

# KIT SAFETY DATA SHEET



**Kit Product Name** DNA Extraction Reagent Pack / DNA Extraction Module

**Kit Catalogue Number(s)** 1665105, 1665105EDU, 12016408, 12016408EDU

**Revision date** 17-May-2022

## Kit Contents

| Catalogue Number(s)        | Product Name               |
|----------------------------|----------------------------|
| 10028137, 9702823, 9703069 | Wash Buffer                |
| 10028138                   | Matrix                     |
| 10028135, 9703066, 9702336 | Lysis Solution             |
| 10028136, 9702337, 9703068 | Neutralization Solution    |
| 10028134, 9703067, 9702335 | Cell Resuspension Solution |



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 17-May-2022

Previous revision date 17-May-2022

Revision Number 1.4

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

### 1.1. Product identifier

**Product Name** Wash Buffer  
**Catalogue Number(s)** 10028137, 9702823, 9703069  
**Pure substance/mixture** Mixture

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended use** Laboratory chemicals  
**Uses advised against** No information available

### 1.3. 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  
The Junction  
Station Road  
Watford, WD17 1ET  
UK

Bio-Rad Laboratories Pvt. Ltd.  
Bio-Rad House  
86-87, Udyog Vihar Phase IV Gurgaon  
122005  
Haryana India

Bio-Rad Laboratories (Pty) Ltd.  
34 Bolton Road  
Parkwood, Johannesburg 2193  
South Africa

For further information, please contact

**Technical Service** 00800 00246 723  
Ireland: Techsupport.UK@bio-rad.com  
India: support.india@bio-rad.com  
South Africa: cdg\_techsupport\_eemea@bio-rad.com

### 1.4. Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Ireland: 353-19014670  
CHEMTREC India: 000-800-100-7141  
CHEMTREC South Africa: 0-800-983-611

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

### 2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

**Hazard statements**

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

**2.3. Other hazards****SECTION 3: Composition/information on ingredients****3.1 Substances**

Not applicable

**3.2 Mixtures**

| Chemical name                | Weight-% | REACH registration number | EC No     | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|------------------------------|----------|---------------------------|-----------|---|------------------------------------|----------|----------------------|
| Sodium chloride<br>7647-14-5 | 2.5 - 5  | No data available         | 231-598-3 | No data available   | -                                  | -        | -                    |

**Full text of H- and EUH-phrases: see section 16**

**Acute Toxicity Estimate**

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

| Chemical name                | Oral LD50<br>mg/kg | Dermal LD50<br>mg/kg | Inhalation LC50 - 4<br>hour - dust/mist - mg/L | Inhalation LC50 - 4<br>hour - vapor - mg/L | Inhalation LC50 - 4<br>hour - gas - ppm |
|------------------------------|--------------------|----------------------|--|--|---|
| Sodium chloride<br>7647-14-5 | 3000               | 10000                | No data available                              | No data available                          | No data available                       |

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

**SECTION 4: First aid measures****4.1. Description of first aid measures**

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | Remove to fresh air.  |
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.<br>Consult a physician. |
| <b>Skin contact</b> | Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.                    |
| <b>Ingestion</b>    | Rinse mouth.  |

**4.2. Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**4.3. Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

### **5.2. Special hazards arising from the substance or mixture**

**Specific hazards arising from the chemical** No information available.

### **5.3. Advice for firefighters**

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

## **SECTION 6: Accidental release measures**

### **6.1. Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation.

**For emergency responders** Use personal protection recommended in Section 8.

### **6.2. Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

### **6.3. Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

### **6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## **SECTION 7: Handling and storage**

### **7.1. Precautions for safe handling**

**Advice on safe handling** Ensure adequate ventilation.

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

### **7.2. Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Store according to product and label instructions.

**7.3. Specific end use(s)**

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters****Exposure Limits**

| Chemical name                | Ireland | Italy | Italy REL | Latvia                   | Lithuania                |
|------------------------------|---------|-------|-----------|--------------------------|--------------------------|
| Sodium chloride<br>7647-14-5 | -       | -     | -         | TWA: 5 mg/m <sup>3</sup> | TWA: 5 mg/m <sup>3</sup> |

**Biological occupational exposure limits**

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

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls****Personal protective equipment**

**Eye/face protection** No special protective equipment required.

**Skin and body protection** No special protective equipment required.

**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.

**Environmental exposure controls** No information available.

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

|                        |                          |
|------------------------|--------------------------|
| <b>Physical state</b>  | Liquid                   |
| <b>Appearance</b>      | aqueous solution         |
| <b>Colour</b>          | colourless               |
| <b>Odour</b>           | Odourless.               |
| <b>Odour threshold</b> | No information available |

| <u>Property</u>                               | <u>Values</u>     | <u>Remarks • Method</u> |
|---|-------------------|-------------------------|
| <b>Melting point / freezing point</b>         | No data available | None known              |
| <b>Boiling point / boiling range</b>          | > 100 °C          |                         |
| <b>Flammability (solid, gas)</b>              | No data available | None known              |
| <b>Flammability Limit in Air</b>              |                   | None known              |
| <b>Upper flammability or explosive limits</b> | No data available |                         |
| <b>Lower flammability or explosive limits</b> | No data available |                         |
| <b>Flash point</b>                            | No data available | None known              |
| <b>Autoignition temperature</b>               | No data available | None known              |

|                            |                          |                          |
|----------------------------|--------------------------|--------------------------|
| Decomposition temperature  |                          | None known               |
| pH                         | 7-8                      |                          |
| pH (as aqueous solution)   | No data available        | No information available |
| Kinematic viscosity        | No data available        | None known               |
| Dynamic viscosity          | No data available        | None known               |
| Water solubility           | Miscible in water        |                          |
| Solubility(ies)            | No data available        | None known               |
| Partition coefficient      | No data available        | None known               |
| Vapour pressure            | No data available        | None known               |
| Relative density           | No data available        | None known               |
| Bulk density               | No data available        |                          |
| Liquid Density             | No data available        |                          |
| Vapour density             | No data available        | None known               |
| Particle characteristics   |                          |                          |
| Particle Size              | No information available |                          |
| Particle Size Distribution | No information available |                          |

## 9.2. Other information

### 9.2.1. Information with regard to physical hazard classes

Not applicable

### 9.2.2. Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity No information available.

### 10.2. Chemical stability

Stability Stable under normal conditions.

#### Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

### 10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

### 10.5. Incompatible materials

Incompatible materials None known based on information supplied.

### 10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Information on likely routes of exposure

#### Product Information

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

|              |   |
|--------------|---|
| Eye contact  | Specific test data for the substance or mixture is not available. |
| Skin contact | Specific test data for the substance or mixture is not available. |
| Ingestion    | Specific test data for the substance or mixture is not available. |

**Symptoms related to the physical, chemical and toxicological characteristics**

|          |                           |
|----------|---------------------------|
| Symptoms | No information available. |
|----------|---------------------------|

**Acute toxicity****Numerical measures of toxicity**

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

ATEmix (oral) 67,575.1774 mg/kg

**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 |

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

|                                   |                           |
|-----------------------------------|---------------------------|
| Skin corrosion/irritation         | No information available. |
| Serious eye damage/eye irritation | No information available. |
| Respiratory or skin sensitization | No information available. |
| Germ cell mutagenicity            | No information available. |
| Carcinogenicity                   | No information available. |
| Reproductive toxicity             | No information available. |
| STOT - single exposure            | No information available. |
| STOT - repeated exposure          | No information available. |
| Aspiration hazard                 | No information available. |

**11.2. Information on other hazards****11.2.1. Endocrine disrupting properties**

|                                 |                           |
|---------------------------------|---------------------------|
| Endocrine disrupting properties | No information available. |
|---------------------------------|---------------------------|

**11.2.2. Other information**

|                       |                           |
|-----------------------|---------------------------|
| Other adverse effects | No information available. |
|-----------------------|---------------------------|

**SECTION 12: Ecological information**

**12.1. Toxicity****Ecotoxicity**

**Unknown aquatic toxicity** Contains 0 % of components with unknown hazards to the aquatic environment.

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

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

**12.3. Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**12.4. Mobility in soil**

**Mobility in soil** No information available.

**12.5. Results of PBT and vPvB assessment****PBT and vPvB assessment**

| Chemical name   | PBT and vPvB assessment                                       |
|-----------------|---|
| Sodium chloride | The substance is not PBT / vPvB PBT assessment does not apply |

**12.6. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**12.7. Other adverse effects**

No information available.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

**Waste from residues/unused products** 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

### IATA

|                                    |                |
|------------------------------------|----------------|
| 14.1 UN number or ID number        | Not regulated  |
| 14.2 UN proper shipping name       | Not regulated  |
| 14.3 Transport hazard class(es)    | Not regulated  |
| 14.4 Packing group                 | Not regulated  |
| 14.5 Environmental hazards         | Not applicable |
| 14.6 Special Precautions for Users |                |
| Special Provisions                 | None           |

### IMDG

|  |                          |
|--|--------------------------|
| 14.1 UN number or ID number                                  | Not regulated            |
| 14.2 UN proper shipping name                                 | Not regulated            |
| 14.3 Transport hazard class(es)                              | Not regulated            |
| 14.4 Packing group   | Not regulated            |
| 14.5 Environmental hazards                                   | Not applicable           |
| 14.6 Special Precautions for Users                           |                          |
| Special Provisions   | None                     |
| 14.7 Maritime transport in bulk according to IMO instruments | No information available |

