# **KIT SAFETY DATA SHEET**



Kit Product Name Restriction Digest Kit

Kit Catalogue Number(s) 1660002EDU

Revision date 25-Apr-2023

# **Kit Contents**

Catalogue Number(s)	Product Name
1660420, 9704664, 9704659, 1660420EDU	Fast Blast DNA Staining Solution
10014110	GAP SEQ F Sequencing Primer
1613116	Agarose, Molecular Biology Certified
1610743, 1610773, 1660742, 1610773EDU, 1610743EDU,	50X Tris/Acetic Acid/EDTA Buffer
1660742EDU, 9703685	
9702941	Hind III Lambda Digest DNA Standard
9702950	EcoR I Enzyme
9702948	Hind III Enzyme
9702947	Lambda DNA
9702949	Pst I Enzyme
9702951	2X Restriction Buffer
1660401, 1660401EDU, 9702945	Sample Loading Dye

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# 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 08-Feb-2023 Revision Number 1

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

1.1. Product identifier

Product Name Fast Blast DNA Staining Solution

**Catalogue Number(s)** 1660420, 9704664, 9704659, 1660420EDU

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

<u>Corporate Headquarters</u> <u>Manufacturer</u>

Bio-Rad Laboratories Inc.

Bio-Rad Laboratories, Life Science Group
1000 Alfred Nobel Drive

Hercules, CA 94547

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive

Hercules, California 94547

USA 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

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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

The product contains no substances which at their given concentration, are considered to be hazardous to health

Chemical name	Weight-%	REACH registration	EC No (EU	Classification according	Specific	M-Factor	M-Factor
		number	Index No)	to Regulation (EC) No.	concentration		(long-term)
				1272/2008 [CLP]	limit (SCL)		
Water	50 - 100	No data available	231-791-2	No data available	-	-	-
7732-18-5							
Trade secret	0.3 - 0.99	No data available	.?	No data available	-	-	-

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

#### **Acute Toxicity Estimate**

No information available

Chemical name	Oral LD50 mg/kg	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
		mg/kg	hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm
Water	89838.9	No data available	No data available	No data available	No data available
7732-18-5					

This product does not contain candidate substances of very high concern at a concentration >=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.

Consult a doctor.

Skin contact In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and

water.

**Ingestion** Rinse mouth.

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

**Symptoms** No information available.

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

Note to doctors Treat symptomatically.

## **SECTION 5: Firefighting measures**

5.1. Extinguishing media

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.

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

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**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place.

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

This product, as supplied, does not contain any hazardous materials with occupational **Exposure Limits** 

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) Predicted No Effect Concentration** 

No information available. No information available.

(PNEC)

8.2. Exposure controls

Personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

No protective equipment is needed under normal use conditions. If exposure limits are Respiratory protection

exceeded or irritation is experienced, ventilation and evacuation may be required.

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

No information available. **Environmental exposure controls** 

### SECTION 9: Physical and chemical properties

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

Physical state Liquid

aqueous solution **Appearance** 

Colour blue Odour Odourless.

**Odour threshold** No information available

Remarks • Method **Property** Values None known

Melting point / freezing point No data available

Boiling point / boiling range 100 °C

Flammability (solid, gas) No data available None known Flammability Limit in Air None known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

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None known

No data available Flash point None known **Autoignition temperature** No data available None known **Decomposition temperature** None known

pH (as aqueous solution) No data available No information available Kinematic viscosity No data available None known

Dynamic viscosity No data available Miscible in water Water solubility

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 regards to physical hazard classes

Not applicable

9.2.2. Other safety characteristics

No information available

# **SECTION 10: Stability and reactivity**

10.1. Reactivity

No information available. Reactivity

10.2. Chemical stability

Stable under normal conditions. Stability

**Explosion data** 

Sensitivity to mechanical impact None. Sensitivity to static discharge

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

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### **Fast Blast DNA Staining Solution**

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**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** 

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg(Rat)	-	-

#### 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 sensitisation** 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** This product does not contain any known or suspected endocrine disruptors.

11.2.2. Other information

Other adverse effects No information available.

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### **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** 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 No information available.

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 waste in accordance with environmental legislation. Dispose of in accordance

with local regulations.

**Contaminated packaging** Do not reuse empty containers.

### **SECTION 14: Transport information**

IATA

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

14.6 Special Precautions for Users

Special Provisions None

**IMDG** 

14.1 UN number or ID numberNot regulated14.2 UN proper shipping nameNot regulated14.3 Transport hazard class(es)Not regulated14.4 Packing groupNot regulated

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14.5 Environmental hazards Not applicable

14.6 Special Precautions for Users

Special Provisions No

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

RID

14.1 UN numberNot regulated14.2 UN proper shipping nameNot regulated14.3 Transport hazard class(es)Not regulated14.4 Packing groupNot regulated14.5 Environmental hazardsNot applicable

14.6 Special Precautions for Users

Special Provisions None

<u>ADR</u>

14.1 UN number or ID numberNot regulated14.2 UN proper shipping nameNot regulated14.3 Transport hazard class(es)Not regulated14.4 Packing groupNot regulated14.5 Environmental hazardsNot 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

#### **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.

#### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances 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

<u>International Inventories</u> 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

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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

Method Used
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)

Australian 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)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision Note Significant changes throughout SDS. Review all sections

Revision date 08-Feb-2023

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,

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materials or in any process, unless specified in the text.

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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

**End of Safety Data Sheet** 

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# 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** 22-Mar-2023 Revision Number 1.2

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

#### 1.1. Product identifier

GAP SEQ F Sequencing Primer **Product Name** 

Catalogue Number(s) 10014110

EC No (EU Index No) 231-791-2

**CAS No** 7732-18-5

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** Manufacturer Bio-Rad Laboratories Inc.

Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories Ltd 1000 Alfred Nobel Drive 2000 Alfred Nobel Drive Hercules, CA 94547 Hercules, California 94547

USA USA **Legal Entity / Contact Address** 

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

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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

The product contains no substances which at their given concentration, are considered to be hazardous to health

Chemical name	Weight-%	REACH registration number	· · · · · · · · · · · · · · · · · · ·	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Water 7732-18-5	50 - 100	No data available	231-791-2	No data available	-	ı	-
Oligonucleotide 119112-10-6	< 0.001	No data available	-	No data available	-	-	-
C.I. Acid Yellow 23 1934-21-0	< 0.001	No data available	217-699-5	No data available	-	-	-
1,3-Propanediol, 2-amino-2-(hydroxy methyl)- 77-86-1	< 0.001	No data available	201-064-4	No data available	-	-	-
1,3-Benzenedisulfon ic acid, 4-[[4-(ethylamino)-3-methylphenyl][4-(eth ylimino)-3-methyl-2, 5-cyclohexadien-1-y lidene]methyl]-, monosodium salt 2650-17-1		No data available	220-167-5	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) STOT SE 3 (H335)	_	-	-

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

#### **Acute Toxicity Estimate**

No information available

Chemical name	Oral LD50 mg/kg	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
		mg/kg	hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm
Water 7732-18-5	89838.9	No data available	No data available	No data available	No data available
C.I. Acid Yellow 23 1934-21-0	2000	No data available	No data available	No data available	No data available
1,3-Propanediol, 2-amino-2-(hydroxymethy I)-	5900	5000	No data available	No data available	No data available

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#### **GAP SEQ F Sequencing Primer**

Chemical name	Oral LD50 mg/kg		Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
77-86-1		<u> </u>			<u> </u>

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This product does not contain candidate substances of very high concern at a concentration >=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.

Consult a doctor.

Skin contact In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and

water.

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 doctors Treat symptomatically.

### **SECTION 5: Firefighting measures**

5.1. Extinguishing media

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

surrounding environment.

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

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

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

Ensure adequate ventilation. Personal precautions

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### **GAP SEQ F Sequencing Primer**

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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** 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)
Predicted No Effect Concentration
(PNEC)

No information available.

8.2. Exposure controls

Personal protective equipment

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

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#### **GAP SEQ F Sequencing Primer**

. . .

