

Catalogue Number(s) 12007294

Other means of identification

Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.
1st and 2nd Floor, Lumpini 1 Building
239/2, Rajdamri Road, Lumpini,
Pathumwan, Bangkok 10330
Thailand

Technical Service +66 2 652 8313
ctsthailand@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

SECTION 2: Hazards identification

Emergency Overview

May cause allergic skin reaction

Appearance Suspension

Physical state Liquid

Odour Odourless

Classification of the substance or mixture

| | |
|--|-------------|
| Skin sensitisation | Category 1A |
| Hazardous to the Aquatic Environment - Acute Hazard | Category 3 |
| Hazardous to the Aquatic Environment - Chronic Hazard | Category 3 |

Label elements



Signal word

Warning

Hazard statements

May cause an allergic skin reaction
Harmful to aquatic life with long lasting effects

Precautionary statements

Prevention

Avoid breathing dust/fume/gas/mist/vapours/spray
Contaminated work clothing should not be allowed out of the workplace
Avoid release to the environment
Wear protective gloves/protective clothing/eye protection/face protection
IF ON SKIN: Wash with plenty of water and soap
If skin irritation or rash occurs: Get medical advice/attention
Take off all contaminated clothing and wash it before reuse

Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Allergic reactions (sensitiser). Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.
Chronic effects: Not applicable.

Environmental hazards

This material is a water pollutant. Keep out of drains, sewers, ditches and waterways. Minimise use of water to prevent environmental contamination

Other hazards which do not result in classification

Not applicable

SECTION 3: Composition/information on ingredients

Substance

Not applicable.

Mixture

| Chemical name | Weight-% | CAS No |
|---|--------------|------------|
| Water | 50 - 100 | 7732-18-5 |
| Magnetic Beads | 20 - 35 | NO-CAS-23 |
| Trade secret | 2.5 - 5 | - |
| Trade secret | 2.5 - 5 | - |
| Trade secret | 1 - 2.5 | - |
| Modified Glycol | 0.1 - 0.299 | NO-CAS-54 |
| Trade secret | 0.1 - 0.299 | - |
| Trade secret | 0.1 - 0.299 | - |
| Antibodies | 0.1 - 0.299 | NO-CAS-81 |
| 5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with | 0.001 - 0.01 | 55965-84-9 |

| | | |
|------------------------------|--------------|-----------|
| 2-methyl-3(2H)-isothiazolone | | |
| Modified alkyl carboxylate | 0.001 - 0.01 | NO-CAS-53 |

SECTION 4: First aid measures

Description of necessary 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 doctor. |
| Skin contact | Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. |
| Ingestion | Rinse mouth thoroughly with water. |
| <u>Most important symptoms and effects, both acute and delayed</u> | Itching. Rashes. Hives. |
| <u>For emergency responders</u> | No information available. |
| <u>Note to doctors</u> | May cause sensitisation in susceptible persons. Treat symptomatically. |

SECTION 5: Firefighting measures

Extinguishing media

| | |
|--|--|
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | No information available. |
| <u>Specific hazards arising from the chemical</u> | Product is or contains a sensitizer. May cause sensitisation by skin contact. |
| <u>Special protective actions for fire-fighters</u> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

SECTION 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. |
| For emergency responders | Use personal protection recommended in Section 8. |
| <u>Environmental precautions</u> | See Section 12 for additional Ecological Information. |
| <u>Methods and material for containment and cleaning up</u> | Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers. |
| <u>Precautions to prevent secondary hazards</u> | Clean contaminated objects and areas thoroughly observing environmental regulations. |

SECTION 7: Handling and storage

| | |
|--|---|
| <u>Precautions for safe handling</u> | 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 it before reuse. See Section 8 for information on appropriate personal protective equipment. |
| <u>Conditions for safe storage, including any incompatibilities</u> | Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store according to product and label instructions. |
| <u>Incompatible materials</u> | Metals. |

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

Note See section 16 for terms and abbreviations

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring and observation processes

No applicable information was found.

| | |
|------------------------------------|---|
| <u>Engineering controls</u> | Showers Eyewash stations Ventilation systems. |
|------------------------------------|---|

Individual protection measures, such as personal protective equipment

| | |
|--|--|
| <u>Eye/face protection</u> | Wear safety glasses with side shields (or goggles). |
| <u>Skin and body protection</u> | Wear suitable protective clothing. |
| <u>Hand protection</u> | Wear suitable gloves. |
| <u>Respiratory protection</u> | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| <u>General hygiene considerations</u> | Handle in accordance with good industrial hygiene and safety practice. |

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| | |
|-------------------------------|--------------------------|
| <u>Appearance</u> | Suspension |
| <u>Colour</u> | colourless |
| <u>Physical state</u> | Liquid |
| <u>Odour</u> | Odourless |
| <u>Odour threshold</u> | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--|----------------------|--------------------------------|
| <u>pH</u> | | None known |
| <u>Melting point / freezing point</u> | No data available | None known |

| | | |
|---|--------------------|------------|
| Boiling point / boiling range | 100 °C | |
| Flash point | No data available | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapour pressure | No data available | None known |
| Vapour density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | Partially miscible | |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

Additional information

| | |
|-----------------------------|----------------|
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |

SECTION 10: Stability and reactivity

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.

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Conditions to avoid None known based on information supplied.

Incompatible materials Metals.

