



# SAFETY DATA SHEET

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

**Product Name** PROTEIN PREPARATION - #10578

**Revision date** 02-Nov-2022

**Revision Number** 3

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

### Product identifier

**Product Name** PROTEIN PREPARATION - #10578

### Other means of identification

**Safety data sheet number** 10578

**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

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#### Legal Entity / Contact Address

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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** For research use only

## SECTION 2: Hazards identification

### **Emergency Overview**

No significant adverse health effects

**Appearance** powder or cake, lyophilised **Physical state** Solid **Odour** No information available

### Classification of the substance or mixture

|  |            |
|--|------------|
| <b>Acute toxicity - Inhalation (Dusts/Mists)</b>             | Category 5 |
| <b>Hazardous to the Aquatic Environment - Acute Hazard</b>   | Category 3 |
| <b>Hazardous to the Aquatic Environment - Chronic Hazard</b> | Category 3 |

**Label elements****Signal word** Warning**Hazard statements**

May be harmful if inhaled

Harmful to aquatic life with long lasting effects

**Precautionary statements****Prevention**

Avoid release to the environment

**Response**

IF INHALED: Call a POISON CENTER or doctor if you feel unwell

**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: If symptoms persist, call a doctor.

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     |
|-----------------|-------------|------------|
| Sodium chloride | 35 - 50     | 7647-14-5  |
| Sodium azide    | 0.3 - 0.999 | 26628-22-8 |

**SECTION 4: First aid measures****Description of necessary first aid measures****General advice** Show this safety data sheet to the doctor in attendance.**Inhalation** If breathing has stopped, give artificial respiration. Get medical attention immediately.  
Remove to fresh air. If symptoms persist, call a doctor.**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.  
Consult a doctor.

|   |   |
|---|---|
| <b>Skin contact</b>   | Wash skin with soap and water.  |
| <b>Ingestion</b>  | Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.  |
| <b><u>Most important symptoms and effects, both acute and delayed</u></b> | Coughing and/ or wheezing. Difficulty in breathing.   |
| <b><u>For emergency responders</u></b>                                    | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing dust/fume/gas/mist/vapours/spray. Use personal protective equipment as required. See section 8 for more information. |
| <b><u>Note to doctors</u></b>   | Treat symptomatically.  |

## SECTION 5: Firefighting measures

### Extinguishing media

|  |  |
|--|--|
| <b>Suitable Extinguishing Media</b>                        | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                            |
| <b>Unsuitable extinguishing media</b>                      | No information available.  |
| <b><u>Specific hazards arising from the chemical</u></b>   | No information available.  |
| <b><u>Special protective actions for fire-fighters</u></b> | 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

|  |  |
|--|--|
| <b>Personal precautions</b>  | Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Use personal protective equipment as required. |
| <b>Other information</b>   | Refer to protective measures listed in Sections 7 and 8.   |
| <b>For emergency responders</b>                                    | Use personal protection recommended in Section 8.  |
| <b><u>Environmental precautions</u></b>                            | See Section 12 for additional Ecological Information.  |
| <b><u>Methods and material for containment and cleaning up</u></b> | Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labelled containers.                |
| <b><u>Precautions to prevent secondary hazards</u></b>             | Clean contaminated objects and areas thoroughly observing environmental regulations.                                       |

## SECTION 7: Handling and storage

|   |   |
|---|---|
| <b><u>Precautions for safe handling</u></b> | Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid generation of dust. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. |
|---|---|

See Section 8 for information on appropriate personal protective equipment.

**Conditions for safe storage,  
including any incompatibilities**

Keep containers tightly closed in a dry, cool and well-ventilated place. 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

| Chemical name             | China                                  | ACGIH TLV  |
|---------------------------|--|--|
| Sodium azide - 26628-22-8 | Ceiling: 0.3 mg/m <sup>3</sup> Ceiling | Ceiling: 0.29 mg/m <sup>3</sup> Sodium azide<br>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.