### RID

|                                    |                |
|------------------------------------|----------------|
| 14.1 UN number                     | Not regulated  |
| 14.2 UN proper shipping name       | Not regulated  |
| 14.3 Transport hazard class(es)    | Not regulated  |
| 14.4 Packing group                 | Not regulated  |
| 14.5 Environmental hazards         | Not applicable |
| 14.6 Special Precautions for Users |                |
| Special Provisions                 | None           |

### ADR

|                                    |                |
|------------------------------------|----------------|
| 14.1 UN number or ID number        | Not regulated  |
| 14.2 UN proper shipping name       | Not regulated  |
| 14.3 Transport hazard class(es)    | Not regulated  |
| 14.4 Packing group                 | Not regulated  |
| 14.5 Environmental hazards         | Not applicable |
| 14.6 Special Precautions for Users |                |
| Special Provisions                 | None           |

## SECTION 15: Regulatory information

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

#### National regulations

##### France

##### Occupational Illnesses (R-463-3, France)

| Chemical name                | French RG number | Title |
|------------------------------|------------------|-------|
| Sodium chloride<br>7647-14-5 | RG 78            | -     |

##### Germany

Water hazard class (WGK) slightly hazardous to water (WGK 1)

##### European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**Authorizations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants**

Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**Plant protection products directive (91/414/EEC)**

| Chemical name               | Plant protection products directive (91/414/EEC) |
|-----------------------------|--|
| Sodium chloride - 7647-14-5 | Plant protection agent                           |

**EU - Biocides****International Inventories**

Contact supplier for inventory compliance status

**15.2. Chemical safety assessment****Chemical Safety Report**

No information available

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

\*

Skin designation

| Classification procedure  |                    |
|---|--------------------|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used        |
| Acute oral toxicity   | Calculation method |
| Acute dermal toxicity   | Calculation method |
| Acute inhalation toxicity - gas                                 | Calculation method |
| Acute inhalation toxicity - Vapour                              | Calculation method |
| Acute inhalation toxicity - dust/mist                           | Calculation method |
| Skin corrosion/irritation                                       | Calculation method |
| Serious eye damage/eye irritation                               | Calculation method |
| Respiratory sensitisation                                       | Calculation method |
| Skin sensitisation  | Calculation method |
| Mutagenicity  | Calculation method |
| Carcinogenicity   | Calculation method |
| Reproductive toxicity   | Calculation method |
| STOT - single exposure  | Calculation method |
| STOT - repeated exposure  | Calculation method |
| Acute aquatic toxicity  | Calculation method |
| Chronic aquatic toxicity  | Calculation method |
| Aspiration hazard   | Calculation method |
| Ozone   | Calculation method |

**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)

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European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
European Chemicals Agency (ECHA) (ECHA\_API)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development 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  
World Health Organization

**Revision Note** Reformatted and updated existing information

**Revision date** 17-May-2022

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**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:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 17-May-2022

Previous revision date 17-May-2022

Revision Number 1.4

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

### 1.1. Product identifier

Product Name Quantum Prep Matrix

Catalogue Number(s) 10028138, 9702798

Pure substance/mixture Mixture

Contains Guanidine, hydrochloride (1:1), Kieselguhr, soda ash flux-calcined

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Laboratory chemicals

Uses advised against No information available

### 1.3. 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  
The Junction  
Station Road  
Watford, WD17 1ET  
UK

Bio-Rad Laboratories Pvt. Ltd.  
Bio-Rad House  
86-87, Udyog Vihar Phase IV Gurgaon  
122005  
Haryana India

Bio-Rad Laboratories (Pty) Ltd.  
34 Bolton Road  
Parkwood, Johannesburg 2193  
South Africa

For further information, please contact

#### Technical Service

00800 00246 723  
Ireland: Techsupport.UK@bio-rad.com  
India: support.india@bio-rad.com  
South Africa: cdg\_techsupport\_eemea@bio-rad.com

### 1.4. Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Ireland: 353-19014670  
CHEMTREC India: 000-800-100-7141  
CHEMTREC South Africa: 0-800-983-611

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

|                       |                     |
|-----------------------|---------------------|
| Acute toxicity - Oral | Category 4 - (H302) |
|-----------------------|---------------------|

|  |                     |
|--|---------------------|
| Skin corrosion/irritation                          | Category 2 - (H315) |
| Serious eye damage/eye irritation                  | Category 2 - (H319) |
| Specific target organ toxicity (repeated exposure) | Category 1 - (H372) |

## 2.2. Label elements

Contains Guanidine, hydrochloride (1:1), Kieselguhr, soda ash flux-calcined



### Signal word

Danger

### Hazard statements

H302 - Harmful if swallowed

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H372 - Causes damage to organs through prolonged or repeated exposure

### Precautionary Statements - EU (§28, 1272/2008)

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P264 - Wash face, hands and any exposed skin thoroughly after handling

P337 + P313 - If eye irritation persists: Get medical advice/attention

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

P280 - Wear protective gloves/protective clothing/eye protection/face protection

## 2.3. Other hazards

# SECTION 3: Composition/information on ingredients

## 3.1 Substances

Not applicable

## 3.2 Mixtures

| Chemical name                                    | Weight-% | REACH registration number | EC No     | Classification according to Regulation (EC) No. 1272/2008 [CLP]    | Specific concentration limit (SCL)                  | M-Factor | M-Factor (long-term) |
|--|----------|---------------------------|-----------|--|---|----------|----------------------|
| Guanidine, hydrochloride (1:1)<br>50-01-1        | 50 - 100 | No data available         | 200-002-3 | Acute Tox. 4 (H302)<br>Skin Irrit. 2 (H315)<br>Eye Irrit. 2 (H319) | -   | -        | -                    |
| Kieselguhr, soda ash flux-calcined<br>68855-54-9 | 20 - 35  | No data available         | 272-489-0 | STOT RE 1 (H372)   | STOT RE 1 ::<br>C>=10%<br>STOT RE 2 ::<br>1%<=C<10% | -        | -                    |

**Full text of H- and EUH-phrases: see section 16**

### Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

| Chemical name                                | Oral LD50<br>mg/kg | Dermal LD50<br>mg/kg | Inhalation LC50 - 4<br>hour - dust/mist - mg/L | Inhalation LC50 - 4<br>hour - vapor - mg/L | Inhalation LC50 - 4<br>hour - gas - ppm |
|--|--------------------|----------------------|--|--|---|
| Guanidine, hydrochloride<br>(1:1)<br>50-01-1 | 475                | 2000                 | No data available                              | No data available                          | No data available                       |

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|   |   |
|---|---|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance.  |
| <b>Inhalation</b>                         | Remove to fresh air. Get medical attention immediately if symptoms occur.   |
| <b>Eye contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. |
| <b>Skin contact</b>                       | Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.  |
| <b>Ingestion</b>                          | Call a physician. Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person.   |
| <b>Self-protection of the first aider</b> | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).   |

### 4.2. Most important symptoms and effects, both acute and delayed

|                 |   |
|-----------------|---|
| <b>Symptoms</b> | May cause redness and tearing of the eyes. Burning sensation. |
|-----------------|---|

### 4.3. Indication of any immediate medical attention and special treatment needed

|                           |                        |
|---------------------------|------------------------|
| <b>Note to physicians</b> | Treat symptomatically. |
|---------------------------|------------------------|

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                       |   |
|---------------------------------------|---|
| <b>Suitable Extinguishing Media</b>   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <b>Large Fire</b>                     | CAUTION: Use of water spray when fighting fire may be inefficient.                                      |
| <b>Unsuitable extinguishing media</b> | Do not scatter spilled material with high pressure water streams.                                       |

### 5.2. Special hazards arising from the substance or mixture

|   |                           |
|---|---------------------------|
| <b>Specific hazards arising from the chemical</b> | No information available. |
|---|---------------------------|

### 5.3. Advice for firefighters

|   |  |
|---|--|
| <b>Special protective equipment and precautions for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |
|---|--|

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

|                                 |  |
|---------------------------------|--|
| <b>Personal precautions</b>     | Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Evacuate personnel to safe areas. |
| <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.  |

**6.2. Environmental precautions**

|                                  |   |
|----------------------------------|---|
| <b>Environmental precautions</b> | Prevent further leakage or spillage if safe to do so. |
|----------------------------------|---|

**6.3. Methods and material for containment and cleaning up**

|  |  |
|--|--|
| <b>Methods for containment</b>         | Prevent further leakage or spillage if safe to do so.                                |
| <b>Methods for cleaning up</b>         | Take up mechanically, placing in appropriate containers for disposal.                |
| <b>Prevention of secondary hazards</b> | Clean contaminated objects and areas thoroughly observing environmental regulations. |

**6.4. Reference to other sections**

|                                    |  |
|------------------------------------|--|
| <b>Reference to other sections</b> | See section 8 for more information. See section 13 for more information. |
|------------------------------------|--|

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

|                                       |  |
|---------------------------------------|--|
| <b>Advice on safe handling</b>        | Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Take off contaminated clothing and wash before reuse. |
| <b>General hygiene considerations</b> | Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.   |

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

|                           |  |
|---------------------------|--|
| <b>Storage Conditions</b> | 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. |
|---------------------------|--|

**7.3. Specific end use(s)**

|                                      |  |
|--------------------------------------|--|
| <b>Risk Management Methods (RMM)</b> | The information required is contained in this Safety Data Sheet. |
|--------------------------------------|--|