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 39,855.00 mg/kg

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|----------------------|--------------------------|-----------------------|
| Water | > 90 mL/kg (Rat) | - | - |
| Trade secret | = 3 g/kg (Rat) | > 10000 mg/kg (Rabbit) | > 42 mg/L (Rat) 1 h |
| Trade secret | = 5900 mg/kg (Rat) | > 5000 mg/kg (Rat) | - |

| | | | |
|--|-----------------------|--------------------------|------------------------|
| Trade secret | = 37000 mg/kg (Rat) | - | > 5.1 mg/L (Rat) 4 h |
| Trade secret | > 3 g/kg (Rat) | - | - |
| 5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone | = 53 mg/kg (Rat) | = 87.12 mg/kg (Rabbit) | - |

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation May cause sensitisation by skin contact.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity — single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity — repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Unknown aquatic toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Algae/aquatic plants | Fish | Crustacea |
|---------------|----------------------|---|--|
| Trade secret | - | LC50: 4747 - 7824mg/L (96h, <i>Oncorhynchus mykiss</i>) LC50: 5560 - 6080mg/L (96h, <i>Lepomis macrochirus</i>) LC50: 6020 - 7070mg/L (96h, <i>Pimephales promelas</i>) LC50: 6420 - 6700mg/L (96h, <i>Pimephales promelas</i>) LC50: =12946mg/L (96h, <i>Lepomis macrochirus</i>) LC50: =7050mg/L (96h, <i>Pimephales promelas</i>) | EC50: 340.7 - 469.2mg/L (48h, <i>Daphnia magna</i>) EC50: =1000mg/L (48h, <i>Daphnia magna</i>) |

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility in soil No information available.

SECTION 13: Disposal considerations

Waste chemicals Flush pipes with water frequently if discarding solutions containing Sodium azide into metal

pipng systems. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IMDG Not regulated
Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA Not regulated

China Not regulated

Special precautions for user
Please refer to the applicable dangerous goods regulations for additional information

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors: Not applicable.
Catalogue of occupational diseases: Not applicable.

Regulations on the Control over Safety of Hazardous Chemicals

Inventory of hazardous chemicals The table below indicates ingredients above the cut-off threshold considered as relevant which are listed.
Weight-% 0

GB 18218-2009 Identification of major hazard installations for dangerous chemicals Not applicable

List of hazardous chemicals under priority management Not applicable

Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used

Inventory of highly toxic goods Not applicable

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

List of toxic chemicals severely restricted for import and export in China Not applicable

Measures for the Environmental Management of New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances Contact supplier for inventory compliance status.

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

SECTION 16: Other information

Product Name Bio-Plex Pro Human Cytokine Screening
Panel, Bead Blend 48-Plex

Revision date 25-Mar-2021

Prepared By Bio-Rad Laboratories, Environmental Health and Safety

Revision date 25-Mar-2021

Revision Note SDS sections updated. 1.

Abbreviations and acronyms

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

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)
Japan GHS Classification
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 Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
GB/T 16483-2008, GB/T 17519-2013

Product Name Bio-Plex Pro Human Cytokine Screening Panel, Detection Antibodies Blend 48-Plex

Revision date 25-Mar-2021

Revision Number 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name Bio-Plex Pro Human Cytokine Screening Panel, Detection Antibodies Blend 48-Plex

Catalogue Number(s) 12007293

Other means of identification

Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.
1st and 2nd Floor, Lumpini 1 Building
239/2, Rajdamri Road, Lumpini,
Pathumwan, Bangkok 10330
Thailand

Technical Service +66 2 652 8313
ctsthailand@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

SECTION 2: Hazards identification

Emergency Overview

May cause allergic skin reaction

Appearance No information available

Physical state Liquid

Odour Odourless

Classification of the substance or mixture

| | |
|--|-------------|
| Skin sensitisation | Category 1A |
| Hazardous to the Aquatic Environment - Acute Hazard | Category 3 |
| Hazardous to the Aquatic Environment - Chronic Hazard | Category 3 |

Label elements

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48-Plex

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Signal word

Warning

Hazard statements

May cause an allergic skin reaction
Harmful to aquatic life with long lasting effects

Precautionary statements

Prevention

Avoid breathing dust/fume/gas/mist/vapours/spray
Contaminated work clothing should not be allowed out of the workplace
Avoid release to the environment
Wear protective gloves/protective clothing/eye protection/face protection
IF ON SKIN: Wash with plenty of water and soap
If skin irritation or rash occurs: Get medical advice/attention
Take off all contaminated clothing and wash it before reuse

Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Allergic reactions (sensitiser). Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.
Chronic effects: Not applicable.

Environmental hazards

This material is a water pollutant. Keep out of drains, sewers, ditches and waterways. Minimise use of water to prevent environmental contamination

Other hazards which do not result in classification

Contains animal source material (Goat) (Cattle) (Mouse)

SECTION 3: Composition/information on ingredients

Substance

Not applicable.

Mixture

| Chemical name | Weight-% | CAS No |
|--------------------------|--------------|------------|
| Water | 50 - 100 | 7732-18-5 |
| Animal Source Antibody | 10 - 20 | NO-CAS-90 |
| Trade secret | 0.3 - 0.999 | - |
| Sodium phosphate dibasic | 0.1 - 0.299 | 7558-79-4 |
| Modified Glycol | 0.1 - 0.299 | NO-CAS-54 |
| Trade secret | 0.1 - 0.299 | - |
| Trade secret | 0.01 - 0.099 | - |
| Sodium azide | 0.01 - 0.099 | 26628-22-8 |
| Trade secret | 0.001 - 0.01 | - |

Product Name Bio-Plex Pro Human Cytokine Screening Panel, Detection Antibodies Blend 48-Plex

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| | | |
|--|--------------|------------|
| Trade secret | 0.001 - 0.01 | - |
| Antibodies | 0.001 - 0.01 | NO-CAS-81 |
| 5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone | 0.001 - 0.01 | 55965-84-9 |
| Modified alkyl carboxylate | 0.001 - 0.01 | NO-CAS-53 |
| Animal Source Material (Mouse) | < 0.001 | NO-CAS-46 |
| Animal Source Material (Goat) | < 0.001 | NO-CAS-17 |
| Animal Source Material (Cattle) | < 0.001 | NO-CAS-44 |

