# **KIT SAFETY DATA SHEET**



Kit Product Name Kit Catalog Number(s) Growth and Expression Reagent Kit 1665057, 1665057EDU, 1665056, 1665055, 1665055EDU

**Revision date** 

30-Mar-2022

# Kit Contents

Catalog Number(s)	Product Name
1451083, 9703463	Sterile Water
1660600, 1660403EDU, 1660600EDU, 1660472EDU, 1660472	LB Nutrient Agar Powder
1660407, 1660407EDU, 9702928	Ampicillin, lyophilized
1660412, 1660412EDU, 10011390	LB Broth, Capsules
9702999	Lysozyme Lyophilized
1610780, 9705962, 1662403, 1662403EDU, 9703380, 1610780EDU, 1610780XTU	10X PBS (Phosphate Buffer Saline)
10013088	IPTG Solution
10020781	BL21(DE3) with pDHFR, lyophilized
10020782, 10021656	Imidazole Stock Solution
10021397	20% Sterile Glucose

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Revision date 24-Aug-2021

SAFETY DATA SHEET

Revision Number 2.1

1. Identification Product identifier **Product Name** Sterile Water Other means of identification 1451083, 9703463 Catalog Number(s) Recommended use of the chemical and restrictions on use **Recommended use** Laboratory chemicals **Restrictions on use** No information available Details of the supplier of the safety data sheet **Corporate Headquarters** Manufacturer Address Legal Entity / Contact Address Bio-Rad Laboratories Inc. Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories (Canada) Ltd. 1000 Alfred Nobel Drive 2000 Alfred Nobel Drive 1329 Meyerside Drive Hercules, CA 94547 Hercules, California 94547 Mississauga, ON L5T 1C9 USA USA Canada **Technical Service** 1-800-361-1808 support@bio-rad.com Emergency telephone number 24 Hour Emergency Phone Number CHEMTREC Canada:1 (800) 424-9300

#### 2. Hazard(s) identification

#### **Classification**

Not classified

Label elements

#### **Hazard statements**

Not classified.

Other information

#### 3. Composition/information on ingredients

Substance

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Water	7732-18-5	80 - 100	-	

4. First-aid measures		
Description of first aid measures		
General advice	No hazards which require special first aid measures.	
Inhalation	Remove to fresh air.	
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.	
Skin contact	Wash skin with soap and water.	
Ingestion	Rinse mouth thoroughly with water.	
Most important symptoms and effects, both acute and delayed		
Symptoms	No information available.	
Indication of any immediate medical attention and special treatment needed		
Note to physicians	Treat symptomatically.	

# 5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.
Specific hazards arising from the chemical	None known.
Explosion data Sensitivity to mechanical impac Sensitivity to static discharge	t None. None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

# 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures		
Personal precautions	See section 8 for more information.	
Methods and material for containment and cleaning up		
Methods for containment	Prevent further leakage or spillage if safe to do so.	
Methods for cleaning up	Pick up and transfer to properly labeled containers.	

# 7. Handling and storage

#### Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

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

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

# 8. Exposure controls/personal protection

#### 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.	
Appropriate engineering controls		
Engineering controls	Showers Eyewash stations Ventilation systems.	
Individual protection measures, such as personal protective equipment		
Eye/face protection	Wear safety glasses with side shields (or goggles).	
Hand protection	Wear suitable gloves.	
Skin and body protection	Wear suitable protective clothing.	
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.	
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.	

# 9. Physical and chemical properties

Information on basic physical and chemical properties				
Physical state	Liquid			
Appearance	clear liquid			
Color	colorless			
Odor	Odorless			
Odor threshold	No information available			
Property	Values	Remarks • Method		
рН				
Melting point / freezing point	0 °C / 32 °F			
Boiling point / boiling range	100 °C / 212 °F			
Flash point	No data available	None known		
Evaporation rate	No data available	None known		
Flammability (solid, gas)	No data available	None known		
Flammability Limit in Air		None known		
Upper flammability or explosive limits	No data available			

Lower flammability or explosive	No data available	
limits	NI 17 111	N1 1
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Miscible in water	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Other information		
Explosive properties	Not applicable.	
Oxidizing properties	Not applicable.	
Softening point	Not applicable	
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	

# 10. Stability and reactivity

Reactivity	No information available.	
Chemical stability	Stable under normal conditions.	
Possibility of hazardous reactions	None under normal processing.	
Conditions to avoid	None known based on information supplied.	
Incompatible materials	None known based on information supplied.	
Hazardous decomposition products None known based on information supplied.		

# 11. Toxicological information

#### Information on likely routes of exposure

#### **Product Information**

Inhalation	Specific test data for the substance or mixture is not available.	
Eye contact	Specific test data for the substance or mixture is not available.	
Skin contact	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
Water	> 90 mL/kg (Rat)	-	-
7732-18-5	-		

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

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

# 12. Ecological information

Ecotoxicity	The environmental impact of this product has not been fully investigated.
Persistence and degradability	No information available.
Bioaccumulation	No information available.
Other adverse effects	No information available.

# 13. Disposal considerations

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.

# 14. Transport information

TDG	Not regulated
DOT	Not regulated
<u>MEX</u>	Not regulated
IATA	Not regulated
IMDG_	Not regulated

#### **15. Regulatory information** Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Regulations

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

#### International Inventories

Contact supplier for inventory compliance status

16. Other information					
NFPA	Health hazards 0	Flammability	0	Instability 0	Physical and chemical
HMIS	Health hazards 0	Flammability	0	Physical hazards 0	properties - Personal protection X
Key or legend to abbre	eviations and acronyms	used in the safe	ty data sl	neet	
TWA TW/					
TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)					
Prepared By	Bio-Rad L	aboratories, Envi	ronmental	Health and Safety.	
Revision date	24-Aug-20	)21			
Revision Note       Reformatted and updated existing information. <u>Disclaimer</u> 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,					

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.