### Engineering controls

Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

|                                       |  |
|---------------------------------------|--|
| <b>Eye/face protection</b>            | Wear safety glasses with side shields (or goggles).  |
| <b>Skin and body protection</b>       | Wear suitable protective clothing.   |
| <b>Hand protection</b>                | Wear suitable gloves.  |
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| <b>General hygiene considerations</b> | Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product.  |

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

|                        |                             |
|------------------------|-----------------------------|
| <b>Appearance</b>      | powder or cake, lyophilised |
| <b>Colour</b>          | Varies                      |
| <b>Physical state</b>  | Solid                       |
| <b>Odour</b>           | No information available    |
| <b>Odour threshold</b> | No information available    |

| <u>Property</u>                       | <u>Values</u>     | <u>Remarks • Method</u> |
|---------------------------------------|-------------------|-------------------------|
| <b>pH</b>                             | No data available | None known              |
| <b>Melting point / freezing point</b> | No data available | None known              |
| <b>Boiling point / boiling range</b>  | No data available | None known              |
| <b>Flash point</b>                    | No data available | None known              |
| <b>Evaporation rate</b>               | 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                       | Soluble 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** 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** Excessive heat.

**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)                 | 6,157.60 mg/kg |
| ATEmix (inhalation-dust/mist) | 6.59 mg/l      |

**Unknown acute toxicity**

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

|                 |                          |
|-----------------|--------------------------|
| Oral LD50       | No information available |
| Dermal LD50     | No information available |
| Inhalation LC50 | No information available |
| Inhalation LC50 | No information available |

**Component Information**

| Chemical name   | Oral LD50        | Dermal LD50              | Inhalation LC50       |
|-----------------|------------------|--------------------------|-----------------------|
| Sodium chloride | = 3 g/kg ( Rat ) | > 10000 mg/kg ( Rabbit ) | > 42 mg/L ( Rat ) 1 h |

|              |                    |                       |                               |
|--------------|--------------------|-----------------------|-------------------------------|
| Sodium azide | = 27 mg/kg ( Rat ) | = 20 mg/kg ( Rabbit ) | 0.054 - 0.52 mg/L ( Rat ) 4 h |
|--------------|--------------------|-----------------------|-------------------------------|

|   |  |
|---|--|
| <b>Skin corrosion/irritation</b>                          | Based on available data, the classification criteria are not met.          |
| <b>Serious eye damage/eye irritation</b>                  | Based on available data, the classification criteria are not met.          |
| <b>Respiratory or skin sensitisation</b>                  | Based on available data, the classification criteria are not met.          |
| <b>Germ cell mutagenicity</b>                             | Based on available data, the classification criteria are not met.          |
| <b>Carcinogenicity</b>                                    | Based on available data, the classification criteria are not met.          |
| <b>Reproductive toxicity</b>                              | Based on available data, the classification criteria are not met.          |
| <b>Specific target organ toxicity — single exposure</b>   | Based on available data, the classification criteria are not met.          |
| <b>Specific target organ toxicity — repeated exposure</b> | Based on available data, the classification criteria are not met.          |
| <b>Target organ effects</b>                               | Kidney. Eyes. Skin. Central nervous system. Central Vascular System (CVS). |
| <b>Aspiration hazard</b>                                  | Based on available data, the classification criteria are not met.          |

## SECTION 12: Ecological information

|                                 |   |
|---------------------------------|---|
| <b>Ecotoxicity</b>              | Harmful to aquatic life with long lasting effects.  |
| <b>Unknown aquatic toxicity</b> | 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment |

| Chemical name   | Algae/aquatic plants | Fish  | Crustacea  |
|-----------------|----------------------|---|--|
| Sodium chloride | -                    | LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus)<br>LC50: =12946mg/L (96h, Lepomis macrochirus)<br>LC50: 6020 - 7070mg/L (96h, Pimephales promelas)<br>LC50: =7050mg/L (96h, Pimephales promelas)<br>LC50: 6420 - 6700mg/L (96h, Pimephales promelas)<br>LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) | EC50: =1000mg/L (48h, Daphnia magna)<br>EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) |
| Sodium azide    | -                    | LC50: =0.8mg/L (96h, Oncorhynchus mykiss)<br>LC50: =0.7mg/L (96h, Lepomis macrochirus)<br>LC50: =5.46mg/L (96h, Pimephales promelas)  | -  |

|                                      |                           |
|--------------------------------------|---------------------------|
| <b>Persistence and degradability</b> | No information available. |
| <b>Bioaccumulative potential</b>     | No information available. |
| <b>Mobility in soil</b>              | 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

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed. Weight-%  
1

| Chemical name | Inventory of hazardous chemicals |
|---------------|----------------------------------|
| 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 02-Nov-2022

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

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**End of Safety Data Sheet**