SECTION 4: First aid measures

Description of necessary 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 doctor. |
| Skin contact | Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. |
| Ingestion | Rinse mouth thoroughly with water. |
| <u>Most important symptoms and effects, both acute and delayed</u> | Itching. Rashes. Hives. |
| <u>For emergency responders</u> | No information available. |
| <u>Note to doctors</u> | May cause sensitisation in susceptible persons. Treat symptomatically. |

SECTION 5: Firefighting measures

Extinguishing media

| | |
|--|--|
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | No information available. |
| <u>Specific hazards arising from the chemical</u> | Product is or contains a sensitiser. May cause sensitisation by skin contact. |
| <u>Special protective actions for fire-fighters</u> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

SECTION 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. |
| For emergency responders | Use personal protection recommended in Section 8. |

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Panel, Detection Antibodies Blend
48-Plex

Revision date 25-Mar-2021

| | |
|--|---|
| <u>Environmental precautions</u> | See Section 12 for additional Ecological Information. |
| <u>Methods and material for containment and cleaning up</u> | Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers. |
| <u>Precautions to prevent secondary hazards</u> | Clean contaminated objects and areas thoroughly observing environmental regulations. |

SECTION 7: Handling and storage

| | |
|--|---|
| <u>Precautions for safe handling</u> | 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 it before reuse. See Section 8 for information on appropriate personal protective equipment. |
| <u>Conditions for safe storage, including any incompatibilities</u> | Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store according to product and label instructions. |
| Incompatible materials | Metals. |

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

| Chemical name | China | ACGIH TLV |
|---------------------------|--|--|
| Sodium azide - 26628-22-8 | Ceiling: 0.3 mg/m ³ Ceiling | Ceiling: 0.29 mg/m ³ Sodium azide Ceiling: 0.11 ppm Hydrazoic acid vapor |

Note See section 16 for terms and abbreviations

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring and observation processes

No applicable information was found.

| | |
|------------------------------------|---|
| <u>Engineering controls</u> | Showers Eyewash stations Ventilation systems. |
|------------------------------------|---|

Individual protection measures, such as personal protective equipment

| | |
|---------------------------------------|--|
| Eye/face protection | Wear safety glasses with side shields (or goggles). |
| Skin and body protection | Wear suitable protective clothing. |
| Hand protection | Wear suitable gloves. |
| 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. |

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

| | |
|-----------------|--------------------------|
| Colour | colourless |
| Physical state | Liquid |
| Odour | Odourless |
| Odour threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--|-------------------|-------------------------|
| pH | | None known |
| Melting point / freezing point | No data available | None known |
| Boiling point / boiling range | 100 °C | |
| Flash point | No data available | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapour pressure | No data available | None known |
| Vapour density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | Miscible in water | |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

Additional information

| | |
|----------------------|----------------|
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |

SECTION 10: Stability and reactivity

| | |
|------------------|---------------------------------|
| <u>Stability</u> | Stable under normal conditions. |
|------------------|---------------------------------|

| | |
|---|---|
| <u>Possibility of hazardous reactions</u> | 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. |
|---|---|

| | |
|---|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge | None. |

| | |
|----------------------------|---|
| <u>Conditions to avoid</u> | None known based on information supplied. |
|----------------------------|---|

| | |
|-------------------------------|---------|
| <u>Incompatible materials</u> | Metals. |
|-------------------------------|---------|

| | |
|---|---|
| <u>Hazardous decomposition products</u> | None known based on information supplied. |
|---|---|

SECTION 11: Toxicological information

Acute toxicity

Numerical measures of toxicity

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--|----------------------|--------------------------|-------------------------------|
| Water | > 90 mL/kg (Rat) | - | - |
| Trade secret | = 3 g/kg (Rat) | > 10000 mg/kg (Rabbit) | > 42 mg/L (Rat) 1 h |
| Sodium phosphate dibasic | = 17 g/kg (Rat) | - | - |
| Trade secret | = 8290 mg/kg (Rat) | > 7940 mg/kg (Rabbit) | > 0.83 mg/L (Rat) 4 h |
| Sodium azide | = 27 mg/kg (Rat) | = 20 mg/kg (Rabbit) | 0.054 - 0.52 mg/L (Rat) 4 h |
| Trade secret | = 2600 mg/kg (Rat) | - | - |
| Trade secret | = 3200 mg/kg (Rat) | - | > 0.83 mg/L (Rat) 4 h |
| 5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone | = 53 mg/kg (Rat) | = 87.12 mg/kg (Rabbit) | - |

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation May cause sensitisation by skin contact.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity — single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity — repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Unknown aquatic toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Algae/aquatic plants | Fish | Crustacea |
|---------------|----------------------|---|--|
| Trade secret | - | LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: 6420 - 6700mg/L (96h, | EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) EC50: =1000mg/L (48h, Daphnia magna) |

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| | | | |
|--------------|---|--|---|
| | | Pimephales promelas) LC50: =12946mg/L (96h, Lepomis macrochirus) LC50: =7050mg/L (96h, Pimephales promelas) | |
| Sodium azide | - | LC50: =0.7mg/L (96h, Lepomis macrochirus) LC50: =0.8mg/L (96h, Oncorhynchus mykiss) LC50: =5.46mg/L (96h, Pimephales promelas) | - |
| Trade secret | EC50: =2500mg/L (72h, Desmodemus subspicatus) | LC50: 750 - 1020mg/L (96h, Pimephales promelas) LC50: =1060mg/L (96h, Lepomis macrochirus) | EC50: =825mg/L (48h, Daphnia magna) EC50: =83mg/L (48h, Daphnia magna) |

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility in soil No information available.