**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.

None known

None known

None known

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**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

Physical state Liquid

Appearance aqueous solution colourless
Odour Odourless.

Odour threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

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 No data available

limits

Lower flammability or explosive No data available

limits

Flash pointNo data availableNone knownAutoignition temperatureNo data availableNone knownDecomposition temperatureNone known

Decomposition temperature

Hc

pH (as aqueous solution) No data available No information available

Kinematic viscosity

Dynamic viscosity

No data available

No data available

Water solubilityMiscible in waterSolubility(ies)No data availableNone knownPartition coefficientNo data availableNone knownVapour pressureNo data availableNone known

Relative density No data available

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 regards 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

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. . .

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**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** 

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg(Rat)	-	-
C.I. Acid Yellow 23	> 2000 mg/kg(Rat)	-	-
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	= 5900 mg/kg(Rat)	> 5000 mg/kg (Rat)	-

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.

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**Respiratory or skin sensitisation** 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 This product does not contain any known or suspected endocrine disruptors.

11.2.2. Other information

Other adverse effects No information available.

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

Chemical name	Partition coefficient
C.I. Acid Yellow 23	-1.572

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

Chemical name	PBT and vPvB assessment
---------------	-------------------------

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Revision date 22-Mar-2023

C.I. Acid Yellow 23	The substance is not PBT / vPvB
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	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

Contaminated packaging

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

products

Do not reuse empty containers.

# **SECTION 14: Transport information**

#### <u>IATA</u>

14.1	UN number or ID number	Not regulated
14.2	<b>UN proper shipping name</b>	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 No information available

according to IMO instruments

### 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

### <u>ADR</u>

ADIC	
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

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### **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) non-hazardous to water (nwg)

#### **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.

#### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Restricted substance per REACH Substance subject to authorisation per Chemical name Annex XVII **REACH Annex XIV** C.I. Acid Yellow 23 - 1934-21-0 75.

#### **Persistent Organic Pollutants**

Not applicable

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

Not applicable

Contact supplier for inventory compliance status **International Inventories** 

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

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL (Short Term Exposure Limit) STEL

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

Page 20 / 112 Acute inhalation toxicity - dust/mist

Serious eye damage/eye irritation

Skin corrosion/irritation

Respiratory sensitisation

Skin sensitisation

Reproductive toxicity

Acute aquatic toxicity

Aspiration hazard

Ozone

Chronic aquatic toxicity

STOT - single exposure

STOT - repeated exposure

Mutagenicity

Carcinogenicity

		Revision date	22-Mar-2023
_			
	Calculation method	-	
	Calculation method		
	Calculation method		

Calculation method

Calculation method

Calculation method

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)

Australian 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)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

**Revision Note** Reformatted and updated existing information

Revision date 22-Mar-2023

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** 

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# 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** 24-Jan-2023 Revision Number 1.3

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

#### 1.1. Product identifier

Agarose, Molecular Biology Certified **Product Name** 

Catalogue Number(s) 1613116

232-731-8 EC No (EU Index No)

**CAS No** 9012-36-6

Pure substance/mixture Substance

#### 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 Bio-Rad Laboratories Ltd

2000 Alfred Nobel Drive Hercules, California 94547

USA

**Legal Entity / Contact Address** 

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

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### Agarose, Molecular Biology Certified

Revision date 24-Jan-2023

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

Chemical name	Weight-%	REACH registration	EC No (EU	Classification according	Specific	M-Factor	M-Factor
		number	Index No)	to Regulation (EC) No.	concentration		(long-term)
				1272/2008 [CLP]	limit (SCL)		
Agarose	50 - 100	No data available	232-731-8	No data available	-	-	-
9012-36-6							

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

#### **Acute Toxicity Estimate**

No information available

This product does not contain candidate substances of very high concern at a concentration >=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.

Consult a doctor.

Skin contact In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and

water.

**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 doctors** Treat symptomatically.

### **SECTION 5: Firefighting measures**

EGHS / BE Page 23/112

5.1. Extinguishing media

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.

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 Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

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

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

This product, as supplied, does not contain any hazardous materials with occupational **Exposure Limits** 

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) Predicted No Effect Concentration** 

No information available. No information available.

(PNEC)

8.2. Exposure controls

Personal protective equipment

Eye/face protection No special protective equipment required.

No special protective equipment required. Skin and body protection

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.

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

**Environmental exposure controls** No information available.

### SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Solid **Appearance** Powder Colour white Odour Odourless.

**Odour threshold** No information available

Remarks • Method **Property** Values

Melting point / freezing point No data available None known Boiling point / boiling range No data available None known Flammability (solid, gas) No data available None known Flammability Limit in Air None known

Upper flammability or explosive

limits

No data available

Lower flammability or explosive limits

No data available

Flash point **Autoignition temperature**  No data available No data available None known None known

**Decomposition temperature** 

None known None known

pH (as aqueous solution) Kinematic viscosity Dynamic viscosity

No data available No information available No data available None known No data available None known

Water solubility Insoluble in water

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#### Agarose, Molecular Biology Certified

Revision date 24-Jan-2023

No data available Solubility(ies) 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 No information available **Particle Size Distribution** 

9.2. Other information

9.2.1. Information with regards to physical hazard classes

Not applicable

9.2.2. Other safety characteristics

No information available

# **SECTION 10: Stability and reactivity**

10.1. Reactivity

No information available. Reactivity

10.2. Chemical stability

Stable under normal conditions. Stability

**Explosion data** 

Sensitivity to mechanical impact None. Sensitivity to static discharge

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.

EGHS / BE Page 26 / 112 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** 

No information available

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 sensitisation** 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** This product does not contain any known or suspected endocrine disruptors.

11.2.2. Other information

Other adverse effects No information available.

**SECTION 12: Ecological information** 

12.1. Toxicity

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

12.2. Persistence and degradability

Persistence and degradability No information available.

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12.3. Bioaccumulative potential

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

12.4. Mobility in soil

No information available. Mobility in soil

12.5. Results of PBT and vPvB assessment

No information available. 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 waste in accordance with environmental legislation. Dispose of in accordance

with local regulations.

Contaminated packaging Do not reuse empty containers.

### **SECTION 14: Transport information**

IATA

Not regulated 14.1 UN number or ID number 14.2 UN proper shipping name Not regulated 14.3 Transport hazard class(es) Not regulated 14.4 Packing group Not regulated

Not applicable 14.5 Environmental hazards

14.6 Special Precautions for Users None

**Special Provisions** 

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 Not applicable 14.5 Environmental hazards

14.6 Special Precautions for Users

**Special Provisions** 

14.7 Maritime transport in bulk No information available

according to IMO instruments

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

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ADR

14.1 UN number or ID numberNot regulated14.2 UN proper shipping nameNot regulated14.3 Transport hazard class(es)Not regulated14.4 Packing groupNot regulated14.5 Environmental hazardsNot 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) non-hazardous to water (nwg)

#### **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.

#### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances 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

<u>International Inventories</u> 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

Leaend

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

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1ethod Used
1011104 0004
Calculation method
alculation method
alculation method
Calculation method
Calculation method
alculation method
Calculation method
Calculation method
alculation method
Calculation method
alculation method
alculation method
alculation method
alculation method
200 200 200 200 200 200 200 200 200 200

#### 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)

Australian 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)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

**Revision Note** Reformatted and updated existing information

Revision date 24-Jan-2023

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** 

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# 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 24-Jan-2023 Revision Number 1.5

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

1.1. Product identifier

Product Name 50X Tris/Acetic Acid/EDTA Buffer

Catalogue Number(s) 1610743, 1610773, 1660742, 1610773EDU, 1610743EDU, 1660742EDU, 9703685

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 Manufacturer

Bio-Rad Laboratories Inc.