Revision date 19-Jan-2022

# SAFETY DATA SHEET

Revision Number 1.1

1. Identification		
Product identifier		
Product Name	LB Nutrient Agar Powder	
Other means of identification		
Catalog Number(s)	1660600, 1660403EDU, 1660600EDU, 16604	72EDU, 1660472
Recommended use of the chemica	and restrictions on use	
Recommended use	Laboratory chemicals	
Restrictions on use	No information available	
Details of the supplier of the safety	data sheet	
<u>Corporate Headquarters</u> Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive Hercules, CA 94547 USA	Manufacturer Address Bio-Rad Laboratories, Life Science Group 2000 Alfred Nobel Drive Hercules, California 94547 USA	Legal Entity / Contact Address Bio-Rad Laboratories (Canada) Ltd. 1329 Meyerside Drive Mississauga, ON L5T 1C9 Canada
Technical Service	1-800-361-1808 support@bio-rad.com	
Emergency telephone number		
24 Hour Emergency Phone Numbe	r CHEMTREC Canada:1 (800) 424-9300	

# 2. Hazard(s) identification

#### **Classification**

Not classified

Label elements

#### **Hazard statements**

Not classified.

Other information

# 3. Composition/information on ingredients

Substance

Not applicable.

#### Mixture

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

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Sodium chloride	7647-14-5	10 - 30	-	

4. First-aid measures		
Description of first aid measures		
General advice	No hazards which require special first aid measures.	
Inhalation	Remove to fresh air.	
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.	
Skin contact	Wash skin with soap and water.	
Ingestion	Rinse mouth thoroughly with water.	
Most important symptoms and effects, both acute and delayed		
Symptoms	No information available.	
Indication of any immediate medical attention and special treatment needed		
Note to physicians	Treat symptomatically.	

# 5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.
Specific hazards arising from the chemical	None known.
Explosion data Sensitivity to mechanical impac Sensitivity to static discharge	t None. None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

# 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

**Personal precautions** 

See section 8 for more information.

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

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

# 7. Handling and storage Precautions for safe handling Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Conditions for safe storage, including any incompatibilities Storage Conditions Store according to product and label instructions.

# 8. Exposure controls/personal protection

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.	
Appropriate engineering controls		
Engineering controls	Showers Eyewash stations Ventilation systems.	
Individual protection measures, such as personal protective equipment		
Eye/face protection	Wear safety glasses with side shields (or goggles).	
Hand protection	Wear suitable gloves.	
Skin and body protection	Wear suitable protective clothing.	
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.	
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.	

# 9. Physical and chemical properties

Information on basic physical and chemical properties				
Physical state	Solid			
Appearance	Powder			
Color	white			
Odor	Odorless			
Odor threshold	No information available			
Property	<u>Values</u>	Remarks • Method		
рН		None known		
Melting point / freezing point	No data available	None known		
Boiling point / boiling range	No data available	None known		

Flack naint	No data available	None known
Flash point	No data available	None known
Evaporation rate		
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		
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Soluble in water	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
, ,		
Other information		
Explosive properties	Not applicable.	
Oxidizing properties	Not applicable.	
Softening point	Not applicable	
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	
	not applicable	

# 10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

# 11. Toxicological information

#### Information on likely routes of exposure

Product	Information

Inhalation	Specific test data for the substance or mixture is not available.	
Eye contact	Specific test data for the substance or mixture is not available.	
Skin contact	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) 5,398.20 mg/kg

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50		
Sodium chloride	= 3 g/kg (Rat)	> 10000 mg/kg (Rabbit)	> 42 mg/L (Rat)1 h		
7647-14-5					
Delayed and immediate effects as well as chronic effects from short and long-term exposure					

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

Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

# 12. Ecological information

#### Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium chloride 7647-14-5	-	LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: 6420 - 6700mg/L (96h, Pimephales promelas) LC50: =12946mg/L (96h, Lepomis macrochirus) LC50: =7050mg/L (96h, Pimephales promelas)	-	EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) EC50: =1000mg/L (48h, Daphnia magna)

#### Persistence and degradability

No information available.

#### **Bioaccumulation**

No information available.

# Other adverse effects

No information available.

# 13. Disposal considerations

#### 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.

# 14. Transport information

TDG	Not regulated
DOT	Not regulated
MEX	Not regulated
	Not regulated
IMDG	Not regulated

#### 15. Regulatory information

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

International Regulations

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

#### **International Inventories**

Contact supplier for inventory compliance status

16. Other info	ormation			
NFPA	Health hazards 0	Flammability 0	Instability 0	Physical and chemical properties -
HMIS	Health hazards 0	Flammability 0	Physical hazards 0	Personal protection X
Key or legend to a	abbreviations and acronyms u	used in the safety data sh	eet	
	B: EXPOSURE CONTROLS/PE			
TWA Ceiling	TWA (time-weighted average) Maximum limit value	STEL *	STEL (Short Term Skin designation	Exposure Limit)
Key literature references and sources for data used to compile the SDS         Agency for Toxic Substances and Disease Registry (ATSDR)         U.S. Environmental Protection Agency ChemView Database         European Food Safety Authority (EFSA)         EPA (Environmental Protection Agency)         Acute Exposure Guideline Level(s) (AEGL(s))         U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act         U.S. Environmental Protection Agency High Production Volume Chemicals         Food Research Journal				

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS) NIOSH (National Institute for Occupational Safety and Health) National Library of Medicine's ChemID Plus (NLM CIP) National Library of Medicine's PubMed database (NLM PUBMED) National Toxicology Program (NTP) New Zealand's Chemical Classification and Information Database (CCID) Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development High Production Volume Chemicals Program Organization for Economic Co-operation and Development Screening Information Data Set RTECS (Registry of Toxic Effects of Libraria Substances) World Health Organization Prepared By Revision date libraria Set State S

Revision Note Significant changes throughout SDS. Review all sections.

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** 



Revision date 24-Feb-2021

# SAFETY DATA SHEET

Revision Number 2

1. Identification			
Product identifier			
Product Name	Ampicillin, lyophilized		
Other means of identification			
Catalog Number(s)	1660407, 1660407EDU, 9702928		
Recommended use of the chemical	and restrictions on use		
Recommended use	Laboratory chemicals		
Restrictions on use	No information available		
Details of the supplier of the safety data sheet			
<u>Corporate Headquarters</u> Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive Hercules, CA 94547 USA	<u>Manufacturer Address</u> Bio-Rad Laboratories, Life Science Group 2000 Alfred Nobel Drive Hercules, California 94547 USA	Legal Entity / Contact Address Bio-Rad Laboratories (Canada) Ltd. 1329 Meyerside Drive Mississauga, ON L5T 1C9 Canada	
Technical Service	1-800-361-1808 support@bio-rad.com		
Emergency telephone number			
24 Hour Emorgonov Phone Number	CHEMTREC Canada:1 (800) 424 0200		

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

# 2. Hazard(s) identification

#### **Classification**

Respiratory sensitization	Category 1
Skin sensitization	Category 1A

#### Label elements

#### Danger

#### **Hazard statements**

May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause an allergic skin reaction



#### Ampicillin, lyophilized

#### **Precautionary Statements - Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray In case of inadequate ventilation wear respiratory protection Contaminated work clothing should not be allowed out of the workplace Wear protective gloves/protective clothing/eye protection/face protection

#### **Precautionary Statements - Response**

#### Skin

IF ON SKIN: Wash with plenty of water and soap If skin irritation or rash occurs: Get medical advice/attention Take off contaminated clothing and wash it before reuse

#### Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing If experiencing respiratory symptoms: Call a POISON CENTER or doctor

#### **Precautionary Statements - Disposal**

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

#### Other information

#### 3. Composition/information on ingredients

#### Substance

Not applicable.