SECTION 13: Disposal considerations

Waste chemicals Flush pipes with water frequently if discarding solutions containing Sodium azide into metal piping systems. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IMDG Not regulated
Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA Not regulated

China Not regulated

Special precautions for user
Please refer to the applicable dangerous goods regulations for additional information

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors: Not applicable.
Catalogue of occupational diseases: Not applicable.

Regulations on the Control over Safety of Hazardous Chemicals

Inventory of hazardous chemicals Not applicable.

| | |
|---------------|----------------------------------|
| Chemical name | Inventory of hazardous chemicals |
|---------------|----------------------------------|

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Panel, Detection Antibodies Blend
48-Plex

Revision date 25-Mar-2021

| | |
|--------------|----------------------|
| Sodium azide | Listed, Highly toxic |
|--------------|----------------------|

GB 18218-2009 Identification of major hazard installations for dangerous chemicals Not applicable

List of hazardous chemicals under priority management Not applicable

Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used
Inventory of highly toxic goods Not applicable

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals
List of toxic chemicals severely restricted for import and export in China Not applicable

Measures for the Environmental Management of New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances Contact supplier for inventory compliance status.

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

SECTION 16: Other information

Prepared By Bio-Rad Laboratories, Environmental Health and Safety

Revision date 25-Mar-2021

Revision Note SDS sections updated. 1.

Abbreviations and acronyms

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

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) (AELG(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)
Japan GHS Classification
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 Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Product Name Bio-Plex Pro Human Cytokine Screening
Panel, Detection Antibodies Blend
48-Plex

Revision date 25-Mar-2021

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



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
GB/T 16483-2008, GB/T 17519-2013

Product Name Bio-Plex Detection Antibody Diluent HB

Revision date 22-Jan-2021

Revision Number 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name Bio-Plex Detection Antibody Diluent HB

Catalogue Number(s) 10032400, 10031831, 12005852

Other means of identification

Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.
1st and 2nd Floor, Lumpini 1 Building
239/2, Rajdamri Road, Lumpini,
Pathumwan, Bangkok 10330
Thailand

Technical Service +66 2 652 8313
ctsthailand@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

SECTION 2: Hazards identification

Emergency Overview

No significant adverse health effects

Appearance aqueous solution

Physical state Liquid

Odour Odourless

Classification of the substance or mixture

Not classified

Label elements

Hazard statements

Not classified

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

Environmental hazards

Not applicable

Other hazards which do not result in classification

Contains animal source material (Cattle)

SECTION 3: Composition/information on ingredients**Substance**

Not applicable.

Mixture

Not classified.

SECTION 4: First aid measures**Description of necessary first aid measures**

| | |
|---|--|
| General advice | No hazards which require special first aid measures. |
| 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 doctor. |
| Skin contact | Wash skin with soap and water. |
| Ingestion | Rinse mouth thoroughly with water. |
| <u>Most important symptoms and effects, both acute and delayed</u> | No information available. |
| <u>For emergency responders</u> | No information available. |
| <u>Note to doctors</u> | Treat symptomatically. |

SECTION 5: Firefighting measures**Extinguishing media**

| | |
|--|--|
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | No information available. |
| <u>Specific hazards arising from the chemical</u> | No information available. |
| <u>Special protective actions for fire-fighters</u> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

| | |
|--|---|
| Personal precautions | See section 8 for more information. |
| For emergency responders | Use personal protection recommended in Section 8. |
| <u>Environmental precautions</u> | See Section 12 for additional Ecological Information. |
| <u>Methods and material for containment and cleaning up</u> | Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers. |
| <u>Precautions to prevent secondary hazards</u> | Clean contaminated objects and areas thoroughly observing environmental regulations. |

SECTION 7: Handling and storage

| | |
|--|--|
| <u>Precautions for safe handling</u> | Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment. |
| <u>Conditions for safe storage, including any incompatibilities</u> | Store according to product and label instructions. |
| Incompatible materials | None known based on information supplied. |

SECTION 8: Exposure controls/personal protection**Occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Note See section 16 for terms and abbreviations

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring and observation processes

No applicable information was found.

| | |
|------------------------------------|---|
| <u>Engineering controls</u> | Showers Eyewash stations Ventilation systems. |
|------------------------------------|---|

Individual protection measures, such as personal protective equipment

| | |
|---------------------------------------|--|
| Eye/face protection | Wear safety glasses with side shields (or goggles). |
| Skin and body protection | Wear suitable protective clothing. |
| Hand protection | Wear suitable gloves. |
| 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. |

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties**

| | |
|-----------------|--------------------------|
| Appearance | aqueous solution |
| Colour | colourless |
| Physical state | Liquid |
| Odour | Odourless |
| Odour threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--|----------------------|--------------------------------|
| pH | 7-8 | |
| Melting point / freezing point | No data available | None known |
| Boiling point / boiling range | 100 °C | |
| Flash point | No data available | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapour pressure | No data available | None known |
| Vapour density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | Miscible in water | |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

Additional information

| | |
|----------------------|----------------|
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |

SECTION 10: Stability and reactivity

Stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Conditions to avoid None known based on information supplied.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information**Acute toxicity****Numerical measures of toxicity**

Component Information

| | |
|---|---|
| Skin corrosion/irritation | Based on available data, the classification criteria are not met. |
| Serious eye damage/eye irritation | Based on available data, the classification criteria are not met. |
| Respiratory or skin sensitisation | Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity | Based on available data, the classification criteria are not met. |
| Carcinogenicity | Based on available data, the classification criteria are not met. |
| Reproductive toxicity | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity — single exposure | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity — repeated exposure | Based on available data, the classification criteria are not met. |
| Aspiration hazard | Based on available data, the classification criteria are not met. |