Bio-Rad Laboratories, Life Science Group
1000 Alfred Nobel Drive

Hercules, CA 94547

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive

Hercules, California 94547

USA 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

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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	,	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Water 7732-18-5	50 - 100	No data available	231-791-2	No data available	1	-	-
1,3-Propanediol, 2-amino-2-(hydroxy methyl)- 77-86-1	20 - 35	No data available	201-064-4	No data available	-	-	-
Sodium acetate 127-09-3	10 - 20	No data available	204-823-8	No data available	-	-	-
Glycine, N,N-1,2-ethanediylbi s[N-(carboxymethyl) -, disodium salt, dihydrate 6381-92-6		No data available	-	Eye Irrit. 2 (H319) STOT SE 3 (H335) Aquatic Chronic 3 (H412)	-	-	-

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

### **Acute Toxicity Estimate**

No information available

Chemical name	Oral LD50 mg/kg	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
		mg/kg	hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm
Water 7732-18-5	89838.9	No data available	No data available	No data available	No data available
1,3-Propanediol, 2-amino-2-(hydroxymethy I)- 77-86-1	5900	5000	No data available	No data available	No data available
Sodium acetate 127-09-3	3530	10000	Inhalation LC50 Rat >30 g/m³ 1 h (Source: NLM_CIP) 7.5	>30	Inhalation LC50 Rat >30 g/m³ 1 h (Source: NLM_CIP)

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

# **SECTION 4: First aid measures**

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Revision date 24-Jan-2023

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.

Consult a doctor.

**Skin contact** In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and

water.

**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 doctors**Treat symptomatically.

# **SECTION 5: Firefighting measures**

5.1. Extinguishing media

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.

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.

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#### 50X Tris/Acetic Acid/EDTA Buffer

Revision date 24-Jan-2023

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 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)
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.

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

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9.1. Information on basic physical and chemical properties

**Physical state** Liquid

Appearance aqueous solution Colour colourless Odour Odourless.

No information available **Odour threshold** 

**Property** Values Remarks • Method Melting point / freezing point No data available None known

Boiling point / boiling range 100 °C

Flammability (solid, gas) No data available None known None known

Flammability Limit in Air

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

No data available None known Flash point **Autoignition temperature** No data available None known None known

**Decomposition temperature** 

7-8

pH (as aqueous solution) No data available No information available None known

Kinematic viscosity No data available **Dynamic viscosity** No data available

Water solubility Miscible in water Solubility(ies) No data available

None known Partition coefficient No data available None known No data available Vapour pressure None known Relative density No data available None known

No data available **Bulk density Liquid Density** No data available

Vapour density No data available None known

Particle characteristics

No information available **Particle Size Particle Size Distribution** No information available

9.2. Other information

9.2.1. Information with regards to physical hazard classes

Not applicable

9.2.2. Other safety characteristics

No information available

**SECTION 10: Stability and reactivity** 

None known

10.1. Reactivity

No information available. Reactivity

10.2. Chemical stability

Stability Stable under normal conditions.

**Explosion data** 

Sensitivity to mechanical impact None. Sensitivity to static discharge

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

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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) 11,575.90 mg/kg
ATEmix (dermal) 16,123.80 mg/kg
ATEmix (inhalation-dust/mist) 40.70 mg/l

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg(Rat)	-	-
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	= 5900 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Sodium acetate	= 3530 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 30 g/m³ (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 sensitisation** No information available.

Germ cell mutagenicity No information available.

**Carcinogenicity** No information available.

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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** This product does not contain any known or suspected endocrine disruptors.

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 acetate	-	LC50: >100mg/L (96h,	-	EC50: >1000mg/L (48h,
		Danio rerio)		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
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	The substance is not PBT / vPvB PBT assessment does
	not apply
Sodium acetate	The substance is not PBT / vPvB PBT assessment does
	not apply
Glycine, N,N-1,2-ethanediylbis[N-(carboxymethyl)-, disodium salt,	The substance is not PBT / vPvB
dihydrate	

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#### 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 Not applicable 14.5 Environmental hazards

14.6 Special Precautions for Users

**Special Provisions** None

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

14.6 Special Precautions for Users

**Special Provisions** None

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

#### 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 Not applicable 14.5 Environmental hazards

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**

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#### 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.

#### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances 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

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)	
Sodium acetate - 127-09-3	Simplified procedure - Category 1	

<u>International Inventories</u> 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

H319 - Causes serious eye irritation

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

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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)

Australian 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)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision Note Reformatted and updated existing information

Revision date 24-Jan-2023

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** 

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## 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 05-Apr-2023 Revision Number 2.1

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

1.1. Product identifier

Product Name Hind III Lambda Digest DNA Standard

Catalogue Number(s) 9702941

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

<u>Corporate Headquarters</u> <u>Manufacturer</u>

Bio-Rad Laboratories Inc.

Bio-Rad Laboratories, Li

1000 Alfred Nobel Drive

Hercules, CA 94547

Bio-Rad Laboratories, Li

2000 Alfred Nobel Drive

Hercules, California 945

USA USA

Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories Ltd 2000 Alfred Nobel Drive The Junction

Hercules, California 94547
USA

The Junction
Station Road
Watford, WD17 1ET

Bio-Rad Laboratories Pvt. Ltd.

**Legal Entity / Contact Address** 

Bio-Rad House

UK

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

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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

The product contains no substances which at their given concentration, are considered to be hazardous to health

Chemical name	Weight-%	REACH registration	EC No (EU	Classification according	Specific	M-Factor	M-Factor
		number	Index No)	to Regulation (EC) No. 1272/2008 [CLP]	concentration limit (SCL)		(long-term)
Water 7732-18-5	50 - 100	No data available	231-791-2	No data available	-	-	-
Glycine, N,N-1,2-ethanediylbi s[N-(carboxymethyl) -, disodium salt, dihydrate 6381-92-6	0.3 - 0.99	No data available	-	Eye Irrit. 2 (H319) STOT SE 3 (H335) Aquatic Chronic 3 (H412)	-	-	-
Sodium chloride 7647-14-5	0.1 - 0.299	No data available	231-598-3	No data available	-	-	-
1,3-Propanediol, 2-amino-2-(hydroxy methyl)- 77-86-1	0.1 - 0.299	No data available	201-064-4	No data available	-	-	-
Magnesium chloride (MgCl2), hexahydrate 7791-18-6	0.01 - 0.099	No data available	-	No data available	-	-	-
Deoxyribonucleic acids 9007-49-2	0.01 - 0.099	No data available	-	No data available	-	-	-
2,3-Butanediol, 1,4-dimercapto-, (R*,R*)- 3483-12-3	0.01 - 0.099	No data available	222-468-7	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	1	-	-
Nuclease, restriction endodeoxyribo-, HINDIII 81295-22-9	0.001 - 0.01	No data available	279-728-8	No data available	-	-	-

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

#### **Acute Toxicity Estimate**

No information available

Chemical name	Oral LD50 mg/kg	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
		mg/kg	hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm
Water	89838.9	No data available	No data available	No data available	No data available

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Chemical name	Oral LD50 mg/kg		Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
7732-18-5					
Sodium chloride 7647-14-5	3000	10000	Inhalation LC50 Rat >42 mg/L 1 h (no deaths occurred, aerosol, Source: ECHA_API)	>42	Inhalation LC50 Rat >42 mg/L 1 h (no deaths occurred, aerosol, Source: ECHA_API)
1,3-Propanediol, 2-amino-2-(hydroxymethy I)- 77-86-1	5900	5000	No data available	No data available	No data available
Magnesium chloride (MgCl2), hexahydrate 7791-18-6	8100	No data available	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=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.

Consult a doctor.

**Skin contact** In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and

water.

**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 doctors Treat symptomatically.

### **SECTION 5: Firefighting measures**

5.1. Extinguishing media

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** No information available.

chemical

5.3. Advice for firefighters

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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.

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 This product, as supplied, does not contain any hazardous materials with occupational

exposure limits established by the region specific regulatory bodies.

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

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

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

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regulatory bodies.

Derived No Effect Level (DNEL)
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

Physical state Liquid

Appearance aqueous solution colourless
Odour Odourless.