#### Mixture

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Sodium [2S-[2.alpha.,5.alpha.,6.beta.(S*)]]-6-(aminophenyla cetamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3. 2.0]heptane-2-carboxylate	69-52-3	80 - 100	-	

#### 4. First-aid measures

#### **Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	May produce an allergic reaction. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.

	Get immediate medical advice/attention.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information.
Most important symptoms and effect	cts, both acute and delayed
Symptoms	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives.
Indication of any immediate medica	I attention and special treatment needed
Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
5. Fire-fighting measures	

Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
Explosion data Sensitivity to mechanical impact Sensitivity to static discharge	None. None.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact. May cause sensitization by skin contact.
Unsuitable extinguishing media	No information available.
Suitable Extinguishing Media	surrounding environment.

#### 6. Accidental release measures

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

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.	
Other information	Refer to protective measures listed in Sections 7 and 8.	
Methods and material for containment and cleaning up		
Methods for containment	Prevent further leakage or spillage if safe to do so.	
Methods for cleaning up	Pick up and transfer to properly labeled containers.	

#### 7. Handling and storage

#### Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse.

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

Hand protection

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children. Store according to product and label instructions.
8. Exposure controls/perso	onal protection
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.
Appropriate engineering controls	
Engineering controls	Showers Eyewash stations Ventilation systems.
Individual protection measures, suc	ch as personal protective equipment
Eye/face protection	Wear safety glasses with side shields (or goggles).

Skin and body protectionWear suitable protective clothing.

Wear suitable gloves.

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

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

# 9. Physical and chemical properties

Information on basic physical and o Physical state Appearance Color Odor Odor	themical properties Solid crystalline light yellow Odorless No information available	
Property pH Melting point / freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability or explosive limits Lower flammability or explosive	Values 240 °C / 464 °F No data available No data available No data available No data available No data available	Remarks • Method None known None known None known None known None known
limits Vapor pressure Vapor density Relative density Water solubility Solubility in other solvents	No data available No data available No data available Soluble in water No data available	None known None known None known None known

Partition coefficient Autoignition temperature Decomposition temperature Kinematic viscosity	No data available No data available No data available	None known None known None known None known
Dynamic viscosity	No data available	None known
Other information Explosive properties	Not applicable.	
Oxidizing properties	Not applicable.	
Softening point	Not applicable	
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	

# 10. Stability and reactivity

Reactivity	No information available.	
Chemical stability	Stable under normal conditions.	
Possibility of hazardous reactions	None under normal processing.	
Conditions to avoid	None known based on information supplied.	
Incompatible materials	None known based on information supplied.	
Hazardous decomposition products None known based on information supplied.		

# 11. Toxicological information

#### Information on likely routes of exposure

Product Information		
Inhalation	Specific test data for the substance or mixture is not available. May cause sensitization in susceptible persons. (based on components).	
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. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause sensitization by skin contact.	
Ingestion	Specific test data for the substance or mixture is not available. May cause additional affects as listed under "Inhalation".	
Symptoms related to the physical, chemical and toxicological characteristics		
Symptoms	Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives.	

#### Acute toxicity

Numerical measures of toxicity

#### **Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium	> 5314 mg/kg (Rat)	-	-
[2S-[2.alpha.,5.alpha.,6.beta.(S*			
)]]-6-(aminophenylacetamido)-3,			

3-dimethyl-7-oxo-4-thia-1-azabi cyclo[3.2.0]heptane-2-carboxyla		
te		
69-52-3		

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

Skin corrosion/irritation	Based on available data, the classification criteria are not met.	
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.	
Respiratory or skin sensitization	May cause sensitization by inhalation. May cause sensitization by skin contact.	
Germ cell mutagenicity	Based on available data, the classification criteria are not met.	
Carcinogenicity	Based on available data, the classification criteria are not met.	

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Sodium	-	Group 3	-	-
[2S-[2.alpha.,5.alpha.,6.b eta.(S*)]]-6-(aminophenyl acetamido)-3,3-dimethyl- 7-oxo-4-thia-1-azabicyclo				
[3.2.0]heptane-2-carboxyl				
ate				
69-52-3				

#### Legend

# IARC (International Agency for Research on Cancer) Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

# 12. Ecological information

Ecotoxicity	The environmental impact of this product has not been fully investigated.
Persistence and degradability Bioaccumulation	No information available. No information available.
Other adverse effects	No information available.

13. Disposal considerations		
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.	

# 14. Transport information

TDG	Not regulated
DOT	Not regulated
MEX	Not regulated
IATA	Not regulated
IMDG	Not regulated

# 15. Regulatory information

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

#### **International Regulations**

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

#### **International Inventories**

Contact supplier for inventory compliance status

16. Other information				
NFPA	Health hazards 2	Flammability 0	Instability 0	Physical and chemical properties -
HMIS Chronic Hazard Star	Health hazards 2 * Legend *= Chronic	Flammability 0 Health Hazard	Physical hazards 0	Personal protection X
Key or legend to a	bbreviations and acronyms	used in the safety data	sheet	
LegendSection 8: EXPOSURE CONTROLS/PERSONAL PROTECTIONTWATWA (time-weighted average)STELCeilingMaximum limit value*Skin designation				
Agency for Toxic S U.S. Environmenta European Food Sa EPA (Environmenta Acute Exposure Gu U.S. Environmenta U.S. Environmenta Food Research Jou Hazardous Substar International Unifor Japan GHS Classif Australia National I NIOSH (National In National Library of National Library of National Toxicology New Zealand's Che	nce Database m Chemical Information Datab ication ndustrial Chemicals Notification stitute for Occupational Safety Medicine's ChemID Plus (NLM Medicine's PubMed database	ry (ATSDR) v Database secticide, Fungicide, and uction Volume Chemicals vase (IUCLID) n and Assessment Scher and Health) I CIP) (NLM PUBMED) nation Database (CCID)	Rodenticide Act	15

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

Prepared By	Bio-Rad Laboratories, Environmental Health and Safety.
Revision date	24-Feb-2021
Revision Note	SDS sections updated. 1. 2.