SECTION 12: Ecological information**Ecotoxicity**

| | |
|---------------------------------|---|
| Unknown aquatic toxicity | 0.095 % of the mixture consists of component(s) of unknown hazards to the aquatic environment |
|---------------------------------|---|

| | |
|---|---------------------------|
| <u>Persistence and degradability</u> | No information available. |
|---|---------------------------|

| | |
|---|---------------------------|
| <u>Bioaccumulative potential</u> | No information available. |
|---|---------------------------|

| | |
|--------------------------------|---------------------------|
| <u>Mobility in soil</u> | No information available. |
|--------------------------------|---------------------------|

SECTION 13: Disposal considerations

| | |
|-------------------------------|---|
| <u>Waste chemicals</u> | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
|-------------------------------|---|

| | |
|--------------------------------------|--------------------------------|
| <u>Contaminated packaging</u> | Do not reuse empty containers. |
|--------------------------------------|--------------------------------|

SECTION 14: Transport information

| | |
|---|--------------------------|
| <u>IMDG</u> | Not regulated |
| Transport in bulk according to Annex II of MARPOL and the IBC Code | No information available |

| | |
|--------------------|---------------|
| <u>IATA</u> | Not regulated |
|--------------------|---------------|

| | |
|---------------------|---------------|
| <u>China</u> | Not regulated |
|---------------------|---------------|

Special precautions for user
Please refer to the applicable dangerous goods regulations for additional information

SECTION 15: Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

| | |
|---|-----------------|
| Catalogue of occupational hazard factors: | Not applicable. |
| Catalogue of occupational diseases: | Not applicable. |

Regulations on the Control over Safety of Hazardous Chemicals

| | |
|---|-----------------|
| <u>Inventory of hazardous chemicals</u> | Not applicable. |
|---|-----------------|

| | |
|---|----------------|
| <u>GB 18218-2009 Identification of major hazard installations for dangerous chemicals</u> | Not applicable |
|---|----------------|

| | |
|--|----------------|
| List of hazardous chemicals under priority management | Not applicable |
|--|----------------|

Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used

| | |
|---------------------------------|----------------|
| Inventory of highly toxic goods | Not applicable |
|---------------------------------|----------------|

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

| | |
|--|----------------|
| List of toxic chemicals severely restricted for import and export in China | Not applicable |
|--|----------------|

Measures for the Environmental Management of New Chemical Substances

| | |
|--|---|
| IECSC - China Inventory of Existing Chemical Substances | Contact supplier for inventory compliance status. |
|--|---|

International Regulations

| | |
|---|----------------|
| The Montreal Protocol on Substances that Deplete the Ozone Layer | Not applicable |
|---|----------------|

| | |
|--|----------------|
| The Stockholm Convention on Persistent Organic Pollutants | Not applicable |
|--|----------------|

| | |
|---------------------------------|----------------|
| The Rotterdam Convention | Not applicable |
|---------------------------------|----------------|

SECTION 16: Other information

| | |
|--------------------|---|
| Prepared By | Bio-Rad Laboratories, Environmental Health and Safety |
|--------------------|---|

| | |
|----------------------|-------------|
| Revision date | 22-Jan-2021 |
|----------------------|-------------|

| | |
|----------------------|--------------------------|
| Revision Note | SDS sections updated. 1. |
|----------------------|--------------------------|

Abbreviations and acronyms

| | |
|--------|--|
| Legend | Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION |
|--------|--|

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

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) (AELG(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)
 Japan GHS Classification
 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 Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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End of Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
GB/T 16483-2008, GB/T 17519-2013

Product Name Bio-Plex Sample Diluent

Revision date 19-Mar-2021

Revision Number 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name Bio-Plex Sample Diluent

Catalogue Number(s) 10014641, 9704423, 9703895, 171305043, 10022628, 10041561, 12005851

Other means of identification

Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.
1st and 2nd Floor, Lumpini 1 Building
239/2, Rajdamri Road, Lumpini,
Pathumwan, Bangkok 10330
Thailand

Technical Service +66 2 652 8313
ctsthailand@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

SECTION 2: Hazards identification

Emergency Overview

No significant adverse health effects

Appearance aqueous solution

Physical state Liquid

Odour Odourless

Classification of the substance or mixture

Not classified

Label elements

Hazard statements

Not classified

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

Environmental hazards

Not applicable

Other hazards which do not result in classification

Contains animal source material (Cattle)

SECTION 3: Composition/information on ingredients**Substance**

Not applicable.

Mixture

Not classified.

SECTION 4: First aid measures**Description of necessary first aid measures**

| | |
|---|--|
| General advice | No hazards which require special first aid measures. |
| 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 doctor. |
| Skin contact | Wash skin with soap and water. |
| Ingestion | Rinse mouth thoroughly with water. |
| <u>Most important symptoms and effects, both acute and delayed</u> | No information available. |
| <u>For emergency responders</u> | No information available. |
| <u>Note to doctors</u> | Treat symptomatically. |

SECTION 5: Firefighting measures**Extinguishing media**

| | |
|--|--|
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | No information available. |
| <u>Specific hazards arising from the chemical</u> | No information available. |
| <u>Special protective actions for fire-fighters</u> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

| | |
|--|---|
| Personal precautions | See section 8 for more information. |
| For emergency responders | Use personal protection recommended in Section 8. |
| <u>Environmental precautions</u> | See Section 12 for additional Ecological Information. |
| <u>Methods and material for containment and cleaning up</u> | Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers. |
| <u>Precautions to prevent secondary hazards</u> | Clean contaminated objects and areas thoroughly observing environmental regulations. |

SECTION 7: Handling and storage

| | |
|--|--|
| <u>Precautions for safe handling</u> | Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment. |
| <u>Conditions for safe storage, including any incompatibilities</u> | Store according to product and label instructions. |
| Incompatible materials | None known based on information supplied. |

SECTION 8: Exposure controls/personal protection**Occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Note See section 16 for terms and abbreviations