Odour threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

Melting point / freezing point  $0 \, ^{\circ}\text{C}$ 

Boiling point / boiling range 100 °C

Flammability (solid, gas) No data available None known Flammability Limit in Air None known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Flash point No data available None known Autoignition temperature No data available None known Decomposition temperature None known

**pH** 8

pH (as aqueous solution) No data available No information available

Kinematic viscosityNo data availableNone knownDynamic viscosityNo data availableNone known

Water solubility Miscible in water

Solubility(ies)No data availableNone knownPartition coefficientNo data availableNone knownVapour pressureNo data availableNone knownRelative densityNo data availableNone known

Bulk density No data available

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

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9.2. Other information

#### 9.2.1. Information with regards 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** 

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Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg(Rat)	-	-
Sodium chloride	= 3 g/kg (Rat)	> 10000 mg/kg ( Rabbit )	> 42 mg/L (Rat)1 h
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	= 5900 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Magnesium chloride (MgCl2), hexahydrate	= 8100 mg/kg (Rat)	-	-

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 sensitisation** 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** This product does not contain any known or suspected endocrine disruptors.

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: 5560 - 6080mg/L	-	EC50: =1000mg/L (48h,
		(96h, Lepomis		Daphnia magna)

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macrochirus)	EC50: 340.7 - 469.2mg/L
LC50: =12946mg/L (96h,	(48h, Daphnia magna)
Lepomis macrochirus)	
LC50: 6020 - 7070mg/L	
(96h, Pimephales	
promelas)	
LC50: =7050mg/L (96h,	
Pimephales promelas)	
LC50: 6420 - 6700mg/L	
(96h, Pimephales	
promelas)	
LC50: 4747 - 7824mg/L	
(96h, Oncorhynchus	
mykiss)	

#### 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 No information available.

	•
Chemical name	PBT and vPvB assessment
Glycine, N,N-1,2-ethanediylbis[N-(carboxymethyl)-, disodium salt,	The substance is not PBT / vPvB
dihydrate	
Sodium chloride	The substance is not PBT / vPvB PBT assessment does
	not apply
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	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

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Revision date 05-Apr-2023

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
14.2 UN proper shipping name
14.3 Transport hazard class(es)
14.4 Packing group
14.5 Environmental hazards
Not regulated
Not regulated
Not regulated
Not applicable

14.6 Special Precautions for Users

Special Provisions None

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

#### RID

14.1 UN numberNot regulated14.2 UN proper shipping nameNot regulated14.3 Transport hazard class(es)Not regulated14.4 Packing groupNot regulated14.5 Environmental hazardsNot applicable

14.6 Special Precautions for Users

Special Provisions None

#### ADR

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

Chemical name	French RG number	Title
Sodium chloride	RG 78	-
7647-14-5		

#### **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.

#### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances 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

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Chemical name	EU - Plant Protection Products (1107/2009/EC)		
Sodium chloride - 7647-14-5	Plant protection agent		

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)		
Sodium chloride - 7647-14-5	Product-type 1: Human hygiene		

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) (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

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International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australian 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)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision Note Significant changes throughout SDS. Review all sections

Revision date 05-Apr-2023

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** 

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## 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 19-Apr-2023 Revision Number 1.1

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

1.1. Product identifier

Product Name EcoR I Enzyme

Catalogue Number(s) 9702950

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

<u>Corporate Headquarters</u>
Bio-Rad Laboratories Inc.

Manufacturer
Bio-Rad Laboratories, Life Science Group

1000 Alfred Nobel Drive
Hercules, CA 94547

2000 Alfred Nobel Drive
Hercules, CAlifornia 94547

USA 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

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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

Contains animal source material. (Cattle). Harmful to aquatic life.

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

#### 3.1 Substances

Not applicable

#### 3.2 Mixtures

Chemical name	Weight-%	REACH registration number	,	Classification according to Regulation (EC) No. 1272/2008 [CLP]	•	M-Factor	M-Factor (long-term)
1,2,3-Propanetriol 56-81-5	50 - 100	No data available	200-289-5	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 mg/kg	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
		mg/kg	hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm
1,2,3-Propanetriol	12600	10000	Inhalation LC50 Rat	>2.75	Inhalation LC50 Rat
56-81-5			>2.75 mg/L 4 h		>2.75 mg/L 4 h
			(condensation aerosol,		(condensation
			Source: ECHA)		aerosol, Source:
			2.75		ECHA)

This product does not contain candidate substances of very high concern at a concentration >=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.

Consult a doctor.

Skin contact In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and

water.

**Ingestion** Rinse mouth.

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

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EcoR I Enzyme Revision date 19-Apr-2023

**Symptoms** No information available.

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

**Note to doctors** Treat symptomatically.

### **SECTION 5: Firefighting measures**

5.1. Extinguishing media

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.

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#### 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	Europ	ean Union	Austria	Belgium	Bu	Igaria	Croatia
1,2,3-Propanetriol	-		-	TWA: 10 mg/m <sup>3</sup>		-	TWA: 10 mg/m <sup>3</sup>
56-81-5							
Chemical name	С	yprus	Czech Republic	Denmark	Es	stonia	Finland
1,2,3-Propanetriol		-	TWA: 10 mg/m <sup>3</sup>	-	TWA:	10 mg/m <sup>3</sup>	TWA: 20 mg/m <sup>3</sup>
56-81-5			Ceiling: 15 mg/m <sup>3</sup>				
Chemical name	F	rance	Germany TRGS	Germany DFG	Gr	eece	Hungary
1,2,3-Propanetriol	TWA:	10 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup>	TWA:	10 mg/m <sup>3</sup>	-
56-81-5				Peak: 400 mg/m <sup>3</sup>			
Chemical name	Luxembourg		Malta	Netherlands	Norway		Poland
1,2,3-Propanetriol	-		=	=	-		TWA: 10 mg/m <sup>3</sup>
56-81-5							
Chemical name	Po	ortugal	Romania	Slovakia	Slovenia		Spain
1,2,3-Propanetriol	TWA: 10 mg/m <sup>3</sup>		-	TWA: 11 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup>		TWA: 10 mg/m <sup>3</sup>
56-81-5	56-81-5				STEL: 4	400 mg/m <sup>3</sup>	
Chemical name	Chemical name Sv		veden	Switzerland		Uni	ted Kingdom
1,2,3-Propanetriol	1,2,3-Propanetriol		-	TWA: 50 mg/m	3	TW	A: 10 mg/m <sup>3</sup>
56-81-5			STEL: 100 mg/n	n <sup>3</sup>	STE	L: 30 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)
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.

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.

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### SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid

Appearance aqueous solution colourless
Odour Odourless.

Odour threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

Melting point / freezing pointNo data availableNone knownBoiling point / boiling rangeNo data availableNone knownFlammability (solid, gas)No data availableNone knownFlammability Limit in AirNone known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Flash pointNo data availableNone knownAutoignition temperature200 °CNone knownDecomposition temperatureNone known

ecomposition temperature

None known

None known

pH (as aqueous solution)

No data available

No information available

Kinematic viscosity
No data available
None known
No data available
None known

Water solubility Miscible in water

Solubility(ies)No data availableNone knownPartition coefficientNo data availableNone knownVapour pressureNo data availableNone knownRelative densityNo data availableNone known

Bulk density
Liquid Density
No data available
No data available

Vapour density No data available None known

Particle characteristics

Particle SizeNo information availableParticle Size DistributionNo information available

#### 9.2. Other information

### 9.2.1. Information with regards 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

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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**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
1,2,3-Propanetriol	= 12600 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 2.75 mg/L (Rat) 4 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 sensitisation** No information available.

Germ cell mutagenicity No information available.

**Carcinogenicity** No information available.

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**EcoR I Enzyme** 

Revision date 19-Apr-2023

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** This product does not contain any known or suspected endocrine disruptors.

#### 11.2.2. Other information

Other adverse effects No information available.