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



Revision date 08-Mar-2021

SAFETY DATA SHEET

Revision Number 1

1. Identification			
Product identifier			
Product Name	LB Broth, Capsules		
Other means of identification			
Catalog Number(s)	1660412, 1660412EDU, 10011390		
Recommended use of the chemical and restrictions on use			
Recommended use	Laboratory chemicals		
Restrictions on use	No information available		
Details of the supplier of the safety data sheet			
Corporate Headquarters Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive Hercules, CA 94547 USA	<u>Manufacturer Address</u> Bio-Rad Laboratories, Life Science Group 2000 Alfred Nobel Drive Hercules, California 94547 USA	Legal Entity / Contact Address Bio-Rad Laboratories (Canada) Ltd. 1329 Meyerside Drive Mississauga, ON L5T 1C9 Canada	
Technical Service	1-800-361-1808 support@bio-rad.com		
Emergency telephone number			
24 Hour Emergency Phone Number	CHEMTREC Canada:1 (800) 424-9300		

# 2. Hazard(s) identification

#### **Classification**

Not classified

#### Label elements

#### **Hazard statements**

Not classified.

Other information

May be harmful if swallowed.

#### **Substance**

Not applicable.

#### Mixture

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

#### 4. First-aid measures

Description of first aid measures		
General advice	No hazards which require special first aid measures.	
Inhalation	Remove to fresh air.	
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.	
Skin contact	Wash skin with soap and water.	
Ingestion	Rinse mouth thoroughly with water.	
Most important symptoms and effects, both acute and delayed		
Symptoms	No information available.	
Indication of any immediate medical attention and special treatment needed		
Note to physicians	Treat symptomatically.	

## 5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	
Unsuitable extinguishing media	No information available.	
Specific hazards arising from the chemical	None known.	
Explosion data Sensitivity to mechanical impact None. Sensitivity to static discharge None.		
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.	

# 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions See section 8 for more information.

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

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

Methods for cleaning up

Pick up and transfer to properly labeled containers.

#### 7. Handling and storage

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

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

#### 8. Exposure controls/personal protection

#### 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.

#### Appropriate engineering controls

Engineering controls	Showers	
	Eyewash stations	
	Ventilation systems.	

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

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

# 9. Physical and chemical properties

Physical state	Solid	
Appearance	tablet	
Color	light brown	
Odor	sweet	
Odor threshold	No information available	
Property	Values	Remarks • Method
pH Molting point (freezing point	No data available	None known None known
Melting point / freezing point		
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known

Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Soluble in water	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Other information		
Explosive properties	Not applicable.	
Oxidizing properties	Not applicable.	
Softening point	Not applicable	
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	

# 10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

# 11. Toxicological information

#### Information on likely routes of exposure

**Product Information** 

Specific test data for the substance or mixture is not available.
Specific test data for the substance or mixture is not available.
Specific test data for the substance or mixture is not available.
May be harmful if swallowed.

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 documentATEmix (oral)3,000.00 mg/kgATEmix (dermal)10,010.00 mg/kg

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

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

# 12. Ecological information

#### Ecotoxicity

Persistence and degradability	No information available.
Bioaccumulation	No information available.
Other adverse effects	No information available.

# 13. Disposal considerations

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.

# 14. Transport information

TDG	Not regulated
DOT	Not regulated
<u>MEX</u>	Not regulated
IATA	Not regulated
IMDG	Not regulated

# 15. Regulatory information

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

#### International Regulations

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

#### International Inventories

Contact supplier for inventory compliance status

16. Other information						
NFPA	Health hazards	0	Flammability	0	Instability 0	Physical and chemical properties -
<u>HMIS</u>	Health hazards	1	Flammability	0	Physical hazards 0	Personal protection X
Key or legend to abb	previations and acro	nyms ι	used in the safe	ty data sh	<u>eet</u>	
	VA (time-weighted ave		S	STEL		Exposure Limit)
Ceiling       Maximum limit value       *       Skin designation         Key literature references and sources for data used to compile the SDS       Agency for Toxic Substances and Disease Registry (ATSDR)         U.S. Environmental Protection Agency ChemView Database       European Food Safety Authority (EFSA)         EPA (Environmental Protection Agency)       Acute Exposure Guideline Level(s) (AEGL(s))         U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act       U.S. Environmental Protection Agency High Production Volume Chemicals         Food Research Journal       Hazardous Substance Database       International Uniform Chemical Information Database (IUCLID)         Japan GHS Classification       Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)         NIOSH (National Institute for Occupational Safety and Health)       National Library of Medicine's ChemID Plus (NLM CIP)         National Library of Medicine's ChemID Plus (NLM CIP)       National Library of Medicine's ChemID Plus (NLM PUBMED)         National Sciel Coronmic Co-operation and Development Environment, Health, and Safety Publications       Organization for Economic Co-operation and Development Environment, Health, and Safety Publications         Organization for Economic Co-operation and Development High Production Volume Chemicals Program Organization for Economic Co-operation and Development Screening Information Data Set       Receine Streening Information Data Set         Word Health Organization       Fernical Classific						
Prepared By	Bio-	Rad La	boratories, Envi	ronmental	Health and Safety.	
Revision date	08-N	/lar-202	21			
Revision Note SDS sections updated. 1. 2. <u>Disclaimer</u> The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the						

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.