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring and observation processes

No applicable information was found.

| | |
|------------------------------------|---|
| <u>Engineering controls</u> | Showers Eyewash stations Ventilation systems. |
|------------------------------------|---|

Individual protection measures, such as personal protective equipment

| | |
|---------------------------------------|--|
| Eye/face protection | Wear safety glasses with side shields (or goggles). |
| Skin and body protection | Wear suitable protective clothing. |
| Hand protection | Wear suitable gloves. |
| 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. |

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties**

| | |
|-----------------|--------------------------|
| Appearance | aqueous solution |
| Colour | colourless |
| Physical state | Liquid |
| Odour | Odourless |
| Odour threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--|-------------------|-------------------------|
| pH | 7-8 | |
| Melting point / freezing point | 0 °C | |
| Boiling point / boiling range | 100 °C | |
| Flash point | No data available | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapour pressure | No data available | None known |
| Vapour density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | Miscible in water | |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

Additional information

| | |
|----------------------|----------------|
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |

SECTION 10: Stability and reactivity

Stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Conditions to avoid None known based on information supplied.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

Acute toxicity

Numerical measures of toxicity

| | |
|---|---|
| Skin corrosion/irritation | Based on available data, the classification criteria are not met. |
| Serious eye damage/eye irritation | Based on available data, the classification criteria are not met. |
| Respiratory or skin sensitisation | Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity | Based on available data, the classification criteria are not met. |
| Carcinogenicity | Based on available data, the classification criteria are not met. |
| Reproductive toxicity | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity — single exposure | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity — repeated exposure | Based on available data, the classification criteria are not met. |
| Aspiration hazard | Based on available data, the classification criteria are not met. |

SECTION 12: Ecological information

Ecotoxicity

Unknown aquatic toxicity 0.095 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility in soil No information available.

SECTION 13: Disposal considerations

Waste chemicals Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IMDG Not regulated
Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA Not regulated

China Not regulated

Special precautions for user
Please refer to the applicable dangerous goods regulations for additional information

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture**National regulations****Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

| | |
|---|-----------------|
| Catalogue of occupational hazard factors: | Not applicable. |
| Catalogue of occupational diseases: | Not applicable. |

Regulations on the Control over Safety of Hazardous Chemicals

| | |
|---|-----------------|
| <u>Inventory of hazardous chemicals</u> | Not applicable. |
|---|-----------------|

| | |
|---|----------------|
| <u>GB 18218-2009 Identification of major hazard installations for dangerous chemicals</u> | Not applicable |
|---|----------------|

| | |
|--|----------------|
| List of hazardous chemicals under priority management | Not applicable |
|--|----------------|

Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used

| | |
|---------------------------------|----------------|
| Inventory of highly toxic goods | Not applicable |
|---------------------------------|----------------|

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

| | |
|--|----------------|
| List of toxic chemicals severely restricted for import and export in China | Not applicable |
|--|----------------|

Measures for the Environmental Management of New Chemical Substances

| | |
|--|---|
| IECSC - China Inventory of Existing Chemical Substances | Contact supplier for inventory compliance status. |
|--|---|

International Regulations

| | |
|---|----------------|
| The Montreal Protocol on Substances that Deplete the Ozone Layer | Not applicable |
|---|----------------|

| | |
|--|----------------|
| The Stockholm Convention on Persistent Organic Pollutants | Not applicable |
|--|----------------|

| | |
|---------------------------------|----------------|
| The Rotterdam Convention | Not applicable |
|---------------------------------|----------------|

SECTION 16: Other information

| | |
|--------------------|---|
| Prepared By | Bio-Rad Laboratories, Environmental Health and Safety |
|--------------------|---|

| | |
|----------------------|-------------|
| Revision date | 19-Mar-2021 |
|----------------------|-------------|

| | |
|----------------------|--------------------------|
| Revision Note | SDS sections updated. 1. |
|----------------------|--------------------------|

Abbreviations and acronyms**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

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)
 Japan GHS Classification
 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 Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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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



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
GB/T 16483-2008, GB/T 17519-2013

Product Name Bio-Plex Standard Diluent

Revision date 19-Mar-2021

Revision Number 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name Bio-Plex Standard Diluent

Catalogue Number(s) 9703888, 9704424, 171305042, 171304080M, 10022368, 12005853

Other means of identification

Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.
1st and 2nd Floor, Lumpini 1 Building
239/2, Rajdamri Road, Lumpini,
Pathumwan, Bangkok 10330
Thailand

Technical Service +66 2 652 8313
ctsthailand@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

SECTION 2: Hazards identification

Emergency Overview

No significant adverse health effects

Appearance Liquid

Physical state Liquid

Odour Odourless

Classification of the substance or mixture

Not classified

Label elements

Hazard statements

Not classified

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

Environmental hazards

Not applicable

Other hazards which do not result in classification

Contains animal source material (Cattle)

SECTION 3: Composition/information on ingredients**Substance**

Not applicable.

Mixture

Not classified.