### **SECTION 12: Ecological information**

#### 12.1. Toxicity

**Ecotoxicity** Harmful to aquatic life.

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

Chemical name	Algae/aquatic plants	Fish	Toxicity to	Crustacea
			microorganisms	
1,2,3-Propanetriol	-	LC50: 51 - 57mL/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		
1,2,3-Propanetriol	-1.75		

#### 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
1,2,3-Propanetriol	The substance is not PBT / vPvB

### 12.6. Endocrine disrupting properties

**Endocrine disrupting properties** No information available.

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#### 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

14.1UN number or ID numberNot regulated14.2UN proper shipping nameNot regulated14.3Transport hazard class(es)Not regulated14.4Packing groupNot regulated14.5Environmental hazardsNot applicable

14.6 Special Precautions for Users

Special Provisions None

#### **IMDG**

14.1 UN number or ID numberNot regulated14.2 UN proper shipping nameNot regulated14.3 Transport hazard class(es)Not regulated14.4 Packing groupNot regulated14.5 Environmental hazardsNot applicable

14.6 Special Precautions for Users

Special Provisions None

14.7 Maritime transport in bulk No information available

according to IMO instruments

#### RID

14.1UN numberNot regulated14.2UN proper shipping nameNot regulated14.3Transport hazard class(es)Not regulated14.4Packing groupNot regulated14.5Environmental hazardsNot applicable

14.6 Special Precautions for Users

Special Provisions None

#### ADR

14.1 UN number or ID numberNot regulated14.2 UN proper shipping nameNot regulated14.3 Transport hazard class(es)Not regulated14.4 Packing groupNot regulated14.5 Environmental hazardsNot 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

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#### **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.

#### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances 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

<u>International Inventories</u> 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

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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)

Australian 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)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision Note Reformatted and updated existing information

Revision date 19-Apr-2023

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** 

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## 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 05-Apr-2023 Revision Number 3.1

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

1.1. Product identifier

Product Name Hind III Enzyme

Catalogue Number(s) 9702948

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 Manufacturer

Bio-Rad Laboratories Inc.

Bio-Rad Laboratories, Life Science Group
1000 Alfred Nobel Drive

Hercules, CA 94547

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive

Hercules, California 94547

USA USA

nufacturer
Legal Entity / Contact Address
Rad Laboratories, Life Science Group 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

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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

(Cattle). Contains animal source material. Harmful to aquatic life.

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

#### 3.1 Substances

Not applicable

#### 3.2 Mixtures

Chemical name	Weight-%	REACH registration number		Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
1,2,3-Propanetriol 56-81-5	50 - 100	No data available	200-289-5	No data available	-	-	-
Water 7732-18-5	35 - 50	No data available	231-791-2	No data available	1	-	-
Sodium chloride 7647-14-5	0.3 - 0.99	No data available	231-598-3	No data available	ı	-	-
1,3-Propanediol, 2-amino-2-(hydroxy methyl)- 77-86-1	0.1 - 0.299	No data available	201-064-4	No data available	-	-	-
Nuclease, restriction endodeoxyribo-, HINDIII 81295-22-9	0.01 - 0.099	No data available	279-728-8	No data available	-	-	-
Albumins, beef serum 94349-60-7	0.01 - 0.099	No data available	305-179-1	No data available	-	-	-
2,3-Butanediol, 1,4-dimercapto-, (R*,R*)- 3483-12-3	0.01 - 0.099	No data available	222-468-7	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	-	-	-
Ethylenediaminetetr aacetic acid 60-00-4	0.001 - 0.01	No data available	(607-429-00 -8) 200-449-4	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	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
		mg/kg	hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm
1,2,3-Propanetriol	12600	10000	Inhalation LC50 Rat	>2.75	Inhalation LC50 Rat
56-81-5			>2.75 mg/L 4 h		>2.75 mg/L 4 h
			(condensation aerosol,		(condensation
			Source: ECHA)		aerosol, Source:
			2.75		ECHA)

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Chemical name	Oral LD50 mg/kg		Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Water 7732-18-5	89838.9	No data available	No data available	No data available	No data available
Sodium chloride 7647-14-5	3000	10000	Inhalation LC50 Rat >42 mg/L 1 h (no deaths occurred, aerosol, Source: ECHA_API)	>42	Inhalation LC50 Rat >42 mg/L 1 h (no deaths occurred, aerosol, Source: ECHA_API)
1,3-Propanediol, 2-amino-2-(hydroxymethy I)- 77-86-1	5900	5000	No data available	No data available	No data available
Ethylenediaminetetraacet ic acid 60-00-4	2000	No data available	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=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.

Consult a doctor.

Skin contact In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and

water.

**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 doctors**Treat symptomatically.

### **SECTION 5: Firefighting measures**

5.1. Extinguishing media

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.

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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	European Union	Austria	Belgium	Bulgaria	Croatia
1,2,3-Propanetriol	-	-	TWA: 10 mg/m <sup>3</sup>	-	TWA: 10 mg/m <sup>3</sup>
56-81-5					
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
1,2,3-Propanetriol	-	TWA: 10 mg/m <sup>3</sup>	-	TWA: 10 mg/m <sup>3</sup>	TWA: 20 mg/m <sup>3</sup>
56-81-5		Ceiling: 15 mg/m <sup>3</sup>			-

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#### **Hind III Enzyme**

Chemical name	France	Germany TRGS	Germany DFG	Gr	eece	Hungary
1,2,3-Propanetriol 56-81-5	TWA: 10 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup> Peak: 400 mg/m <sup>3</sup>	TWA:	10 mg/m <sup>3</sup>	-
Chemical name	Ireland	Italy MDLPS	Italy AIDII	La	atvia	Lithuania
Sodium chloride 7647-14-5	-	-	-	TWA:	5 mg/m³	TWA: 5 mg/m <sup>3</sup>
Chemical name	Luxembourg	Malta	Netherlands	No	rway	Poland
1,2,3-Propanetriol 56-81-5	-	-	-		-	TWA: 10 mg/m <sup>3</sup>
Chemical name	Portugal	Romania	Slovakia	Slo	venia	Spain
1,2,3-Propanetriol 56-81-5	TWA: 10 mg/m <sup>3</sup>	-	TWA: 11 mg/m <sup>3</sup>		100 mg/m <sup>3</sup> 100 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>
Chemical name	S	weden	Switzerland		Uni	ted Kingdom
1,2,3-Propanetriol 56-81-5		-	TWA: 50 mg/m STEL: 100 mg/r			A: 10 mg/m³ EL: 30 mg/m³

#### **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) 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

Physical state Liquid

**Appearance** aqueous solution Colour colourless Odour Odourless.

**Odour threshold** No information available

**Property** Values Remarks • Method No data available None known

Melting point / freezing point

Boiling point / boiling range > 100 °C

Flammability (solid, gas) No data available None known Flammability Limit in Air None known

No data available Upper flammability or explosive

limits

Lower flammability or explosive No data available

limits

Page 66 / 112 Flash point > 160 °C Autoignition temperature 200 °C

Autoignition temperature200 °CNone knownDecomposition temperatureNone known

рΗ

None known None known

**pH (as aqueous solution)**No data available
No information available
None known

Dynamic viscosity No data available Water solubility Miscible in water

Water solubility
Solubility(ies)
Partition coefficient
Vapour pressure
Relative density
No data available
No data available
No data available

None known None known None known None known

None known

Bulk density

Liquid Density

No data available

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 regards 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

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**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**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
1,2,3-Propanetriol	= 12600 mg/kg (Rat)	> 10 g/kg(Rabbit)	> 2.75 mg/L (Rat)4 h
Water	> 90 mL/kg ( Rat )	-	-
Sodium chloride	= 3 g/kg (Rat)	> 10000 mg/kg ( Rabbit )	> 42 mg/L (Rat)1 h
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	= 5900 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Ethylenediaminetetraacetic acid	> 2000 mg/kg (Rat)	-	-

#### 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 sensitisation** 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

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#### 11.2.1. Endocrine disrupting properties

**Endocrine disrupting properties** This product does not contain any known or suspected endocrine disruptors.

#### 11.2.2. Other information

Other adverse effects No information available.