Revision date 24-Feb-2021

SAFETY DATA SHEET

**Revision Number** 2

1. Identification					
Product identifier					
Product Name	Lysozyme Lyophilized				
Other means of identification					
Catalog Number(s)	9702999				
Recommended use of the chemical	and restrictions on use				
Recommended use	Laboratory chemicals				
Restrictions on use	No information available				
Details of the supplier of the safety	data sheet				
Corporate Headquarters Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive Hercules, CA 94547 USA	<u>Manufacturer Address</u> Bio-Rad Laboratories, Life Science Group 2000 Alfred Nobel Drive Hercules, California 94547 USA	Legal Entity / Contact Address Bio-Rad Laboratories (Canada) Ltd. 1329 Meyerside Drive Mississauga, ON L5T 1C9 Canada			
Technical Service	1-800-361-1808 support@bio-rad.com				
Emergency telephone number					
24 Hour Emergency Phone Number	CHEMTREC Canada:1 (800) 424-9300				

# 2. Hazard(s) identification

#### **Classification**

Respiratory sensitization

Category 1

#### Label elements

Danger

**Hazard statements** 

May cause allergy or asthma symptoms or breathing difficulties if inhaled



In case of inadequate ventilation wear respiratory protection

#### **Precautionary Statements - Response**

#### Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing If experiencing respiratory symptoms: Call a POISON CENTER or doctor

#### **Precautionary Statements - Disposal**

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

#### Other information

4. First-aid measures

#### Substance

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Lysozyme	9001-63-2	80 - 100	-	

Description of first aid measures		
General advice	Show this safety data sheet to the doctor in attendance.	
Inhalation	May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.	
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.	
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.	
Ingestion	May produce an allergic reaction. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.	
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information.	
Most important symptoms and effects, both acute and delayed		
Symptoms	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives.	
Indication of any immediate medical attention and special treatment needed		
Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.	

#### 5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	
Unsuitable extinguishing media	No information available.	
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact.	
Explosion data Sensitivity to mechanical impact None. Sensitivity to static discharge None.		
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.	

#### 6. Accidental release measures

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

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.	
Other information	Refer to protective measures listed in Sections 7 and 8.	
Methods and material for containment and cleaning up		
Methods for containment	Prevent further leakage or spillage if safe to do so.	
Methods for cleaning up	Pick up and transfer to properly labeled containers.	

#### 7. Handling and storage

#### Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.

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

Storage ConditionsKeep containers tightly closed in a dry, cool and well-ventilated place. Store locked up.<br/>Keep out of the reach of children. Store according to product and label instructions.

#### 8. Exposure controls/personal protection

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.

Engineering controls	Showers Eyewash stations Ventilation systems.		
Individual protection measures, such as personal protective equipment			
Eye/face protection	Wear safety glasses with side shields (or goggles).		
Hand protection	Wear suitable gloves.		
Skin and body protection	Wear suitable protective clothing.		
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.		
General hygiene considerations	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.		

# 9. Physical and chemical properties

#### Information on basic physical and chemical properties

Physical state	Solid	
Appearance	Powder	
Color	white	
Odor	Odorless	
Odor threshold	No information available	
-		<b>-</b> . <b>.</b>
Property	Values	Remarks • Method
pH	Ne dete evellete	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive	No data available	
limits		
Lower flammability or explosive	No data available	
limits		
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Soluble in water	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Other information		
Explosive properties	Not applicable.	
Oxidizing properties	Not applicable.	
Softening point	Not applicable	
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	

# 10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.
	New your based on information or the

Hazardous decomposition products None known based on information supplied.

# 11. Toxicological information

#### Information on likely routes of exposure

Product Information		
Inhalation	Specific test data for the substance or mixture is not available. May cause sensitization in susceptible persons. (based on components).	
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. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).	
Ingestion	Specific test data for the substance or mixture is not available. May cause additional affects as listed under "Inhalation".	
Symptoms related to the physical, chemical and toxicological characteristics		
Symptoms	Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing.	

#### 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	Based on available data, the classification criteria are not met.	
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.	
Respiratory or skin sensitization	May cause sensitization by inhalation.	
Germ cell mutagenicity	Based on available data, the classification criteria are not met.	
Carcinogenicity	Based on available data, the classification criteria are not met.	
Reproductive toxicity	Based on available data, the classification criteria are not met.	
STOT - single exposure	Based on available data, the classification criteria are not met.	
STOT - repeated exposure	Based on available data, the classification criteria are not met.	
Aspiration hazard	Based on available data, the classification criteria are not met.	

# 12. Ecological information

Ecotoxicity	The environmental impact of this product has not been fully investigated.
Persistence and degradability Bioaccumulation	No information available. No information available.
Other adverse effects	No information available.

# 13. Disposal considerations

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.

# 14. Transport information

TDG	Not regulated
DOT	Not regulated
MEX	Not regulated
	Not regulated
IMDG	Not regulated

## 15. Regulatory information

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

#### **International Regulations**

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

#### International Inventories

Contact supplier for inventory compliance status

16. Other information								
<u>NFPA</u>	Health hazards	2	Flammability	0	Instability 0	Physical and chemical properties -		
HMIS Chronic Hazard Star Lege	Health hazards 2 end *= Ch		Flammability	0	Physical hazards 0	Personal protection X		

Key or legend to abbreviations and acronyms used in the safety data sheet								
Legend Section 8 TWA Ceiling	8: EXPOSURE CON TWA (time-weighte Maximum limit valu	<b>U</b> ,	OTECTION STEL *	STEL (Short Term Exposure Limit) Skin designation				
Agency for Toxic S U.S. Environmenta European Food Sa EPA (Environmenta Acute Exposure Gi U.S. Environmenta U.S. Environmenta Food Research Jo Hazardous Substa International Unifor Japan GHS Classi Australia National In NIOSH (National In National Library of National Library of National Toxicolog New Zealand's Che Organization for Ed Organization for Ed	Substances and Dise al Protection Agency afety Authority (EFS/ cal Protection Agency uideline Level(s) (AE al Protection Agency urnal nce Database rm Chemical Informa fication Industrial Chemicals nstitute for Occupation Medicine's PubMed y Program (NTP) emical Classification conomic Co-operation conomic Co-operation conomic Co-operation conomic Co-operation for Toxic Effects of Classification	y) EGL(s)) Federal Insecticide, Fung High Production Volume ation Database (IUCLID) Notification and Assessn onal Safety and Health)	gicide, and Rodentic Chemicals nent Scheme (NICN D) se (CCID) ronment, Health, and Production Volume	AS) d Safety Publications Chemicals Program				
Prepared By		Bio-Rad Laboratories, Ei	nvironmental Health	and Safety.				
Revision date		24-Feb-2021						
			t to the best of ou	v all sections. r knowledge, information and belief or safe handling, use, processing, s				