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters****Exposure Limits**

| Chemical name                                    | European Union | Austria                    | Belgium                    | Bulgaria | Croatia  |
|--|----------------|----------------------------|----------------------------|----------|--|
| Kieselguhr, soda ash flux-calcined<br>68855-54-9 | -              | TWA: 0.3 mg/m <sup>3</sup> | -                          | -        | TWA: 2.4 mg/m <sup>3</sup><br>TWA: 6 mg/m <sup>3</sup> |
| Chemical name                                    | France         | Germany                    | Germany MAK                | Greece   | Hungary  |
| Kieselguhr, soda ash flux-calcined<br>68855-54-9 | -              | TWA: 0.3 mg/m <sup>3</sup> | TWA: 0.3 mg/m <sup>3</sup> | -        | -  |
| Chemical name                                    | Ireland        | Italy                      | Italy REL                  | Latvia   | Lithuania  |

|   |   |                            |                |                            |  |
|---|---|----------------------------|----------------|----------------------------|--|
| Kieselguhr, soda ash<br>flux-calcined<br>68855-54-9 | TWA: 1.2 mg/m <sup>3</sup><br>STEL: 3.6 mg/m <sup>3</sup> | -                          | -              | -                          | -  |
| Chemical name                                       | Luxembourg  | Malta                      | Netherlands    | Norway                     | Poland   |
| Kieselguhr, soda ash<br>flux-calcined<br>68855-54-9 | -   | -                          | -              | -                          | TWA: 2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup> |
| Chemical name                                       | Portugal  | Romania                    | Slovakia       | Slovenia                   | Spain  |
| Kieselguhr, soda ash<br>flux-calcined<br>68855-54-9 | -   | -                          | -              | TWA: 0.3 mg/m <sup>3</sup> | -  |
| Chemical name                                       | Sweden  | Switzerland                | United Kingdom |                            |  |
| Kieselguhr, soda ash<br>flux-calcined<br>68855-54-9 | -   | TWA: 0.3 mg/m <sup>3</sup> | -              |                            |  |

**Biological occupational exposure limits**

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

**Derived No Effect Level (DNEL)** No information available.  
**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls****Personal protective equipment**

**Eye/face protection** If splashes are likely to occur, wear safety glasses with side-shields.

**Hand protection** Wear suitable gloves. Impervious gloves.

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing.

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

**General hygiene considerations** Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.

**Environmental exposure controls** No information available.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

**Physical state** Liquid  
**Appearance** Suspension  
**Colour** white  
**Odour** Odourless.  
**Odour threshold** No information available

| <u>Property</u>                               | <u>Values</u>     | <u>Remarks • Method</u> |
|---|-------------------|-------------------------|
| <b>Melting point / freezing point</b>         | No data available | None known              |
| <b>Boiling point / boiling range</b>          | No data available | None known              |
| <b>Flammability (solid, gas)</b>              | No data available | None known              |
| <b>Flammability Limit in Air</b>              |                   | None known              |
| <b>Upper flammability or explosive limits</b> | No data available |                         |
| <b>Lower flammability or explosive limits</b> | No data available |                         |



|                            |                          |                          |
|----------------------------|--------------------------|--------------------------|
| Flash point                | No data available        | None known               |
| Autoignition temperature   | No data available        | None known               |
| Decomposition temperature  |                          | None known               |
| pH                         | 6-7                      |                          |
| pH (as aqueous solution)   | No data available        | No information available |
| Kinematic viscosity        | No data available        | None known               |
| Dynamic viscosity          | No data available        | None known               |
| Water solubility           | Immiscible in water      |                          |
| Solubility(ies)            | No data available        | None known               |
| Partition coefficient      | No data available        | None known               |
| Vapour pressure            | No data available        | None known               |
| Relative density           | No data available        | None known               |
| Bulk density               | No data available        |                          |
| Liquid Density             | No data available        |                          |
| Vapour density             | No data available        | None known               |
| Particle characteristics   |                          |                          |
| Particle Size              | No information available |                          |
| Particle Size Distribution | No information available |                          |

## 9.2. Other information

### 9.2.1. Information with regard to physical hazard classes

Not applicable

### 9.2.2. Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity No information available.

### 10.2. Chemical stability

Stability Stable under normal conditions.

### Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

### 10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

### 10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Information on likely routes of exposure

Product Information

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.   |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.                                  |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).   |
| <b>Ingestion</b>    | Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components). |

#### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** May cause redness and tearing of the eyes. Redness.

#### Acute toxicity

#### Numerical measures of toxicity

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

**ATEmix (oral)** 645.4704 mg/kg

#### **Unknown acute toxicity**

22 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

#### **Component Information**

| Chemical name                      | Oral LD50           | Dermal LD50             | Inhalation LC50                                      |
|------------------------------------|---------------------|-------------------------|--|
| Guanidine, hydrochloride (1:1)     | = 475 mg/kg ( Rat ) | > 2000 mg/kg ( Rabbit ) | = 3.181 mg/L ( Rat ) 4 h<br>= 7.655 mg/L ( Rat ) 4 h |
| Kieselguhr, soda ash flux-calcined | -                   | -                       | > 2.6 mg/L ( Rat ) 4 h                               |

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

|  |  |
|--|--|
| <b>Skin corrosion/irritation</b>         | Classification based on data available for ingredients.                                |
| <b>Serious eye damage/eye irritation</b> | Classification based on data available for ingredients. Causes serious eye irritation. |
| <b>Respiratory or skin sensitization</b> | No information available.  |
| <b>Germ cell mutagenicity</b>            | No information available.  |
| <b>Carcinogenicity</b>                   | No information available.  |
| <b>Reproductive toxicity</b>             | No information available.  |
| <b>STOT - single exposure</b>            | No information available.  |
| <b>STOT - repeated exposure</b>          | Causes damage to organs through prolonged or repeated exposure.                        |
| <b>Aspiration hazard</b>                 | No information available.  |

#### 11.2. Information on other hazards

**11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**11.2.2. Other information**

**Other adverse effects** Diatomaceous earth is an amorphous silica composed of the skeletons of prehistoric plants, or diatoms, containing less than one per cent crystalline silica. It is classified as an IARC Group 3 carcinogen while crystalline silica is an IARC Group 1 carcinogen. Chronic exposure to crystalline silica via inhalation could also cause silicosis. Symptoms include coughing, wheezing, shortness of breath/dyspnea, decrease chest expansion, a progressive decrease in lung function. Chronic inhalation of crystalline silica is also a lung cancer hazard. Risk of cancer depends upon duration and level of exposure.

**SECTION 12: Ecological information****12.1. Toxicity**

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

**Unknown aquatic toxicity** Contains 0 % of components with unknown hazards to the aquatic environment.

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

**12.3. Bioaccumulative potential****Bioaccumulation****Component Information**

| Chemical name                  | Partition coefficient |
|--------------------------------|-----------------------|
| Guanidine, hydrochloride (1:1) | -1.7                  |

**12.4. Mobility in soil**

**Mobility in soil** No information available.

**12.5. Results of PBT and vPvB assessment****PBT and vPvB assessment**

| Chemical name                      | PBT and vPvB assessment         |
|------------------------------------|---------------------------------|
| Guanidine, hydrochloride (1:1)     | The substance is not PBT / vPvB |
| Kieselguhr, soda ash flux-calcined | PBT assessment does not apply   |

**12.6. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

**Waste from residues/unused products** 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

### IATA

|                                    |                |
|------------------------------------|----------------|
| 14.1 UN number or ID number        | Not regulated  |
| 14.2 UN proper shipping name       | Not regulated  |
| 14.3 Transport hazard class(es)    | Not regulated  |
| 14.4 Packing group                 | Not regulated  |
| 14.5 Environmental hazards         | Not applicable |
| 14.6 Special Precautions for Users |                |
| Special Provisions                 | None           |

### IMDG

|  |                          |
|--|--------------------------|
| 14.1 UN number or ID number                                  | Not regulated            |
| 14.2 UN proper shipping name                                 | Not regulated            |
| 14.3 Transport hazard class(es)                              | Not regulated            |
| 14.4 Packing group   | Not regulated            |
| 14.5 Environmental hazards                                   | Not applicable           |
| 14.6 Special Precautions for Users                           |                          |
| Special Provisions   | None                     |
| 14.7 Maritime transport in bulk according to IMO instruments | No information available |

### RID

|                                    |                |
|------------------------------------|----------------|
| 14.1 UN number                     | Not regulated  |
| 14.2 UN proper shipping name       | Not regulated  |
| 14.3 Transport hazard class(es)    | Not regulated  |
| 14.4 Packing group                 | Not regulated  |
| 14.5 Environmental hazards         | Not applicable |
| 14.6 Special Precautions for Users |                |
| Special Provisions                 | None           |

### ADR

|                                    |                |
|------------------------------------|----------------|
| 14.1 UN number or ID number        | Not regulated  |
| 14.2 UN proper shipping name       | Not regulated  |
| 14.3 Transport hazard class(es)    | Not regulated  |
| 14.4 Packing group                 | Not regulated  |
| 14.5 Environmental hazards         | Not applicable |
| 14.6 Special Precautions for Users |                |
| Special Provisions                 | None           |