### **SECTION 12: Ecological information**

### 12.1. Toxicity

**Ecotoxicity** Harmful to aquatic life.

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

		F	<b>+</b> · · · ·	0 /
Chemical name	Algae/aquatic plants	Fish	Toxicity to	Crustacea
			microorganisms	
1,2,3-Propanetriol	-	LC50: 51 - 57mL/L (96h,	-	-
		Oncorhynchus mykiss)		
Sodium chloride	-	LC50: 5560 - 6080mg/L	-	EC50: =1000mg/L (48h,
		(96h, Lepomis		Daphnia magna)
		macrochirus)		EC50: 340.7 - 469.2mg/L
		LC50: =12946mg/L (96h,		(48h, Daphnia magna)
		Lepomis macrochirus)		
		LC50: 6020 - 7070mg/L		
		(96h, Pimephales		
		promelas)		
		LC50: =7050mg/L (96h,		
		Pimephales promelas)		
		LC50: 6420 - 6700mg/L		
		(96h, Pimephales		
		promelas)		
		LC50: 4747 - 7824mg/L		
		(96h, Oncorhynchus		
		mykiss)		
Ed t P :	E050 4.04 // (70)	• '		5050 440 // (40)
Ethylenediaminetetraacet		LC50: 34 - 62mg/L (96h,	-	EC50: =113mg/L (48h,
ic acid	Desmodesmus	Lepomis macrochirus)		Daphnia magna)
	subspicatus)	LC50: 44.2 - 76.5mg/L		
		(96h, Pimephales		
		promelas)		

#### 12.2. Persistence and degradability

**Persistence and degradability** No information available.

#### 12.3. Bioaccumulative potential

### Bioaccumulation

**Component Information** 

Chemical name	Partition coefficient
1,2,3-Propanetriol	-1.75

#### 12.4. Mobility in soil

Mobility in soil No information available.

### 12.5. Results of PBT and vPvB assessment

#### PBT and vPvB assessment

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#### **Hind III Enzyme**

Chemical name	PBT and vPvB assessment
1,2,3-Propanetriol	The substance is not PBT / vPvB
Sodium chloride	The substance is not PBT / vPvB PBT assessment does
	not apply
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	The substance is not PBT / vPvB PBT assessment does
	not apply
Ethylenediaminetetraacetic acid	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**

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 No information available

according to IMO instruments

#### 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 14.2 UN proper shipping name**Not regulated Not regulated

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\_\_\_\_\_

14.3 Transport hazard class(es)Not regulated14.4 Packing groupNot regulated14.5 Environmental hazardsNot applicable

14.6 Special Precautions for Users Special Provisions

**SECTION 15: Regulatory information** 

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

None

Chemical name	French RG number	Title
Sodium chloride	RG 78	-
7647-14-5		

#### **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.

#### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

		( -3 ( -)	
ı	Chemical name	Restricted substance per REACH	Substance subject to authorisation per
ı		Annex XVII	REACH Annex XIV
I	Ethylenediaminetetraacetic acid - 60-00-4	75.	-

#### **Persistent Organic Pollutants**

Not applicable

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

Not applicable

Chemical name	EU - Plant Protection Products (1107/2009/EC)	
Sodium chloride - 7647-14-5	Plant protection agent	

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
Sodium chloride - 7647-14-5	Product-type 1: Human hygiene

<u>International Inventories</u> 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

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

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)

Australian 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)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Reformatted and updated existing information **Revision Note** 

**Revision date** 05-Apr-2023

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** 

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# 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 19-Apr-2023 Revision Number 1.1

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

1.1. Product identifier

Product Name Lambda DNA

Catalogue Number(s) 9702947

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 Manufacturer

Bio-Rad Laboratories Inc.

Bio-Rad Laboratories, Life Science Group
1000 Alfred Nobel Drive

Hercules, CA 94547

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive

Hercules, California 94547

USA USA

<u>Legal Entity / Contact Address</u> 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

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Lambda DNA Revision date 19-Apr-2023

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

The product contains no substances which at their given concentration, are considered to be hazardous to health

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

#### **Acute Toxicity Estimate**

No information available

This product does not contain candidate substances of very high concern at a concentration >=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.

Consult a doctor.

**Skin contact** In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and

water.

**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

# **SECTION 5: Firefighting measures**

# 5.1. Extinguishing media

surrounding environment.

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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.

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

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**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)
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.

None known

**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

Physical state Liquid

Appearance aqueous solution colourless
Odour Odourless.

Odour threshold No information available

Property Values Remarks • Method

Melting point / freezing point  $0 \, ^{\circ}\text{C}$ 

Boiling point / boiling range 100 °C

Flammability (solid, gas) No data available None known

Flammability Limit in Air

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Flash point No data available None known Autoignition temperature 200 °C None known

Autoignition temperature200 °CNone knownDecomposition temperatureNone knownpHNone known

H None known

pH (as aqueous solution) No data available No information available

Kinematic viscosity

No data available

None known

No data available

None known

No data available

None known

Water solubility Miscible in water

Solubility(ies)No data availableNone knownPartition coefficientNo data availableNone knownVapour pressureNo data availableNone knownRelative densityNo data availableNone known

Bulk density No data available

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None known

Liquid Density
No data available
Vapour density
No data available

Particle characteristics

Particle Size No information available Particle Size Distribution No information available

9.2. Other information

### 9.2.1. Information with regards 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.

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# Acute toxicity

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

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 sensitisation** 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** This product does not contain any known or suspected endocrine disruptors.

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.

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

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

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### 12.4. Mobility in soil

**Mobility in soil** No information available.

### 12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

#### 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**

# <u>IATA</u>

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	<b>UN number or ID number</b>	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 No information available according to IMO instruments

### 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

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14.2 UN proper shipping name
14.3 Transport hazard class(es)
14.4 Packing group
14.5 Environmental hazards
Not regulated Not regulated 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

#### **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.

#### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances 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

<u>International Inventories</u> 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				

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#### Lambda DNA

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)

Australian 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)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision Note Reformatted and updated existing information

Revision date 19-Apr-2023

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** 

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# 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 05-Apr-2023 Revision Number 1.1

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

1.1. Product identifier

Product Name Pst I Enzyme

Catalogue Number(s) 9702949

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.

Manufacturer
Bio-Rad Laboratories. Life Sc

Bio-Rad Laboratories Inc.

Bio-Rad Laboratories, Life Science Group
1000 Alfred Nobel Drive

Hercules, CA 94547

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive

Hercules, California 94547

USA 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

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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

Harmful to aquatic life. Contains animal source material. (Cattle).

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

# 3.1 Substances

Not applicable

#### 3.2 Mixtures

Chemical name	Weight-%	REACH registration number	number Index No) to Regulation (EC) No. co		Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
1,2,3-Propanetriol 56-81-5	50 - 100	No data available	200-289-5	No data available	-	-	-
Water 7732-18-5	35 - 50	No data available	231-791-2	No data available	ı	-	-
Sodium chloride 7647-14-5	0.3 - 0.99	No data available	231-598-3	No data available	ı	-	-
1,3-Propanediol, 2-amino-2-(hydroxy methyl)- 77-86-1	0.1 - 0.299	No data available	201-064-4	No data available	-	-	-
Nuclease, restriction endodeoxyribo-, PSTI 81295-32-1	0.01 - 0.099	No data available	279-734-0	No data available	-	-	-
Albumins, beef serum 94349-60-7	0.01 - 0.099	No data available	305-179-1	No data available	1	-	-
2,3-Butanediol, 1,4-dimercapto-, (R*,R*)- 3483-12-3	0.01 - 0.099	No data available	222-468-7	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	-	-	-
Ethylenediaminetetr aacetic acid 60-00-4	0.001 - 0.01	No data available	(607-429-00 -8) 200-449-4	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	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
		mg/kg	hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm
1,2,3-Propanetriol	12600	10000	Inhalation LC50 Rat	>2.75	Inhalation LC50 Rat
56-81-5			>2.75 mg/L 4 h		>2.75 mg/L 4 h
			(condensation aerosol,		(condensation
			Source: ECHA)		aerosol, Source:
			2.75		ECHA)

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Chemical name	Oral LD50 mg/kg		Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Water 7732-18-5	89838.9	No data available	No data available	No data available	No data available
Sodium chloride 7647-14-5	3000	10000	Inhalation LC50 Rat >42 mg/L 1 h (no deaths occurred, aerosol, Source: ECHA_API)	>42	Inhalation LC50 Rat >42 mg/L 1 h (no deaths occurred, aerosol, Source: ECHA_API)
1,3-Propanediol, 2-amino-2-(hydroxymethy I)- 77-86-1	5900	5000	No data available	No data available	No data available
Ethylenediaminetetraacet ic acid 60-00-4	2000	No data available	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=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.