SECTION 4: First aid measures**Description of necessary first aid measures**

| | |
|---|--|
| General advice | No hazards which require special first aid measures. |
| 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 doctor. |
| Skin contact | Wash skin with soap and water. |
| Ingestion | Rinse mouth thoroughly with water. |
| <u>Most important symptoms and effects, both acute and delayed</u> | No information available. |
| <u>For emergency responders</u> | No information available. |
| <u>Note to doctors</u> | Treat symptomatically. |

SECTION 5: Firefighting measures**Extinguishing media**

| | |
|--|--|
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | No information available. |
| <u>Specific hazards arising from the chemical</u> | No information available. |
| <u>Special protective actions for fire-fighters</u> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

| | |
|--|---|
| Personal precautions | See section 8 for more information. |
| For emergency responders | Use personal protection recommended in Section 8. |
| <u>Environmental precautions</u> | See Section 12 for additional Ecological Information. |
| <u>Methods and material for containment and cleaning up</u> | Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers. |
| <u>Precautions to prevent secondary hazards</u> | Clean contaminated objects and areas thoroughly observing environmental regulations. |

SECTION 7: Handling and storage

| | |
|--|--|
| <u>Precautions for safe handling</u> | Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment. |
| <u>Conditions for safe storage, including any incompatibilities</u> | Store according to product and label instructions. |
| Incompatible materials | None known based on information supplied. |

SECTION 8: Exposure controls/personal protection**Occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Note See section 16 for terms and abbreviations

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring and observation processes

No applicable information was found.

| | |
|------------------------------------|---|
| <u>Engineering controls</u> | Showers Eyewash stations Ventilation systems. |
|------------------------------------|---|

Individual protection measures, such as personal protective equipment

| | |
|---------------------------------------|--|
| Eye/face protection | Wear safety glasses with side shields (or goggles). |
| Skin and body protection | Wear suitable protective clothing. |
| Hand protection | Wear suitable gloves. |
| 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. |

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties**

| | |
|-----------------|--------------------------|
| Appearance | Liquid |
| Colour | colourless |
| Physical state | Liquid |
| Odour | Odourless |
| Odour threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--|----------------------|--------------------------------|
| pH | 7-8 | |
| Melting point / freezing point | No data available | None known |
| Boiling point / boiling range | 100 °C | |
| Flash point | No data available | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapour pressure | No data available | None known |
| Vapour density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | Miscible in water | |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

Additional information

| | |
|----------------------|----------------|
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |

SECTION 10: Stability and reactivity

Stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Conditions to avoid None known based on information supplied.

Incompatible materials None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information**Acute toxicity****Numerical measures of toxicity**

| | |
|---|---|
| Skin corrosion/irritation | Based on available data, the classification criteria are not met. |
| Serious eye damage/eye irritation | Based on available data, the classification criteria are not met. |
| Respiratory or skin sensitisation | Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity | Based on available data, the classification criteria are not met. |
| Carcinogenicity | Based on available data, the classification criteria are not met. |
| Reproductive toxicity | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity — single exposure | Based on available data, the classification criteria are not met. |
| Specific target organ toxicity — repeated exposure | Based on available data, the classification criteria are not met. |
| Aspiration hazard | Based on available data, the classification criteria are not met. |

SECTION 12: Ecological information

Ecotoxicity

Unknown aquatic toxicity 0.018 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility in soil No information available.

SECTION 13: Disposal considerations

Waste chemicals Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IMDG Not regulated
Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA Not regulated

China Not regulated

Special precautions for user
Please refer to the applicable dangerous goods regulations for additional information

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture**National regulations****Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

| | |
|---|-----------------|
| Catalogue of occupational hazard factors: | Not applicable. |
| Catalogue of occupational diseases: | Not applicable. |

Regulations on the Control over Safety of Hazardous Chemicals

| | |
|---|-----------------|
| <u>Inventory of hazardous chemicals</u> | Not applicable. |
|---|-----------------|

| | |
|---|----------------|
| <u>GB 18218-2009 Identification of major hazard installations for dangerous chemicals</u> | Not applicable |
|---|----------------|

| | |
|--|----------------|
| List of hazardous chemicals under priority management | Not applicable |
|--|----------------|

Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used

| | |
|---------------------------------|----------------|
| Inventory of highly toxic goods | Not applicable |
|---------------------------------|----------------|

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

| | |
|--|----------------|
| List of toxic chemicals severely restricted for import and export in China | Not applicable |
|--|----------------|

Measures for the Environmental Management of New Chemical Substances

| | |
|--|---|
| IECSC - China Inventory of Existing Chemical Substances | Contact supplier for inventory compliance status. |
|--|---|

International Regulations

| | |
|---|----------------|
| The Montreal Protocol on Substances that Deplete the Ozone Layer | Not applicable |
|---|----------------|

| | |
|--|----------------|
| The Stockholm Convention on Persistent Organic Pollutants | Not applicable |
|--|----------------|

| | |
|---------------------------------|----------------|
| The Rotterdam Convention | Not applicable |
|---------------------------------|----------------|

SECTION 16: Other information

| | |
|--------------------|---|
| Prepared By | Bio-Rad Laboratories, Environmental Health and Safety |
|--------------------|---|

| | |
|----------------------|-------------|
| Revision date | 19-Mar-2021 |
|----------------------|-------------|

| | |
|----------------------|--------------------------|
| Revision Note | SDS sections updated. 1. |
|----------------------|--------------------------|

Abbreviations and acronyms**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

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)
 Japan GHS Classification
 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 Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
GB/T 16483-2008, GB/T 17519-2013

Product Name Streptavidin-PE
Revision date 15-Dec-2020
Revision Number 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product Name Streptavidin-PE
Catalogue Number(s) 171304501, 9704418, 9703887, 9703897

Other means of identification

Pure substance/mixture Mixture

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.
1st and 2nd Floor, Lumpini 1 Building
239/2, Rajdamri Road, Lumpini,
Pathumwan, Bangkok 10330
Thailand

Technical Service +66 2 652 8313
ctsthailand@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Hong Kong: 800-968-793

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

SECTION 2: Hazards identification

Emergency Overview

No significant adverse health effects

Appearance aqueous solution **Physical state** Liquid **Odour** Odourless

Classification of the substance or mixture

Not classified

Label elements

Hazard statements

Not classified

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

Environmental hazards

Not applicable

Other hazards which do not result in classification

Not applicable

SECTION 3: Composition/information on ingredients**Substance**

Not applicable.