## SECTION 15: Regulatory information

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

#### National regulations

##### **Germany**

**Water hazard class (WGK)** slightly hazardous to water (WGK 1)

##### **European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

#### **Authorizations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

| Chemical name | Restricted substance per REACH Annex XVII | Substance subject to authorization per REACH Annex XIV |
|---------------|---|--|
|---------------|---|--|

|  |     |   |
|--|-----|---|
| Guanidine, hydrochloride (1:1) - 50-01-1 | 75. | - |
|--|-----|---|

**Persistent Organic Pollutants**

Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**International Inventories**

Contact supplier for inventory compliance status

**15.2. Chemical safety assessment****Chemical Safety Report**

No information available

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H302 - Harmful if swallowed

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H372 - Causes damage to organs through prolonged or repeated exposure

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA

TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling

Maximum limit value

\*

Skin designation

| Classification procedure  |                    |
|---|--------------------|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used        |
| Acute oral toxicity   | Calculation method |
| Acute dermal toxicity   | Calculation method |
| Acute inhalation toxicity - gas                                 | Calculation method |
| Acute inhalation toxicity - Vapour                              | Calculation method |
| Acute inhalation toxicity - dust/mist                           | Calculation method |
| Skin corrosion/irritation                                       | Calculation method |
| Serious eye damage/eye irritation                               | Calculation method |
| Respiratory sensitisation                                       | Calculation method |
| Skin sensitisation  | Calculation method |
| Mutagenicity  | Calculation method |
| Carcinogenicity   | Calculation method |
| Reproductive toxicity   | Calculation method |
| STOT - single exposure  | Calculation method |
| STOT - repeated exposure  | Calculation method |
| Acute aquatic toxicity  | Calculation method |
| Chronic aquatic toxicity  | Calculation method |
| Aspiration hazard   | Calculation method |
| Ozone   | Calculation method |

**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

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European Food Safety Authority (EFSA)  
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
European Chemicals Agency (ECHA) (ECHA\_API)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development 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  
World Health Organization

**Revision Note**                                      Reformatted and updated existing information

**Revision date**                                      17-May-2022

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**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:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 16-May-2022

Previous revision date 23-Sep-2021

Revision Number 1.3

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

### 1.1. Product identifier

**Product Name** Lysis Solution  
**Catalogue Number(s)** 10028135, 9703066, 9702336  
**Pure substance/mixture** Mixture

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended use** Laboratory chemicals  
**Uses advised against** No information available

### 1.3. 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  
The Junction  
Station Road  
Watford, WD17 1ET  
UK

Bio-Rad Laboratories Pvt. Ltd.  
Bio-Rad House  
86-87, Udyog Vihar Phase IV Gurgaon  
122005  
Haryana India

Bio-Rad Laboratories (Pty) Ltd.  
34 Bolton Road  
Parkwood, Johannesburg 2193  
South Africa

For further information, please contact

**Technical Service** 00800 00246 723  
Ireland: Techsupport.UK@bio-rad.com  
India: support.india@bio-rad.com  
South Africa: cdg\_techsupport\_eemea@bio-rad.com

### 1.4. Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Ireland: 353-19014670  
CHEMTREC India: 000-800-100-7141  
CHEMTREC South Africa: 0-800-983-611

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

|  |                     |
|--|---------------------|
| <b>Skin corrosion/irritation</b>         | Category 2 - (H315) |
| <b>Serious eye damage/eye irritation</b> | Category 2 - (H319) |

**2.2. Label elements****Signal word**

Warning

**Hazard statements**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

**Precautionary Statements - EU (§28, 1272/2008)**

P264 - Wash face, hands and any exposed skin thoroughly after handling

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P337 + P313 - If eye irritation persists: Get medical advice/attention

P362 + P364 - Take off contaminated clothing and wash it before reuse

P280 - Wear protective gloves/protective clothing/eye protection/face protection

**2.3. Other hazards****SECTION 3: Composition/information on ingredients****3.1 Substances**

Not applicable

**3.2 Mixtures**

| Chemical name                     | Weight-%    | REACH registration number | EC No     | Classification according to Regulation (EC) No. 1272/2008 [CLP]  | Specific concentration limit (SCL)   | M-Factor | M-Factor (long-term) |
|-----------------------------------|-------------|---------------------------|-----------|--|--|----------|----------------------|
| Sodium lauryl sulfate<br>151-21-3 | 1 - 2.5     | No data available         | 205-788-1 | Acute Tox. 4 (H302)<br>Skin Irrit. 2 (H315)<br>Eye Dam. 1 (H318)<br>STOT SE 3 (H335)<br>Aquatic Chronic 3 (H412) | -  | -        | -                    |
| Sodium hydroxide<br>1310-73-2     | 0.3 - 0.999 | No data available         | 215-185-5 | Skin Corr. 1A (H314)<br>Eye Dam. 1 (H318)  | Eye Irrit. 2 ::<br>0.5%≤C<2%<br>Skin Corr. 1A ::<br>C≥5%<br>Skin Corr. 1B ::<br>2%≤C<5%<br>Skin Irrit. 2 ::<br>0.5%≤C<2% | -        | -                    |

**Full text of H- and EUH-phrases: see section 16****Acute Toxicity Estimate**

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATE<sub>mix</sub>) for classifying a mixture based on its components



| Chemical name                     | Oral LD50<br>mg/kg | Dermal LD50<br>mg/kg | Inhalation LC50 - 4<br>hour - dust/mist - mg/L | Inhalation LC50 - 4<br>hour - vapor - mg/L | Inhalation LC50 - 4<br>hour - gas - ppm |
|-----------------------------------|--------------------|----------------------|--|--|---|
| Sodium lauryl sulfate<br>151-21-3 | 1288               | 200                  | 0.975  | No data available                          | No data available                       |
| Sodium hydroxide<br>1310-73-2     | 325                | 1350                 | No data available                              | No data available                          | No data available                       |

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|   |   |
|---|---|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance.  |
| <b>Inhalation</b>                         | Remove to fresh air. Get medical attention immediately if symptoms occur.   |
| <b>Eye contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. |
| <b>Skin contact</b>                       | Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.  |
| <b>Ingestion</b>                          | Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.   |
| <b>Self-protection of the first aider</b> | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).   |

### 4.2. Most important symptoms and effects, both acute and delayed

|                 |   |
|-----------------|---|
| <b>Symptoms</b> | May cause redness and tearing of the eyes. Burning sensation. |
|-----------------|---|

### 4.3. Indication of any immediate medical attention and special treatment needed

|                           |                        |
|---------------------------|------------------------|
| <b>Note to physicians</b> | Treat symptomatically. |
|---------------------------|------------------------|

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                       |   |
|---------------------------------------|---|
| <b>Suitable Extinguishing Media</b>   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <b>Large Fire</b>                     | CAUTION: Use of water spray when fighting fire may be inefficient.                                      |
| <b>Unsuitable extinguishing media</b> | Do not scatter spilled material with high pressure water streams.                                       |

### 5.2. Special hazards arising from the substance or mixture

|   |                           |
|---|---------------------------|
| <b>Specific hazards arising from the chemical</b> | No information available. |
|---|---------------------------|

### 5.3. Advice for firefighters

|   |  |
|---|--|
| <b>Special protective equipment and precautions for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |
|---|--|

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

|                                 |  |
|---------------------------------|--|
| <b>Personal precautions</b>     | Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. 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.  |

### 6.2. Environmental precautions

|                                  |   |
|----------------------------------|---|
| <b>Environmental precautions</b> | Prevent further leakage or spillage if safe to do so. |
|----------------------------------|---|

### 6.3. Methods and material for containment and cleaning up

|  |  |
|--|--|
| <b>Methods for containment</b>         | Prevent further leakage or spillage if safe to do so.                                |
| <b>Methods for cleaning up</b>         | Take up mechanically, placing in appropriate containers for disposal.                |
| <b>Prevention of secondary hazards</b> | Clean contaminated objects and areas thoroughly observing environmental regulations. |

### 6.4. Reference to other sections

|                                    |  |
|------------------------------------|--|
| <b>Reference to other sections</b> | See section 8 for more information. See section 13 for more information. |
|------------------------------------|--|

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

|                                       |   |
|---------------------------------------|---|
| <b>Advice on safe handling</b>        | Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. |
| <b>General hygiene considerations</b> | Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.  |

### 7.2. Conditions for safe storage, including any incompatibilities

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

### 7.3. Specific end use(s)

|                                      |  |
|--------------------------------------|--|
| <b>Risk Management Methods (RMM)</b> | The information required is contained in this Safety Data Sheet. |
|--------------------------------------|--|