Consult a doctor.

Skin contact In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and

water.

**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 doctors Treat symptomatically.

# **SECTION 5: Firefighting measures**

5.1. Extinguishing media

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.

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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	European Union	Austria	Belgium	Bulgaria	Croatia
1,2,3-Propanetriol	-	-	TWA: 10 mg/m <sup>3</sup>	-	TWA: 10 mg/m <sup>3</sup>
56-81-5					
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
1,2,3-Propanetriol	-	TWA: 10 mg/m <sup>3</sup>	-	TWA: 10 mg/m <sup>3</sup>	TWA: 20 mg/m <sup>3</sup>
56-81-5		Ceiling: 15 mg/m <sup>3</sup>			_

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# Pst I Enzyme

Chemical name		France	Germany TRGS	Germany DFG	Gr	eece	Hungary
1,2,3-Propanetriol 56-81-5	TWA	A: 10 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup> Peak: 400 mg/m <sup>3</sup>	TWA:	10 mg/m <sup>3</sup>	-
Chemical name		Ireland	Italy MDLPS	Italy AIDII	La	atvia	Lithuania
Sodium chloride 7647-14-5		-	-	-	TWA:	5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>
Chemical name	Lu	xembourg	Malta	Netherlands	Norway		Poland
1,2,3-Propanetriol 56-81-5		-	-	-	-		TWA: 10 mg/m <sup>3</sup>
Chemical name		Portugal	Romania	Slovakia	Slo	venia	Spain
1,2,3-Propanetriol 56-81-5	TWA	\: 10 mg/m <sup>3</sup>	-	TWA: 11 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup> STEL: 400 mg/m <sup>3</sup>		TWA: 10 mg/m <sup>3</sup>
Chemical name	Chemical name		weden	Switzerland		Uni	ted Kingdom
1,2,3-Propanetriol 56-81-5			-	TWA: 50 mg/m STEL: 100 mg/n			A: 10 mg/m <sup>3</sup> EL: 30 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) 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

Physical state Liquid

Appearanceaqueous solutionColourcolourlessOdourOdourless.

Odour threshold No information available

 Property
 Values
 Remarks
 • Method

 Melting point / freezing point
 No data available
 None known

Melting point / freezing point No data available
Boiling point / boiling range > 100 °C

**Flammability (solid, gas)**No data available
None known
None known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

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None known

Flash point > 160 °C

Autoignition temperature200None knownDecomposition temperatureNone known

H None known

**pH (as aqueous solution)**No data available
No information available
None known

Dynamic viscosity
Water solubility
No data available
Miscible in water

Solubility(ies)No data availableNone knownPartition coefficientNo data availableNone knownVapour pressureNo data availableNone knownRelative densityNo data availableNone known

Bulk density
Liquid Density
No data available
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 regards 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

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**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**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
1,2,3-Propanetriol	= 12600 mg/kg (Rat)	> 10 g/kg(Rabbit)	> 2.75 mg/L (Rat) 4 h
Water	> 90 mL/kg (Rat)	-	-
Sodium chloride	= 3 g/kg (Rat)	> 10000 mg/kg ( Rabbit )	> 42 mg/L (Rat)1 h
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	= 5900 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
Ethylenediaminetetraacetic acid	> 2000 mg/kg (Rat)	-	-

# 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 sensitisation** 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

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# 11.2.1. Endocrine disrupting properties

**Endocrine disrupting properties** This product does not contain any known or suspected endocrine disruptors.

### 11.2.2. Other information

Other adverse effects No information available.

# **SECTION 12: Ecological information**

# 12.1. Toxicity

**Ecotoxicity** Harmful to aquatic life.

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

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,2,3-Propanetriol	-	LC50: 51 - 57mL/L (96h,	-	-
		Oncorhynchus mykiss)		
Sodium chloride	-	LC50: 5560 - 6080mg/L	-	EC50: =1000mg/L (48h,
		(96h, Lepomis		Daphnia magna)
		macrochirus)		EC50: 340.7 - 469.2mg/L
		LC50: =12946mg/L (96h,		(48h, Daphnia magna)
		Lepomis macrochirus)		
		LC50: 6020 - 7070mg/L		
		(96h, Pimephales		
		promelas)		
		LC50: =7050mg/L (96h,		
		Pimephales promelas)		
		LC50: 6420 - 6700mg/L		
		(96h, Pimephales		
		promelas)		
		LC50: 4747 - 7824mg/L		
		(96h, Oncorhynchus		
		mykiss)		
Ethylenediaminetetraacet	EC50: =1.01mg/L (72h,	LC50: 34 - 62mg/L (96h,	-	EC50: =113mg/L (48h,
ic acid	Desmodesmus	Lepomis macrochirus)		Daphnia magna)
	subspicatus)	LC50: 44.2 - 76.5mg/L		
		(96h, Pimephales		
		promelas)		

# 12.2. Persistence and degradability

Persistence and degradability No information available.

### 12.3. Bioaccumulative potential

### Bioaccumulation

**Component Information** 

our portone in ormanion		
Chemical name	Partition coefficient	
1,2,3-Propanetriol	-1.75	

# 12.4. Mobility in soil

Mobility in soil No information available.

# 12.5. Results of PBT and vPvB assessment

# PBT and vPvB assessment

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### Pst I Enzyme

Chemical name	PBT and vPvB assessment
1,2,3-Propanetriol	The substance is not PBT / vPvB
Sodium chloride	The substance is not PBT / vPvB PBT assessment does
	not apply
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	The substance is not PBT / vPvB PBT assessment does
	not apply
Ethylenediaminetetraacetic acid	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**

I	ŀ	١.	T	/	١

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	<b>UN proper shipping name</b>	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 No information available

according to IMO instruments

#### 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 14.2 UN proper shipping name**Not regulated Not regulated

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14.3 Transport hazard class(es) Not regulated14.4 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	RG 78	-
7647-14-5		

### **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.

### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

	Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
ı	Ethylenediaminetetraacetic acid - 60-00-4	75.	-

### **Persistent Organic Pollutants**

Not applicable

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

Not applicable

EU - Plant Protection Products (1107/2009/EC)

Chemical name	EU - Plant Protection Products (1107/2009/EC)
Sodium chloride - 7647-14-5	Plant protection agent

Biocidal Products Regulation (EU) No 528/2012 (BPR)

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
Sodium chloride - 7647-14-5	Product-type 1: Human hygiene

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

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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) (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)

Australian 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)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision Note Significant changes throughout SDS. Review all sections

Revision date 05-Apr-2023

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

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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** 

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# 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 19-Apr-2023 Revision Number 1.1

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

1.1. Product identifier

Pure substance/mixture

Product Name 2X Restriction Buffer

Catalogue Number(s) 9702951

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

Mixture

Recommended use Laboratory chemicals

Uses advised against

No information available

1.3. Details of the supplier of the safety data sheet

<u>Corporate Headquarters</u>
Bio-Rad Laboratories Inc.

Manufacturer
Bio-Rad Laboratories, Life Science Group

1000 Alfred Nobel Drive

Hercules, CA 94547

Bio-read Eaboratories, Elle
2000 Alfred Nobel Drive
Hercules, CAlifornia 94547

USA USA

<u>Legal Entity / Contact Address</u> 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

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Revision date 19-Apr-2023

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

The product contains no substances which at their given concentration, are considered to be hazardous to health

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

#### **Acute Toxicity Estimate**

No information available

This product does not contain candidate substances of very high concern at a concentration >=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.