Mixture

Not classified.

| Chemical name | Weight-% | CAS No |
|---------------|--------------|-----------|
| Water | 50 - 100 | 7732-18-5 |
| Trade secret | 0.3 - 0.999 | - |
| Trade secret | 0.1 - 0.299 | - |
| Trade secret | 0.1 - 0.299 | - |
| Avidin | 0.01 - 0.099 | 9013-20-1 |

SECTION 4: First aid measures**Description of necessary first aid measures****General advice**

No hazards which require special first aid measures.

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 doctor.

Skin contact

Wash skin with soap and water.

Ingestion

Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed

No information available.

For emergency responders

No information available.

Note to doctors

Treat symptomatically.

SECTION 5: Firefighting measures**Extinguishing media****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

| | |
|--|--|
| Unsuitable extinguishing media | No information available. |
| <u>Specific hazards arising from the chemical</u> | No information available. |
| <u>Special protective actions for fire-fighters</u> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

| | |
|--|---|
| Personal precautions | See section 8 for more information. |
| For emergency responders | Use personal protection recommended in Section 8. |
| <u>Environmental precautions</u> | See Section 12 for additional Ecological Information. |
| <u>Methods and material for containment and cleaning up</u> | Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers. |
| <u>Precautions to prevent secondary hazards</u> | Clean contaminated objects and areas thoroughly observing environmental regulations. |

SECTION 7: Handling and storage

| | |
|--|--|
| <u>Precautions for safe handling</u> | Handle in accordance with good industrial hygiene and safety practice. See Section 8 for information on appropriate personal protective equipment. |
| <u>Conditions for safe storage, including any incompatibilities</u> | Store according to product and label instructions. |
| Incompatible materials | Metals. |

SECTION 8: Exposure controls/personal protection

Occupational exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Note See section 16 for terms and abbreviations

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring and observation processes

No applicable information was found.

| | |
|------------------------------------|---|
| <u>Engineering controls</u> | Showers Eyewash stations Ventilation systems. |
|------------------------------------|---|

Individual protection measures, such as personal protective equipment

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

| | |
|---------------------------------------|--|
| Skin and body protection | Wear suitable protective clothing. |
| Hand protection | Wear suitable gloves. |
| 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. |

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| | |
|------------------------|--------------------------|
| Appearance | aqueous solution |
| Colour | colourless |
| Physical state | Liquid |
| Odour | Odourless |
| Odour threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|---|-------------------|-------------------------|
| pH | 7-8 | |
| Melting point / freezing point | 0 °C | |
| Boiling point / boiling range | 100 °C | |
| Flash point | No data available | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability or explosive limits | No data available | |
| Lower flammability or explosive limits | No data available | |
| Vapour pressure | No data available | None known |
| Vapour density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | Miscible in water | |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

Additional information

| | |
|-----------------------------|----------------|
| Explosive properties | Not applicable |
| Oxidising properties | Not applicable |

SECTION 10: Stability and reactivity

| | |
|-------------------------|---------------------------------|
| <u>Stability</u> | Stable under normal conditions. |
|-------------------------|---------------------------------|

| | |
|--|---|
| <u>Possibility of hazardous reactions</u> | 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. |
|--|---|

| | |
|---|-------|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge | None. |

| | |
|-----------------------------------|---|
| <u>Conditions to avoid</u> | None known based on information supplied. |
|-----------------------------------|---|

| | |
|--------------------------------------|---------|
| <u>Incompatible materials</u> | Metals. |
|--------------------------------------|---------|

| | |
|--|---|
| <u>Hazardous decomposition products</u> | None known based on information supplied. |
|--|---|

SECTION 11: Toxicological information**Acute toxicity****Numerical measures of toxicity**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|----------------------|--------------------------|-------------------------|
| Water | > 90 mL/kg (Rat) | - | - |
| Trade secret | = 3 g/kg (Rat) | > 10000 mg/kg (Rabbit) | > 42 mg/L (Rat) 1 h |
| Trade secret | = 8290 mg/kg (Rat) | > 7940 mg/kg (Rabbit) | > 0.83 mg/L (Rat) 4 h |

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity — single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity — repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information**Ecotoxicity**

Unknown aquatic toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical name | Algae/aquatic plants | Fish | Crustacea |
|---------------|----------------------|---|--|
| Trade secret | - | LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: 6420 - 6700mg/L (96h, Pimephales promelas) LC50: =12946mg/L (96h, Lepomis macrochirus) LC50: =7050mg/L (96h, Pimephales promelas) | EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) EC50: =1000mg/L (48h, Daphnia magna) |

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility in soil No information available.

SECTION 13: Disposal considerations

Waste chemicals Flush pipes with water frequently if discarding solutions containing Sodium azide into metal piping systems.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IMDG Not regulated
Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA Not regulated

China Not regulated

Special precautions for user
 Please refer to the applicable dangerous goods regulations for additional information

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors: Not applicable.
 Catalogue of occupational diseases: Not applicable.

Regulations on the Control over Safety of Hazardous Chemicals

Inventory of hazardous chemicals Not applicable.

GB 18218-2009 Identification of major hazard installations for dangerous chemicals Not applicable

List of hazardous chemicals under priority management Not applicable

Regulations on Labour Protection in Workplaces Where Toxic Substances Are Used

Inventory of highly toxic goods Not applicable

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

List of toxic chemicals severely restricted for import and export in China Not applicable

Measures for the Environmental Management of New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances Contact supplier for inventory compliance status.

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

SECTION 16: Other information

Prepared By Bio-Rad Laboratories, Environmental Health and Safety

Revision date 15-Dec-2020

Revision Note Significant changes throughout SDS. Review all sections.

Abbreviations and acronyms

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| C | Carcinogen | | |

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) (AELG(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)
Japan GHS Classification
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 Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Disclaimer

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End of Safety Data Sheet