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure Limits

| Chemical name                 | European Union | Austria  | Belgium                      | Bulgaria  | Croatia                      |
|-------------------------------|----------------|--|------------------------------|---|------------------------------|
| Sodium hydroxide<br>1310-73-2 | -              | TWA: 2 mg/m <sup>3</sup><br>STEL 4 mg/m <sup>3</sup>     | -                            | TWA: 2.0 mg/m <sup>3</sup>                            | STEL: 2 mg/m <sup>3</sup>    |
| Chemical name                 | Cyprus         | Czech Republic   | Denmark                      | Estonia   | Finland                      |
| Sodium hydroxide<br>1310-73-2 | -              | TWA: 1 mg/m <sup>3</sup><br>Ceiling: 2 mg/m <sup>3</sup> | Ceiling: 2 mg/m <sup>3</sup> | TWA: 1 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup> | Ceiling: 2 mg/m <sup>3</sup> |
| Chemical name                 | France         | Germany  | Germany MAK                  | Greece  | Hungary                      |

|                               |   |   |   |   |   |
|-------------------------------|---|---|---|---|---|
| Sodium hydroxide<br>1310-73-2 | TWA: 2 mg/m <sup>3</sup>                                      | -   | -   | TWA: 2 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup> | TWA: 1 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup>   |
| Chemical name                 | Ireland   | Italy   | Italy REL   | Latvia  | Lithuania   |
| Sodium hydroxide<br>1310-73-2 | STEL: 2 mg/m <sup>3</sup>                                     | -   | Ceiling: 2 mg/m <sup>3</sup>                          | TWA: 0.5 mg/m <sup>3</sup>                            | Ceiling: 2 mg/m <sup>3</sup>                            |
| Chemical name                 | Luxembourg  | Malta   | Netherlands   | Norway  | Poland  |
| Sodium hydroxide<br>1310-73-2 | -   | -   | -   | Ceiling: 2 mg/m <sup>3</sup>                          | STEL: 1 mg/m <sup>3</sup><br>TWA: 0.5 mg/m <sup>3</sup> |
| Chemical name                 | Portugal  | Romania   | Slovakia  | Slovenia  | Spain   |
| Sodium hydroxide<br>1310-73-2 | Ceiling: 2 mg/m <sup>3</sup>                                  | TWA: 1 mg/m <sup>3</sup><br>STEL: 3 mg/m <sup>3</sup> | TWA: 2 mg/m <sup>3</sup>                              | -   | STEL: 2 mg/m <sup>3</sup>                               |
| Chemical name                 | Sweden  |   | Switzerland   |   | United Kingdom  |
| Sodium hydroxide<br>1310-73-2 | NGV: 1 mg/m <sup>3</sup><br>Bindande KGV: 2 mg/m <sup>3</sup> |   | TWA: 2 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup> |   | STEL: 2 mg/m <sup>3</sup>                               |

**Biological occupational exposure limits**

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

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls****Personal protective equipment**

**Eye/face protection** If splashes are likely to occur, wear safety glasses with side-shields.

**Hand protection** Wear suitable gloves. Impervious gloves.

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing.

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

**General hygiene considerations** Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.

**Environmental exposure controls** No information available.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

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

| Property                               | Values            | Remarks • Method |
|--|-------------------|------------------|
| Melting point / freezing point         | 0 °C              |                  |
| Boiling point / boiling range          | 100 °C            |                  |
| 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 |                  |

|                            |                          |                          |
|----------------------------|--------------------------|--------------------------|
| Flash point                | No data available        | None known               |
| Autoignition temperature   | No data available        | None known               |
| Decomposition temperature  |                          | None known               |
| pH                         | 12.5-13.5                |                          |
| pH (as aqueous solution)   | No data available        | No information available |
| Kinematic viscosity        | No data available        | None known               |
| Dynamic viscosity          | No data available        | None known               |
| Water solubility           | Miscible in water        |                          |
| Solubility(ies)            | No data available        | None known               |
| Partition coefficient      | No data available        | None known               |
| Vapour pressure            | No data available        | None known               |
| Relative density           | No data available        | None known               |
| Bulk density               | No data available        |                          |
| Liquid Density             | No data available        |                          |
| Vapour density             | No data available        | None known               |
| Particle characteristics   |                          |                          |
| Particle Size              | No information available |                          |
| Particle Size Distribution | No information available |                          |

## 9.2. Other information

### 9.2.1. Information with regard to physical hazard classes

Not applicable

### 9.2.2. Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity No information available.

### 10.2. Chemical stability

Stability Stable under normal conditions.

#### Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

### 10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

### 10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Information on likely routes of exposure

Product Information

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.  |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain. |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).  |
| <b>Ingestion</b>    | Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.             |

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Redness. May cause redness and tearing of the eyes.

**Acute toxicity****Numerical measures of toxicity**

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

**ATEmix (inhalation-dust/mist)** 97.60 mg/l

**Component Information**

| Chemical name         | Oral LD50            | Dermal LD50             | Inhalation LC50                      |
|-----------------------|----------------------|-------------------------|--------------------------------------|
| Sodium lauryl sulfate | = 1288 mg/kg ( Rat ) | = 200 mg/kg ( Rabbit )  | > 3900 mg/m <sup>3</sup> ( Rat ) 1 h |
| Sodium hydroxide      | = 325 mg/kg ( Rat )  | = 1350 mg/kg ( Rabbit ) | -                                    |

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

|  |  |
|--|--|
| <b>Skin corrosion/irritation</b>         | Classification based on data available for ingredients.                                |
| <b>Serious eye damage/eye irritation</b> | Classification based on data available for ingredients. Causes serious eye irritation. |
| <b>Respiratory or skin sensitization</b> | No information available.  |
| <b>Germ cell mutagenicity</b>            | No information available.  |
| <b>Carcinogenicity</b>                   | No information available.  |
| <b>Reproductive toxicity</b>             | No information available.  |
| <b>STOT - single exposure</b>            | No information available.  |
| <b>STOT - repeated exposure</b>          | No information available.  |
| <b>Aspiration hazard</b>                 | No information available.  |

**11.2. Information on other hazards****11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

### 11.2.2. Other information

**Other adverse effects** No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Ecotoxicity

**Unknown aquatic toxicity** Contains 0 % of components with unknown hazards to the aquatic environment.

| Chemical name         | Algae/aquatic plants   | Fish   | Toxicity to microorganisms | Crustacea                           |
|-----------------------|--|--|----------------------------|-------------------------------------|
| Sodium lauryl sulfate | EC50: 3.59 - 15.6mg/L (96h, Pseudokirchneriella subcapitata)<br>EC50: 30 - 100mg/L (96h, Desmodesmus subspicatus)<br>EC50: =117mg/L (96h, Pseudokirchneriella subcapitata)<br>EC50: =53mg/L (72h, Desmodesmus subspicatus) | LC50: 10.2 - 22.5mg/L (96h, Pimephales promelas)<br>LC50: 10.8 - 16.6mg/L (96h, Poecilia reticulata)<br>LC50: 13.5 - 18.3mg/L (96h, Poecilia reticulata)<br>LC50: 15 - 18.9mg/L (96h, Pimephales promelas)<br>LC50: 22.1 - 22.8mg/L (96h, Pimephales promelas)<br>LC50: 4.06 - 5.75mg/L (96h, Lepomis macrochirus)<br>LC50: 4.2 - 4.8mg/L (96h, Lepomis macrochirus)<br>LC50: 4.3 - 8.5mg/L (96h, Oncorhynchus mykiss)<br>LC50: 5.8 - 7.5mg/L (96h, Pimephales promelas)<br>LC50: 6.2 - 9.6mg/L (96h, Pimephales promelas)<br>LC50: 8 - 12.5mg/L (96h, Pimephales promelas)<br>LC50: 9.9 - 20.1mg/L (96h, Brachydanio rerio)<br>LC50: =1.31mg/L (96h, Cyprinus carpio)<br>LC50: =4.2mg/L (96h, Oncorhynchus mykiss)<br>LC50: =4.5mg/L (96h, Lepomis macrochirus)<br>LC50: =4.62mg/L (96h, Oncorhynchus mykiss)<br>LC50: =7.97mg/L (96h, Brachydanio rerio) | -                          | EC50: =1.8mg/L (48h, Daphnia magna) |
| Sodium hydroxide      | -  | LC50: =45.4mg/L (96h, Oncorhynchus mykiss)   | -                          | -                                   |

### 12.2. Persistence and degradability

**Persistence and degradability** No information available.

### 12.3. Bioaccumulative potential

#### Bioaccumulation

**Component Information**

| Chemical name         | Partition coefficient |
|-----------------------|-----------------------|
| Sodium lauryl sulfate | 1.6                   |

**12.4. Mobility in soil**

**Mobility in soil** No information available.

**12.5. Results of PBT and vPvB assessment****PBT and vPvB assessment**

| Chemical name         | PBT and vPvB assessment                                       |
|-----------------------|---|
| Sodium lauryl sulfate | The substance is not PBT / vPvB                               |
| Sodium hydroxide      | The substance is not PBT / vPvB PBT assessment does not apply |

**12.6. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**12.7. Other adverse effects**

No information available.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

**Waste from residues/unused products** 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

**IATA**

**14.1 UN number or ID number** Not regulated

**14.2 UN proper shipping name** Not regulated

**14.3 Transport hazard class(es)** Not regulated

**14.4 Packing group** Not regulated

**14.5 Environmental hazards** Not applicable

**14.6 Special Precautions for Users**

**Special Provisions** None

**IMDG**

**14.1 UN number or ID number** Not regulated

**14.2 UN proper shipping name** Not regulated

**14.3 Transport hazard class(es)** Not regulated

**14.4 Packing group** Not regulated

**14.5 Environmental hazards** Not applicable

**14.6 Special Precautions for Users**

**Special Provisions** None

**14.7 Maritime transport in bulk according to IMO instruments** No information available

**RID**

**14.1 UN number** Not regulated

**14.2 UN proper shipping name** Not regulated

**14.3 Transport hazard class(es)** Not regulated

|                                    |                |
|------------------------------------|----------------|
| 14.4 Packing group                 | Not regulated  |
| 14.5 Environmental hazards         | Not applicable |
| 14.6 Special Precautions for Users |                |
| Special Provisions                 | None           |