Consult a doctor.

**Skin contact** In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and

water.

**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

# **SECTION 5: Firefighting measures**

# 5.1. Extinguishing media

surrounding environment.

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**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.

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

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**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) 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.

No protective equipment is needed under normal use conditions. If exposure limits are Respiratory protection

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

**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

100 °C Boiling point / boiling range

Flammability (solid, gas) No data available None known None known Flammability Limit in Air

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Flash point No data available None known No data available **Autoignition temperature** None known **Decomposition temperature** None known рH None known

pH (as aqueous solution) No data available No information available

Kinematic viscosity No data available None known Dynamic viscosity No data available None known

Miscible in water Water solubility No data available Solubility(ies)

None known No data available Partition coefficient None known Vapour pressure No data available None known None known Relative density No data available

No data available **Bulk density** 

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None known

**Liquid Density** No data available No data available Vapour density

Particle characteristics

**Particle Size** No information available **Particle Size Distribution** No information available

9.2. Other information

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

Not applicable

#### 9.2.2. Other safety characteristics

No information available

# **SECTION 10: Stability and reactivity**

10.1. Reactivity

No information available. Reactivity

10.2. Chemical stability

Stability Stable under normal conditions.

**Explosion data** 

Sensitivity to mechanical impact None. Sensitivity to static discharge

10.3. Possibility of hazardous reactions

None under normal processing. Possibility of hazardous reactions

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

None known based on information supplied. Incompatible materials

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.

Eve 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.

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Acute toxicity

**Numerical measures of toxicity** 

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 sensitisation** 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** This product does not contain any known or suspected endocrine disruptors.

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.

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

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

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### 12.4. Mobility in soil

**Mobility in soil** No information available.

### 12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

#### 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**

# <u>IATA</u>

14.1	UN number or ID number	Not regulated
14.2	<b>UN proper shipping name</b>	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

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·

14.2 UN proper shipping name
14.3 Transport hazard class(es)
14.4 Packing group
14.5 Environmental hazards
Not regulated Not regulated 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

#### **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.

#### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances 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

<u>International Inventories</u> 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			

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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)

Australian 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)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision Note Reformatted and updated existing information

Revision date 19-Apr-2023

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** 

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# 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 05-Apr-2023 Revision Number 2.2

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

1.1. Product identifier

Product Name Sample Loading Dye

**Catalogue Number(s)** 1660401, 1660401EDU, 9702945

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 Manufacturer

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

USA

Bio-Rad Laboratories, Life Science Group 2000 Alfred Nobel Drive

Hercules, California 94547

USA

<u>Legal Entity / Contact Address</u> 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

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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	,	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Water 7732-18-5	50 - 100	No data available	231-791-2	No data available	-	-	-
1,2,3-Propanetriol 56-81-5	20 - 35	No data available	200-289-5	No data available	-	-	-
Phenol, 4,4-(3H-2,1-benzox athiol-3-ylidene)bis[ 2,6-dibromo-, S,S-dioxide, monosodium salt 34725-61-6	0.01 - 0.099	No data available	252-170-2	No data available	-	-	-
1,3-Benzenedisulfon ic acid, 4-[[4-(ethylamino)-3- methylphenyl][4-(eth ylimino)-3-methyl-2, 5-cyclohexadien-1-y lidene]methyl]-, monosodium salt 2650-17-1	0.099	No data available	220-167-5	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) STOT SE 3 (H335)	-	-	-

# 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

1	Chemical name	Oral LD50 mg/kg	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
			mg/kg	hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm
	Water 7732-18-5	89838.9	No data available	No data available	No data available	No data available
	1,2,3-Propanetriol 56-81-5	12600	10000	Inhalation LC50 Rat >2.75 mg/L 4 h (condensation aerosol, Source: ECHA) 2.75	>2.75	Inhalation LC50 Rat >2.75 mg/L 4 h (condensation aerosol, Source: ECHA)

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No.

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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.

Consult a doctor.

**Skin contact** In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and

water.

**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 doctors Treat symptomatically.

# **SECTION 5: Firefighting measures**

5.1. Extinguishing media

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

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**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	European Union	Austria	Belgium	Bul	lgaria	Croatia
1,2,3-Propanetriol	-	-	TWA: 10 mg/m <sup>3</sup>		-	TWA: 10 mg/m <sup>3</sup>
56-81-5						
Chemical name	Cyprus	Czech Republic	Denmark	Es	tonia	Finland
1,2,3-Propanetriol	-	TWA: 10 mg/m <sup>3</sup>	-	TWA: 1	10 mg/m <sup>3</sup>	TWA: 20 mg/m <sup>3</sup>
56-81-5		Ceiling: 15 mg/m <sup>3</sup>			_	
Chemical name	France	Germany TRGS	Germany DFG	Gr	eece	Hungary
1,2,3-Propanetriol	TWA: 10 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup>	TWA: 1	10 mg/m <sup>3</sup>	-
56-81-5	-	-	Peak: 400 mg/m <sup>3</sup>			
Chemical name	Luxembourg	Malta	Netherlands	No	rway	Poland
1,2,3-Propanetriol	-	-	-		-	TWA: 10 mg/m <sup>3</sup>
56-81-5						-
Chemical name	Portugal	Romania	Slovakia	Slo	venia	Spain
1,2,3-Propanetriol	TWA: 10 mg/m <sup>3</sup>	-	TWA: 11 mg/m <sup>3</sup>	TWA: 2	00 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>
56-81-5				STEL: 4	100 mg/m <sup>3</sup>	
Chemical name	Chemical name Swe		Switzerland		Uni	ted Kingdom
1,2,3-Propanetriol		-	TWA: 50 mg/m	3		A: 10 mg/m <sup>3</sup>
56-81-5			STEL: 100 mg/r	n <sup>3</sup>	STE	EL: 30 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)
Predicted No Effect Concentration

No information available.

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(PNEC)

8.2. Exposure controls

Personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

No protective equipment is needed under normal use conditions. If exposure limits are Respiratory protection

exceeded or irritation is experienced, ventilation and evacuation may be required.

None known

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

No information available. **Environmental exposure controls** 

# SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Liquid

**Appearance** aqueous solution

Colour blue Odour Odourless.

**Odour threshold** No information available

Property Values Remarks • Method None known

Melting point / freezing point No data available

> 100 °C Boiling point / boiling range

Flammability (solid, gas) No data available None known Flammability Limit in Air None known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Flash point No data available None known **Autoignition temperature** 392.78 °C None known **Decomposition temperature** None known

None known

pH (as aqueous solution) No data available No information available No data available Kinematic viscosity None known

Dynamic viscosity No data available Miscible in water Water solubility

Solubility(ies) No data available None known Partition coefficient No data available None known No data available Vapour pressure None known Relative density 1.0 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 regards to physical hazard classes

Not applicable

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## 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**

	Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ī	Water	> 90 mL/kg(Rat)	-	-

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1,2,3-Propanetriol	= 12600 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 2.75 mg/L (Rat)4 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 sensitisation** 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** This product does not contain any known or suspected endocrine disruptors.

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
1,2,3-Propanetriol	-	LC50: 51 - 57mL/L (96h,	-	-
		Oncorhynchus mykiss)		

# 12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

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**Component Information** 

Chemical name	Partition coefficient			
1,2,3-Propanetriol	-1.75			

# 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
1,2,3-Propanetriol	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**

<u>· </u>	
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

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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 Not regulated 14.3 Transport hazard class(es) 14.4 Packing group Not regulated Not applicable 14.5 Environmental hazards

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

#### **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.

#### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances 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 (Short Term Exposure Limit) STEL

Ceiling Maximum limit value Skin designation

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

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Calculation method
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)

Australian 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)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision Note Reformatted and updated existing information

Revision date 05-Apr-2023

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** 

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