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



Revision date 30-Dec-2021

# SAFETY DATA SHEET

Revision Number 1.1

1. Identification		
Product identifier		
Product Name	10X PBS (Phosphate Buffer Saline)	
Other means of identification		
Catalog Number(s)	1610780, 9705962, 1662403, 1662403EDU, 9	9703380, 1610780EDU, 1610780XTU
Recommended use of the chemical	and restrictions on use	
Recommended use	Laboratory chemicals	
Restrictions on use	No information available	
Details of the supplier of the safety data sheet		
Corporate Headquarters Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive Hercules, CA 94547 USA	<u>Manufacturer Address</u> Bio-Rad Laboratories, Life Science Group 2000 Alfred Nobel Drive Hercules, California 94547 USA	Legal Entity / Contact Address Bio-Rad Laboratories (Canada) Ltd. 1329 Meyerside Drive Mississauga, ON L5T 1C9 Canada
Technical Service	1-800-361-1808 support@bio-rad.com	
Emergency telephone number		
24 Hour Emergency Phone Number	CHEMTREC Canada:1 (800) 424-9300	

# 2. Hazard(s) identification

## **Classification**

Not classified

Label elements

## **Hazard statements**

Not classified.

Other information

# 3. Composition/information on ingredients

Substance

Not applicable.

## Mixture

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

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Sodium chloride	7647-14-5	5 - 10	-	

4. First-aid measures		
Description of first aid measures		
General advice	No hazards which require special first aid measures.	
Inhalation	Remove to fresh air.	
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.	
Skin contact	Wash skin with soap and water.	
Ingestion	Rinse mouth thoroughly with water.	
Most important symptoms and effects, both acute and delayed		
Symptoms	No information available.	
Indication of any immediate medical attention and special treatment needed		
Note to physicians	Treat symptomatically.	

# 5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.
Specific hazards arising from the chemical	None known.
Explosion data Sensitivity to mechanical impac Sensitivity to static discharge	t None. None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

# 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

See section 8 for more information.

## Methods and material for containment and cleaning up

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

# 7. Handling and storage Precautions for safe handling Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Conditions for safe storage, including any incompatibilities Storage Conditions Store according to product and label instructions.

# 8. Exposure controls/personal protection

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.	
Appropriate engineering controls		
Engineering controls	Showers Eyewash stations Ventilation systems.	
Individual protection measures, such as personal protective equipment		
Eye/face protection	Wear safety glasses with side shields (or goggles).	
Hand protection	Wear suitable gloves.	
Skin and body protection	Wear suitable protective clothing.	
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.	
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.	

# 9. Physical and chemical properties

Information on basic ph	ysical and chemical properties
Physical state	Liquid

Appearance	aqueous solution
Color	colorless
Odor	Odorless
Odor threshold	No information available

Property_	Values
pH	7.4
Melting point / freezing point	No data available
Boiling point / boiling range	No data available

## Remarks • Method

None known None known

## 10X PBS (Phosphate Buffer Saline)

Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air	No data available No data available No data available	None known None known None known None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Miscible in water	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Other information		
Explosive properties	Not applicable.	
Oxidizing properties	Not applicable.	
Softening point	Not applicable	
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	

# 10. Stability and reactivity

Reactivity	No information available.	
Chemical stability	Stable under normal conditions.	
Possibility of hazardous reactions	None under normal processing.	
Conditions to avoid	None known based on information supplied.	
Incompatible materials	None known based on information supplied.	
Hazardous decomposition products None known based on information supplied.		

# 11. Toxicological information

## Information on likely routes of exposure

Product	Information
---------	-------------

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	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, or	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) 34,482.7586 mg/kg

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium chloride	= 3 g/kg (Rat)	> 10000 mg/kg (Rabbit)	> 42 mg/L (Rat)1 h
7647-14-5			

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

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

# 12. Ecological information

## Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium chloride 7647-14-5	-	LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: 6420 - 6700mg/L (96h, Pimephales promelas) LC50: =12946mg/L (96h, Lepomis macrochirus) LC50: =7050mg/L (96h, Pimephales promelas)	-	EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) EC50: =1000mg/L (48h, Daphnia magna)

## Persistence and degradability

No information available.

#### **Bioaccumulation**

No information available.

# Other adverse effects

No information available.

# 13. Disposal considerations

## 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.

# 14. Transport information

TDG	Not regulated
DOT	Not regulated
MEX	Not regulated
IATA	Not regulated
IMDG	Not regulated

## 15. Regulatory information

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

## International Regulations

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

## **International Inventories**

Hazardous Substance Database

Japan GHS Classification

International Uniform Chemical Information Database (IUCLID)

Contact supplier for inventory compliance status

16. Other info	ormation			
<u>NFPA</u> HMIS	Health hazards 0 Health hazards 0	Flammability 0 Flammability 0	Instability 0 Physical hazards 0	Physical and chemical properties - Personal protection X
Key or legend to	abbreviations and acronyms ι	used in the safety data sh	eet	
<b>Legend Section</b> TWA Ceiling	8: EXPOSURE CONTROLS/PE TWA (time-weighted average) Maximum limit value	RSONAL PROTECTION STEL *	STEL (Short Term Skin designation	Exposure Limit)
Key literature references and sources for data used to compile the SDS Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database European Food Safety Authority (EFSA) EPA (Environmental Protection Agency) Acute Exposure Guideline Level(s) (AEGL(s)) U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal				

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)<br/>NIOSH (National Institute for Occupational Safety and Health)<br/>National Library of Medicine's ChemID Plus (NLM CIP)<br/>National Library of Medicine's PubMed database (NLM PUBMED)<br/>National Toxicology Program (NTP)<br/>New Zealand's Chemical Classification and Information Database (CCID)<br/>Organization for Economic Co-operation and Development Environment, Health, and Safety Publications<br/>Organization for Economic Co-operation and Development Screening Information Data Set<br/>RTECS (Registry of Toxic Effects of Chemical Substances)<br/>World Health OrganizationPrepared ByBio-Rad Laboratories, Environmental Health and Safety.Revision date30-Dec-2021

**Revision Note** Significant changes throughout SDS. Review all sections.

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** 



Revision date 30-Dec-2021

SAFETY DATA SHEET

**Revision Number** 1

## 1. Identification Product identifier **Product Name IPTG Solution** Other means of identification 10013088 Catalog Number(s) Recommended use of the chemical and restrictions on use **Recommended use** Laboratory chemicals **Restrictions on use** No information available Details of the supplier of the safety data sheet **Corporate Headquarters** Manufacturer Address Legal Entity / Contact Address **Bio-Rad Laboratories Inc.** Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories (Canada) Ltd. 1000 Alfred Nobel Drive 2000 Alfred Nobel Drive 1329 Meyerside Drive Hercules, CA 94547 Hercules, California 94547 Mississauga, ON L5T 1C9 USA USA Canada **Technical Service** 1-800-361-1808 support@bio-rad.com Emergency telephone number 24 Hour Emergency Phone Number CHEMTREC Canada:1 (800) 424-9300

## 2. Hazard(s) identification

#### **Classification**

Not classified

Label elements

#### **Hazard statements**

Not classified.