**ADR**

|                                    |                |
|------------------------------------|----------------|
| 14.1 UN number or ID number        | Not regulated  |
| 14.2 UN proper shipping name       | Not regulated  |
| 14.3 Transport hazard class(es)    | Not regulated  |
| 14.4 Packing group                 | Not regulated  |
| 14.5 Environmental hazards         | Not applicable |
| 14.6 Special Precautions for Users |                |
| Special Provisions                 | None           |

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Germany**

Water hazard class (WGK) slightly hazardous to water (WGK 1)

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**Authorizations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

| Chemical name                | Restricted substance per REACH Annex XVII | Substance subject to authorization per REACH Annex XIV |
|------------------------------|---|--|
| Sodium hydroxide - 1310-73-2 | 75.                                       | -  |

**Persistent Organic Pollutants**

Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**International Inventories**

Contact supplier for inventory compliance status

**15.2. Chemical safety assessment****Chemical Safety Report**

No information available

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage



H315 - Causes skin irritation  
 H318 - Causes serious eye damage  
 H335 - May cause respiratory irritation  
 H412 - Harmful to aquatic life with long lasting effects

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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

| Classification procedure  |                       |
|---|-----------------------|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used           |
| Acute oral toxicity   | Calculation method    |
| Acute dermal toxicity   | Calculation method    |
| Acute inhalation toxicity - gas                                 | Calculation method    |
| Acute inhalation toxicity - Vapour                              | Calculation method    |
| Acute inhalation toxicity - dust/mist                           | Calculation method    |
| Skin corrosion/irritation                                       | On basis of test data |
| Serious eye damage/eye irritation                               | On basis of test data |
| Respiratory sensitisation                                       | Calculation method    |
| Skin sensitisation  | Calculation method    |
| Mutagenicity  | Calculation method    |
| Carcinogenicity   | Calculation method    |
| Reproductive toxicity   | Calculation method    |
| STOT - single exposure  | Calculation method    |
| STOT - repeated exposure  | Calculation method    |
| Acute aquatic toxicity  | Calculation method    |
| Chronic aquatic toxicity  | Calculation method    |
| Aspiration hazard   | Calculation method    |
| Ozone   | Calculation method    |

**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)  
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
 European Chemicals Agency (ECHA) (ECHA\_API)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGl(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development 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  
 World Health Organization

**Revision Note** Reformatted and updated existing information

**Revision date** 16-May-2022

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

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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:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 23-Sep-2021

Previous revision date 06-Apr-2021

Revision Number 1.2

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

### 1.1. Product identifier

**Product Name** Neutralization Solution  
**Catalogue Number(s)** 10028136, 9702337, 9703068  
**Pure substance/mixture** Mixture  
Contains Guanidine, hydrochloride (1:1)

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended use** Laboratory chemicals  
**Uses advised against** No information available

### 1.3. 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  
The Junction  
Station Road  
Watford, WD17 1ET  
UK  
  
Bio-Rad Laboratories Pvt. Ltd.  
Bio-Rad House  
86-87, Udyog Vihar Phase IV Gurgaon  
122005  
Haryana India  
  
Bio-Rad Laboratories (Pty) Ltd.  
34 Bolton Road  
Parkwood, Johannesburg 2193  
South Africa

For further information, please contact

#### Technical Service

00800 00246 723  
Ireland: Techsupport.UK@bio-rad.com  
India: support.india@bio-rad.com  
South Africa: cdg\_techsupport\_eemea@bio-rad.com

### 1.4. Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Ireland: 353-19014670  
CHEMTREC India: 000-800-100-7141  
CHEMTREC South Africa: 0-800-983-611

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

|                              |                     |
|------------------------------|---------------------|
| <b>Acute toxicity - Oral</b> | Category 4 - (H302) |
|------------------------------|---------------------|

|                                   |                     |
|-----------------------------------|---------------------|
| Skin corrosion/irritation         | Category 2 - (H315) |
| Serious eye damage/eye irritation | Category 2 - (H319) |

**2.2. Label elements**

Contains Guanidine, hydrochloride (1:1)

**Signal word**

Warning

**Hazard statements**

H302 - Harmful if swallowed

H315 - Causes skin irritation

H319 - Causes serious eye irritation

**Precautionary Statements - EU (§28, 1272/2008)**

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P337 + P313 - If eye irritation persists: Get medical advice/attention

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

P280 - Wear protective gloves/protective clothing/eye protection/face protection

**2.3. Other hazards**

## SECTION 3: Composition/information on ingredients

**3.1 Substances**

Not applicable

**3.2 Mixtures**

| Chemical name                             | Weight-% | REACH registration number | EC No     | Classification according to Regulation (EC) No. 1272/2008 [CLP]    | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|---|----------|---------------------------|-----------|--|------------------------------------|----------|----------------------|
| Guanidine, hydrochloride (1:1)<br>50-01-1 | 35 - 50  | No data available         | 200-002-3 | Acute Tox. 4 (H302)<br>Skin Irrit. 2 (H315)<br>Eye Irrit. 2 (H319) | -                                  | -        | -                    |

**Full text of H- and EUH-phrases: see section 16**

**Acute Toxicity Estimate**

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

| Chemical name                             | Oral LD50 mg/kg | Dermal LD50 mg/kg | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapor - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|---|-----------------|-------------------|---|---|--------------------------------------|
| Guanidine, hydrochloride (1:1)<br>50-01-1 | 475             | 2000              | No data available                           | No data available                       | No data available                    |

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|   |   |
|---|---|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance.  |
| <b>Inhalation</b>                         | Remove to fresh air. Get medical attention immediately if symptoms occur.   |
| <b>Eye contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. |
| <b>Skin contact</b>                       | Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.  |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.   |
| <b>Self-protection of the first aider</b> | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).   |

### 4.2. Most important symptoms and effects, both acute and delayed

|                 |   |
|-----------------|---|
| <b>Symptoms</b> | May cause redness and tearing of the eyes. Burning sensation. |
|-----------------|---|

### 4.3. Indication of any immediate medical attention and special treatment needed

|                           |                        |
|---------------------------|------------------------|
| <b>Note to physicians</b> | Treat symptomatically. |
|---------------------------|------------------------|

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                       |   |
|---------------------------------------|---|
| <b>Suitable Extinguishing Media</b>   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <b>Large Fire</b>                     | CAUTION: Use of water spray when fighting fire may be inefficient.                                      |
| <b>Unsuitable extinguishing media</b> | Do not scatter spilled material with high pressure water streams.                                       |

### 5.2. Special hazards arising from the substance or mixture

|   |                           |
|---|---------------------------|
| <b>Specific hazards arising from the chemical</b> | No information available. |
|---|---------------------------|

### 5.3. Advice for firefighters

|   |  |
|---|--|
| <b>Special protective equipment and precautions for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |
|---|--|

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

|                             |  |
|-----------------------------|--|
| <b>Personal precautions</b> | Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. |
| <b>Other information</b>    | Refer to protective measures listed in Sections 7 and 8.   |

**For emergency responders** Use personal protection recommended in Section 8.

#### **6.2. Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

#### **6.3. Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

#### **6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

**General hygiene considerations** Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.

#### **7.2. Conditions for safe storage, including any incompatibilities**

**Storage Conditions** 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.

#### **7.3. Specific end use(s)**

**Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

## **SECTION 8: Exposure controls/personal protection**

#### **8.1. Control parameters**

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

#### **Biological occupational exposure limits**

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

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

#### **8.2. Exposure controls**

#### **Personal protective equipment**

**Eye/face protection** If splashes are likely to occur, wear safety glasses with side-shields.

|  |  |
|--|--|
| <b>Hand protection</b>                 | Wear suitable gloves. Impervious gloves.   |
| <b>Skin and body protection</b>        | Wear suitable protective clothing. Long sleeved clothing.  |
| <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>  | Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.                             |
| <b>Environmental exposure controls</b> | No information available.  |

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                        |                          |
|------------------------|--------------------------|
| <b>Physical state</b>  | Liquid                   |
| <b>Appearance</b>      | aqueous solution         |
| <b>Colour</b>          | white                    |
| <b>Odour</b>           | Odourless.               |
| <b>Odour threshold</b> | No information available |

| <u>Property</u>                               | <u>Values</u>            | <u>Remarks • Method</u>  |
|---|--------------------------|--------------------------|
| <b>Melting point / freezing point</b>         | No data available        | None known               |
| <b>Boiling point / boiling range</b>          | No data available        | None known               |
| <b>Flammability (solid, gas)</b>              | No data available        | None known               |
| <b>Flammability Limit in Air</b>              |                          | None known               |
| <b>Upper flammability or explosive limits</b> | No data available        |                          |
| <b>Lower flammability or explosive limits</b> | No data available        |                          |
| <b>Flash point</b>                            | No data available        | None known               |
| <b>Autoignition temperature</b>               | No data available        | None known               |
| <b>Decomposition temperature</b>              |                          | None known               |
| <b>pH</b>                                     | 4-5                      |                          |
| <b>pH (as aqueous solution)</b>               | No data available        | No information available |
| <b>Kinematic viscosity</b>                    | No data available        | None known               |
| <b>Dynamic viscosity</b>                      | No data available        | None known               |
| <b>Water solubility</b>                       | Miscible in water        |                          |
| <b>Solubility(ies)</b>                        | No data available        | None known               |
| <b>Partition coefficient</b>                  | No data available        | None known               |
| <b>Vapour pressure</b>                        | No data available        | None known               |
| <b>Relative density</b>                       | No data available        | None known               |
| <b>Bulk density</b>                           | No data available        |                          |
| <b>Liquid Density</b>                         | No data available        |                          |
| <b>Vapour density</b>                         | No data available        | None known               |
| <b>Particle characteristics</b>               |                          |                          |
| <b>Particle Size</b>                          | No information available |                          |
| <b>Particle Size Distribution</b>             | No information available |                          |

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

Not applicable

#### 9.2.2. Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity** No information available.

### 10.2. Chemical stability

**Stability** Stable under normal conditions.

#### **Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

### 10.4. Conditions to avoid

**Conditions to avoid** None known based on information supplied.

### 10.5. Incompatible materials

**Incompatible materials** Strong acids. Strong bases. Strong oxidizing agents.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** None known based on information supplied.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Information on likely routes of exposure

##### **Product Information**

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.   |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.                                  |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).   |
| <b>Ingestion</b>    | Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components). |

#### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** Redness. May cause redness and tearing of the eyes.

#### Acute toxicity

##### **Numerical measures of toxicity**

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

**ATEmix (oral)** 1,097.1809 mg/kg

##### **Component Information**

| Chemical name                  | Oral LD50           | Dermal LD50             | Inhalation LC50                                      |
|--------------------------------|---------------------|-------------------------|--|
| Guanidine, hydrochloride (1:1) | = 475 mg/kg ( Rat ) | > 2000 mg/kg ( Rabbit ) | = 3.181 mg/L ( Rat ) 4 h<br>= 7.655 mg/L ( Rat ) 4 h |



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

|  |  |
|--|--|
| <b>Skin corrosion/irritation</b>         | Classification based on data available for ingredients.                                |
| <b>Serious eye damage/eye irritation</b> | Classification based on data available for ingredients. Causes serious eye irritation. |
| <b>Respiratory or skin sensitization</b> | No information available.  |
| <b>Germ cell mutagenicity</b>            | No information available.  |
| <b>Carcinogenicity</b>                   | No information available.  |
| <b>Reproductive toxicity</b>             | No information available.  |
| <b>STOT - single exposure</b>            | No information available.  |
| <b>STOT - repeated exposure</b>          | No information available.  |
| <b>Aspiration hazard</b>                 | No information available.  |

**11.2. Information on other hazards****11.2.1. Endocrine disrupting properties**

|  |                           |
|--|---------------------------|
| <b>Endocrine disrupting properties</b> | No information available. |
|--|---------------------------|

**11.2.2. Other information**

|                              |                           |
|------------------------------|---------------------------|
| <b>Other adverse effects</b> | No information available. |
|------------------------------|---------------------------|

**SECTION 12: Ecological information****12.1. Toxicity****Ecotoxicity**

|                                 |   |
|---------------------------------|---|
| <b>Unknown aquatic toxicity</b> | Contains 0 % of components with unknown hazards to the aquatic environment. |
|---------------------------------|---|

**12.2. Persistence and degradability**

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

**12.3. Bioaccumulative potential****Bioaccumulation****Component Information**

| Chemical name                  | Partition coefficient |
|--------------------------------|-----------------------|
| Guanidine, hydrochloride (1:1) | -1.7                  |

**12.4. Mobility in soil**

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

**12.5. Results of PBT and vPvB assessment****PBT and vPvB assessment**

| Chemical name                  | PBT and vPvB assessment         |
|--------------------------------|---------------------------------|
| Guanidine, hydrochloride (1:1) | The substance is not PBT / vPvB |

**12.6. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

**Waste from residues/unused products** 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****IATA**

|                                    |                |
|------------------------------------|----------------|
| 14.1 UN number or ID number        | Not regulated  |
| 14.2 UN proper shipping name       | Not regulated  |
| 14.3 Transport hazard class(es)    | Not regulated  |
| 14.4 Packing group                 | Not regulated  |
| 14.5 Environmental hazards         | Not applicable |
| 14.6 Special Precautions for Users |                |
| Special Provisions                 | None           |

**IMDG**

|  |                          |
|--|--------------------------|
| 14.1 UN number or ID number                                  | Not regulated            |
| 14.2 UN proper shipping name                                 | Not regulated            |
| 14.3 Transport hazard class(es)                              | Not regulated            |
| 14.4 Packing group   | Not regulated            |
| 14.5 Environmental hazards                                   | Not applicable           |
| 14.6 Special Precautions for Users                           |                          |
| Special Provisions   | None                     |
| 14.7 Maritime transport in bulk according to IMO instruments | No information available |

**RID**

|                                    |                |
|------------------------------------|----------------|
| 14.1 UN number                     | Not regulated  |
| 14.2 UN proper shipping name       | Not regulated  |
| 14.3 Transport hazard class(es)    | Not regulated  |
| 14.4 Packing group                 | Not regulated  |
| 14.5 Environmental hazards         | Not applicable |
| 14.6 Special Precautions for Users |                |
| Special Provisions                 | None           |

**ADR**

|                                 |                |
|---------------------------------|----------------|
| 14.1 UN number or ID number     | Not regulated  |
| 14.2 UN proper shipping name    | Not regulated  |
| 14.3 Transport hazard class(es) | Not regulated  |
| 14.4 Packing group              | Not regulated  |
| 14.5 Environmental hazards      | Not applicable |

**14.6 Special Precautions for Users****Special Provisions**

None

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Germany****Water hazard class (WGK)**

slightly hazardous to water (WGK 1)

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**Authorizations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

| Chemical name                            | Restricted substance per REACH Annex XVII | Substance subject to authorization per REACH Annex XIV |
|--|---|--|
| Guanidine, hydrochloride (1:1) - 50-01-1 | 75.                                       | -  |

**Persistent Organic Pollutants**

Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**International Inventories**

Contact supplier for inventory compliance status

**15.2. Chemical safety assessment****Chemical Safety Report**

No information available

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H302 - Harmful if swallowed

H315 - Causes skin irritation

H319 - Causes serious eye irritation

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA TWA (time-weighted average)

Ceiling Maximum limit value

STEL

\*

STEL (Short Term Exposure Limit)

Skin designation

**Classification procedure**

|   |             |
|---|-------------|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used |
|---|-------------|

|                                       |                    |
|---------------------------------------|--------------------|
| Acute oral toxicity                   | Calculation method |
| Acute dermal toxicity                 | Calculation method |
| Acute inhalation toxicity - gas       | Calculation method |
| Acute inhalation toxicity - Vapour    | Calculation method |
| Acute inhalation toxicity - dust/mist | Calculation method |
| Skin corrosion/irritation             | Calculation method |
| Serious eye damage/eye irritation     | Calculation method |
| Respiratory sensitisation             | Calculation method |
| Skin sensitisation                    | Calculation method |
| Mutagenicity                          | Calculation method |
| Carcinogenicity                       | Calculation method |
| Reproductive toxicity                 | Calculation method |
| STOT - single exposure                | Calculation method |
| STOT - repeated exposure              | Calculation method |
| Acute aquatic toxicity                | Calculation method |
| Chronic aquatic toxicity              | Calculation method |
| Aspiration hazard                     | Calculation method |
| Ozone                                 | Calculation method |

**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)  
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
 European Chemicals Agency (ECHA) (ECHA\_API)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development 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  
 World Health Organization

**Revision Note** Reformatted and updated existing information

**Revision date** 23-Sep-2021

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**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:  
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date 16-May-2022

Previous revision date 16-May-2022

Revision Number 1.4

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

### 1.1. Product identifier

**Product Name** Cell Resuspension Solution  
**Catalogue Number(s)** 10028134, 9703067, 9702335  
**Pure substance/mixture** Mixture

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended use** Laboratory chemicals  
**Uses advised against** No information available

### 1.3. 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  
The Junction  
Station Road  
Watford, WD17 1ET  
UK

Bio-Rad Laboratories Pvt. Ltd.  
Bio-Rad House  
86-87, Udyog Vihar Phase IV Gurgaon  
122005  
Haryana India

Bio-Rad Laboratories (Pty) Ltd.  
34 Bolton Road  
Parkwood, Johannesburg 2193  
South Africa

For further information, please contact

**Technical Service** 00800 00246 723  
Ireland: Techsupport.UK@bio-rad.com  
India: support.india@bio-rad.com  
South Africa: cdg\_techsupport\_eemea@bio-rad.com

### 1.4. Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC Ireland: 353-19014670  
CHEMTREC India: 000-800-100-7141  
CHEMTREC South Africa: 0-800-983-611

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

**2.2. Label elements**

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

**Hazard statements**

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

**2.3. Other hazards****SECTION 3: Composition/information on ingredients****3.1 Substances**

Not applicable

**3.2 Mixtures**

**Full text of H- and EUH-phrases: see section 16**

**Acute Toxicity Estimate**

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATE<sub>mix</sub>) for classifying a mixture based on its components

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

**SECTION 4: First aid measures****4.1. Description of 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.<br>Consult a physician. |
| Skin contact | Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.                    |
| Ingestion    | Rinse mouth.  |

**4.2. Most important symptoms and effects, both acute and delayed**

|          |                           |
|----------|---------------------------|
| Symptoms | No information available. |
|----------|---------------------------|

**4.3. Indication of any immediate medical attention and special treatment needed**

|                    |                        |
|--------------------|------------------------|
| Note to physicians | Treat symptomatically. |
|--------------------|------------------------|