#### Other information

May be harmful if swallowed. May be harmful in contact with skin.

## Substance

Not applicable.

## Mixture

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
.betaD-Galactopyranoside, 1-methylethyl 1-thio-	367-93-1	10 - 30	-	

|--|

## Description of first aid measures

General advice	No hazards which require special first aid measures.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	
Symptoms	No information available.
Indication of any immediate medical attention and special treatment needed	
Note to physicians	Treat symptomatically.

# 5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.
Specific hazards arising from the chemical	None known.
Explosion data Sensitivity to mechanical impac Sensitivity to static discharge	t None. None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

# 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

**Personal precautions** 

See section 8 for more information.

## Methods and material for containment and cleaning up

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

# 7. Handling and storage

## Precautions for safe handling Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Conditions for safe storage, including any incompatibilities **Storage Conditions** Store according to product and label instructions.

# 8. Exposure controls/personal protection

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.
Appropriate engineering controls	
Engineering controls	Showers Eyewash stations Ventilation systems.
Individual protection measures, su	ch as personal protective equipment
Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

# 9. Physical and chemical properties

Information on basic physical and chemical properties				
Physical state	Liquid			
Appearance	aqueous solution			
Color	colorless			
Odor	Odorless			
Odor threshold	No information available			
<u>Property</u> pH	Values_			
Melting point / freezing point Boiling point / boiling range	No data available No data available			

#### Remarks • Method None known None known None known

Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air	No data available No data available No data available	None known None known None known None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure Vapor density Relative density Water solubility Solubility in other solvents Partition coefficient Autoignition temperature Decomposition temperature Kinematic viscosity Dynamic viscosity	No data available No data available No data available Miscible in water No data available No data available No data available No data available No data available	None known None known None known None known None known None known None known None known
Other information Explosive properties Oxidizing properties Softening point Molecular weight VOC Content (%)	Not applicable. Not applicable. Not applicable Not applicable Not applicable	

# 10. Stability and reactivity

Reactivity	No information available.			
Chemical stability	Stable under normal conditions.			
Possibility of hazardous reactions	None under normal processing.			
Conditions to avoid	None known based on information supplied.			
Incompatible materials	None known based on information supplied.			
Hazardous decomposition products	None known based on information supplied.			

# 11. Toxicological information

## Information on likely routes of exposure

Inhalation	Specific test data for the substance or mixture is not available.			
Eye contact	Specific test data for the substance or mixture is not available.			
Skin contact	May be harmful in contact with skin.			
Ingestion	May be harmful if swallowed.			
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)
 2,100.8403 mg/kg

 ATEmix (dermal)
 4,621.80 mg/kg

 ATEmix (inhalation-dust/mist)
 6.30 mg/l

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

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

12. Ecological informatio	n
Ecotoxicity	The environmental impact of this product has not been fully investigated.
Persistence and degradability	No information available.
Bioaccumulation	No information available.
Other adverse effects	No information available.

# 13. Disposal considerations

## 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.

# 14. Transport information

TDG	Not regulated
DOT	Not regulated
MEX	Not regulated
IATA	Not regulated

IMDG

Not regulated

# 15. Regulatory information

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

## **International Regulations**

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

## International Inventories

Contact supplier for inventory compliance status

16. Other information						
<u>NFPA</u>	Health hazards 2	Flammability	0	Instability 0	Physical and chemical properties -	
HMIS	Health hazards 1	Flammability	0	Physical hazards 0		
Key or legend to abbr	reviations and acronyms	used in the safe	ty data sł	neet		
TWA TW Ceiling Ma	KPOSURE CONTROLS/P /A (time-weighted average ximum limit value ces and sources for data	) S	STEL	Skin designatio	erm Exposure Limit) on	
Agency for Toxic Subsi U.S. Environmental Pro European Food Safety EPA (Environmental Pro Acute Exposure Guidel U.S. Environmental Pro U.S. Environmental Pro Food Research Journa Hazardous Substance International Uniform O Japan GHS Classificati Australia National Indu NIOSH (National Institu National Library of Meo National Library of Meo National Toxicology Pro New Zealand's Chemic Organization for Econo Organization for Econo	tances and Disease Regis betection Agency ChemView Authority (EFSA) rotection Agency) line Level(s) (AEGL(s)) betection Agency Federal In betection Agency High Prod l Database Chemical Information Databies Strial Chemicals Notification ute for Occupational Safety dicine's ChemID Plus (NLM dicine's PubMed database ogram (NTP) cal Classification and Inform pric Co-operation and Dev pric Co-operation and Dev	try (ATSDR) w Database esecticide, Fungici luction Volume Ch base (IUCLID) on and Assessmer and Health) (NLM PUBMED) (NLM PUBMED) mation Database ( velopment Environ velopment High Pr velopment Screen	de, and Reneration Notes that Scheme (CCID) (CCID) (The section Notes that Scheme (CCID)	odenticide Act • (NICNAS) alth, and Safety Publicat volume Chemicals Prog		
Prepared By	Bio-Rad L	aboratories, Envi	ronmental	Health and Safety.		
Revision date	30-Dec-20	021				
	ided in this Safety Data S	Sheet is correct to	o the bes		formation and belief at the g, 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



Revision date 03-Feb-2022

SAFETY DATA SHEET

**Revision Number** 1

1. Identification Product identifier **Product Name** BL21(DE3) with pDHFR, lyophilized Other means of identification 10020781 Catalog Number(s) Recommended use of the chemical and restrictions on use **Recommended use** Laboratory chemicals **Restrictions on use** No information available Details of the supplier of the safety data sheet **Corporate Headquarters** Manufacturer Address Legal Entity / Contact Address **Bio-Rad Laboratories Inc.** Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories (Canada) Ltd. 1000 Alfred Nobel Drive 2000 Alfred Nobel Drive 1329 Meyerside Drive Hercules, CA 94547 Hercules, California 94547 Mississauga, ON L5T 1C9 USA USA Canada **Technical Service** 1-800-361-1808 support@bio-rad.com Emergency telephone number 24 Hour Emergency Phone Number CHEMTREC Canada:1 (800) 424-9300

## 2. Hazard(s) identification

#### **Classification**

Not classified

Label elements

#### **Hazard statements**

Not classified.