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

|                              |   |
|------------------------------|---|
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
|------------------------------|---|

|                                       |  |
|---------------------------------------|--|
| <b>Large Fire</b>                     | CAUTION: Use of water spray when fighting fire may be inefficient. |
| <b>Unsuitable extinguishing media</b> | Do not scatter spilled material with high pressure water streams.  |

**5.2. Special hazards arising from the substance or mixture**

|   |                           |
|---|---------------------------|
| <b>Specific hazards arising from the chemical</b> | No information available. |
|---|---------------------------|

**5.3. Advice for firefighters**

|   |  |
|---|--|
| <b>Special protective equipment and precautions for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |
|---|--|

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

|                                 |   |
|---------------------------------|---|
| <b>Personal precautions</b>     | Ensure adequate ventilation.                      |
| <b>For emergency responders</b> | Use personal protection recommended in Section 8. |

**6.2. Environmental precautions**

|                                  |   |
|----------------------------------|---|
| <b>Environmental precautions</b> | See Section 12 for additional Ecological Information. |
|----------------------------------|---|

**6.3. Methods and material for containment and cleaning up**

|  |  |
|--|--|
| <b>Methods for containment</b>         | Prevent further leakage or spillage if safe to do so.                                |
| <b>Methods for cleaning up</b>         | Take up mechanically, placing in appropriate containers for disposal.                |
| <b>Prevention of secondary hazards</b> | Clean contaminated objects and areas thoroughly observing environmental regulations. |

**6.4. Reference to other sections**

|                                    |  |
|------------------------------------|--|
| <b>Reference to other sections</b> | See section 8 for more information. See section 13 for more information. |
|------------------------------------|--|

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

|                                       |  |
|---------------------------------------|--|
| <b>Advice on safe handling</b>        | Ensure adequate ventilation.   |
| <b>General hygiene considerations</b> | Handle in accordance with good industrial hygiene and safety practice. |

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

|                           |  |
|---------------------------|--|
| <b>Storage Conditions</b> | Store according to product and label instructions. |
|---------------------------|--|

**7.3. Specific end use(s)**

|                                      |  |
|--------------------------------------|--|
| <b>Risk Management Methods (RMM)</b> | The information required is contained in this Safety Data Sheet. |
|--------------------------------------|--|

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

|                        |   |
|------------------------|---|
| <b>Exposure Limits</b> | This product, as supplied, does not contain any hazardous materials with occupational |
|------------------------|---|

exposure limits established by the region specific regulatory bodies.

#### Biological occupational exposure limits

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

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

### 8.2. Exposure controls

#### Personal protective equipment

**Eye/face protection** No special protective equipment required.

**Skin and body protection** No special protective equipment required.

**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.

**Environmental exposure controls** No information available.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                        |                          |
|------------------------|--------------------------|
| <b>Physical state</b>  | Liquid                   |
| <b>Appearance</b>      | aqueous solution         |
| <b>Colour</b>          | colourless               |
| <b>Odour</b>           | Odourless.               |
| <b>Odour threshold</b> | No information available |

| <b>Property</b>                               | <b>Values</b>     | <b>Remarks • Method</b>  |
|---|-------------------|--------------------------|
| <b>Melting point / freezing point</b>         | 0 °C              |                          |
| <b>Boiling point / boiling range</b>          | 100 °C            |                          |
| <b>Flammability (solid, gas)</b>              | No data available | None known               |
| <b>Flammability Limit in Air</b>              |                   | None known               |
| <b>Upper flammability or explosive limits</b> | No data available |                          |
| <b>Lower flammability or explosive limits</b> | No data available |                          |
| <b>Flash point</b>                            | No data available | None known               |
| <b>Autoignition temperature</b>               | No data available | None known               |
| <b>Decomposition temperature</b>              |                   | None known               |
| <b>pH</b>                                     | 7.5-8.5           |                          |
| <b>pH (as aqueous solution)</b>               | No data available | No information available |
| <b>Kinematic viscosity</b>                    | No data available | None known               |
| <b>Dynamic viscosity</b>                      | No data available | None known               |
| <b>Water solubility</b>                       | Miscible in water |                          |
| <b>Solubility(ies)</b>                        | No data available | None known               |
| <b>Partition coefficient</b>                  | No data available | None known               |
| <b>Vapour pressure</b>                        | No data available | None known               |
| <b>Relative density</b>                       | No data available | None known               |
| <b>Bulk density</b>                           | No data available |                          |
| <b>Liquid Density</b>                         | No data available |                          |
| <b>Vapour density</b>                         | No data available | None known               |



**Particle characteristics**

|                            |                          |
|----------------------------|--------------------------|
| Particle Size              | No information available |
| Particle Size Distribution | No information available |

**9.2. Other information****9.2.1. Information with regard to physical hazard classes**

Not applicable

**9.2.2. Other safety characteristics**

No information available

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Reactivity No information available.

**10.2. Chemical stability**

Stability Stable under normal conditions.

**Explosion data**

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

**10.3. Possibility of hazardous reactions**

Possibility of hazardous reactions None under normal processing.

**10.4. Conditions to avoid**

Conditions to avoid None known based on information supplied.

**10.5. Incompatible materials**

Incompatible materials None known based on information supplied.

**10.6. Hazardous decomposition products**

Hazardous decomposition products None known based on information supplied.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Information on likely routes of exposure****Product Information**

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

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

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

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

**Symptoms related to the physical, chemical and toxicological characteristics**

Symptoms No information available.

**Acute toxicity**

---

**Numerical measures of toxicity****Component Information****Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**11.2. Information on other hazards****11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**11.2.2. Other information**

**Other adverse effects** No information available.

|   |
|---|
| <b>SECTION 12: Ecological information</b> |
|---|

**12.1. Toxicity****Ecotoxicity**

**Unknown aquatic toxicity** Contains 0 % of components with unknown hazards to the aquatic environment.

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

**12.3. Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**12.4. Mobility in soil**

Mobility in soil No information available.

#### 12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

#### 12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

#### 12.7. Other adverse effects

No information available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste from residues/unused products 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

#### IATA

|                                    |                |
|------------------------------------|----------------|
| 14.1 UN number or ID number        | Not regulated  |
| 14.2 UN proper shipping name       | Not regulated  |
| 14.3 Transport hazard class(es)    | Not regulated  |
| 14.4 Packing group                 | Not regulated  |
| 14.5 Environmental hazards         | Not applicable |
| 14.6 Special Precautions for Users |                |
| Special Provisions                 | None           |

#### IMDG

|  |                          |
|--|--------------------------|
| 14.1 UN number or ID number                                  | Not regulated            |
| 14.2 UN proper shipping name                                 | Not regulated            |
| 14.3 Transport hazard class(es)                              | Not regulated            |
| 14.4 Packing group   | Not regulated            |
| 14.5 Environmental hazards                                   | Not applicable           |
| 14.6 Special Precautions for Users                           |                          |
| Special Provisions   | None                     |
| 14.7 Maritime transport in bulk according to IMO instruments | No information available |

#### RID

|                                    |                |
|------------------------------------|----------------|
| 14.1 UN number                     | Not regulated  |
| 14.2 UN proper shipping name       | Not regulated  |
| 14.3 Transport hazard class(es)    | Not regulated  |
| 14.4 Packing group                 | Not regulated  |
| 14.5 Environmental hazards         | Not applicable |
| 14.6 Special Precautions for Users |                |
| Special Provisions                 | None           |

#### ADR

|                                 |                |
|---------------------------------|----------------|
| 14.1 UN number or ID number     | Not regulated  |
| 14.2 UN proper shipping name    | Not regulated  |
| 14.3 Transport hazard class(es) | Not regulated  |
| 14.4 Packing group              | Not regulated  |
| 14.5 Environmental hazards      | Not applicable |

**14.6 Special Precautions for Users****Special Provisions**

None

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Germany****Water hazard class (WGK)**

slightly hazardous to water (WGK 1)

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**Authorizations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants**

Not applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**International Inventories**

Contact supplier for inventory compliance status

**15.2. Chemical safety assessment****Chemical Safety Report**

No information available

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA

TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling

Maximum limit value

\*

Skin designation

| Classification procedure  |                    |
|---|--------------------|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used        |
| Acute oral toxicity   | Calculation method |
| Acute dermal toxicity   | Calculation method |
| Acute inhalation toxicity - gas                                 | Calculation method |
| Acute inhalation toxicity - Vapour                              | Calculation method |
| Acute inhalation toxicity - dust/mist                           | Calculation method |
| Skin corrosion/irritation                                       | Calculation method |
| Serious eye damage/eye irritation                               | Calculation method |

|                           |                    |
|---------------------------|--------------------|
| Respiratory sensitisation | Calculation method |
| Skin sensitisation        | Calculation method |
| Mutagenicity              | Calculation method |
| Carcinogenicity           | Calculation method |
| Reproductive toxicity     | Calculation method |
| STOT - single exposure    | Calculation method |
| STOT - repeated exposure  | Calculation method |
| Acute aquatic toxicity    | Calculation method |
| Chronic aquatic toxicity  | Calculation method |
| Aspiration hazard         | Calculation method |
| Ozone                     | Calculation method |

**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)  
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
European Chemicals Agency (ECHA) (ECHA\_API)  
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)  
National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development 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  
World Health Organization

**Revision Note** Reformatted and updated existing information

**Revision date** 16-May-2022

**This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**Disclaimer**

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**End of Safety Data Sheet**