Other information

## 3. Composition/information on ingredients

Substance

Description				
nical name	CAS No	Weight-%	Hazardous Material	Date HMIRA filed and
			Information Review Act	date exemption
			registry number	granted (if applicable)
			(HMIRA registry #)	· · · ·
1 Bacteria	NO-CAS-104	80 - 100	-	
	Description	mical name CAS No	nical name CAS No Weight-%	nical name CAS No Weight-% Hazardous Material Information Review Act registry number (HMIRA registry #)

# 4. First-aid measures

## **Description of first aid measures**

General advice	No hazards which require special first aid measures.	
Inhalation	Remove to fresh air.	
Eye contact	Contains human source material and / or potentially infectious components. Call a physician if irritation persists.	
Skin contact	Wash skin with soap and water.	
Ingestion	Call a physician. Contains human source material and / or potentially infectious components.	
Most important symptoms and effects, both acute and delayed		
Symptoms	No information available.	
Indication of any immediate medical attention and special treatment needed		
Note to physicians	Contains human source material and / or potentially infectious components.	

# 5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	
Unsuitable extinguishing media	No information available.	
Specific hazards arising from the chemical	None known.	
Explosion data Sensitivity to mechanical impact None. Sensitivity to static discharge None.		
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.	

# 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions See section 8 for more information.

## Methods and material for containment and cleaning up

Methods for containment

Do not allow into any sewer, on the ground or into any body of water.

Methods for cleaning up

Clean contaminated surface thoroughly. Use:. Disinfectant.

7. Handling and storage		
Precautions for safe handling		
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.	
Conditions for safe storage, including any incompatibilities		
Storage Conditions	Store according to product and label instructions.	

# 8. Exposure controls/personal protection

## 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.

## Appropriate engineering controls

Showers Eyewash stations Ventilation systems.
ch as personal protective equipment
Wear safety glasses with side shields (or goggles).
Wear suitable gloves.
Wear suitable protective clothing. No protective equipment is needed under normal use conditions. If exposure limits are
exceeded or irritation is experienced, ventilation and evacuation may be required. Follow universal and standard precautions for handling potentially infectious materials.

# 9. Physical and chemical properties

## Information on basic physical and chemical properties

Physical state Appearance Color Odor	Solid Solid, (white to off-white) powder or cake, lyophilized light yellow Odorless	
Odor threshold	No information available	
<u>Property</u> pH	Values	Remarks • Method None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known

Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Soluble in water	None known
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Other information		
Explosive properties	Not applicable.	
Oxidizing properties	Not applicable.	
Softening point	Not applicable	
Molecular weight	Not applicable	

Not applicable

# 10. Stability and reactivity

VOC Content (%)

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

# 11. Toxicological information

## Information on likely routes of exposure

#### **Product Information**

Specific test data for the substance or mixture is not available.
Specific test data for the substance or mixture is not available.
Specific test data for the substance or mixture is not available.
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	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

# 12. Ecological information

Ecotoxicity	The environmental impact of this product has not been fully investigated.
Persistence and degradability Bioaccumulation	No information available. No information available.
Other adverse effects	No information available.

# 13. Disposal considerations

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.

# 14. Transport information

TDG	Not regulated
DOT	Not regulated
MEX	Not regulated
	Not regulated
IMDG_	Not regulated

# 15. Regulatory information

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

## International Regulations

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

## International Inventories

Contact supplier for inventory compliance status

16. Other information							
<u>NFPA</u>	Health haza	rds 0	Flammability	0	Instability 0		Physical and chemical properties -
<u>HMIS</u>	Health haza	rds 0	Flammability	0	Physical hazar	<b>ds</b> 0	Personal protection X
Key or legend to a	abbreviations and a	acronyms	used in the safe	ty data	sheet		
TWA Ceiling	B: EXPOSURE CON TWA (time-weighte Maximum limit value	d average e	) 5	STEL	STEL (Sh Skin desi		n Exposure Limit)
Key literature references and sources for data used to compile the SDS Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database European Food Safety Authority (EFSA) EPA (Environmental Protection Agency (AEGL(s)) U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal Hazardous Substance Database International Uniform Chemical Information Database (IUCLID) Japan GHS Classification Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS) NIOSH (National Institute for Occupational Safety and Health) National Library of Medicine's ChemID Plus (NLM CIP) National Library of Medicine's PubMed database (NLM PUBMED) National Toxicology Program (NTP) New Zealand's Chemical Classification and Information Database (CCID) Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development Screening Information Data Set RTECS (Registry of Toxic Effects of Chemical Substances) World Health Organization							
Prepared By		Bio-Rad L	aboratories, Envi	ronmen	tal Health and Safety		
Revision date		03-Feb-20	)22				
<b>Revision Note</b>		Significan	t changes through	nout SD	S. Review all section	S.	

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



Revision date 21-Jan-2022

SAFETY DATA SHEET

Revision Number 1

1. Identification		
Product identifier		
Product Name	Imidazole Stock Solution	
Other means of identification		
Catalog Number(s)	10020782, 10021656	
Recommended use of the chemica	l and restrictions on use	
Recommended use	Laboratory chemicals	
Restrictions on use	No information available	
Details of the supplier of the safety data sheet		
Corporate Headquarters Bio-Rad Laboratories Inc. 1000 Alfred Nobel Drive Hercules, CA 94547 USA	Manufacturer Address Bio-Rad Laboratories, Life Science Group 2000 Alfred Nobel Drive Hercules, California 94547 USA	Legal Entity / Contact Address Bio-Rad Laboratories (Canada) Ltd. 1329 Meyerside Drive Mississauga, ON L5T 1C9 Canada
Technical Service	1-800-361-1808 support@bio-rad.com	
Emergency telephone number		
Od Have Freedom and Blacks News		

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

# 2. Hazard(s) identification

## **Classification**

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Reproductive toxicity	Category 1B

## Label elements

## Danger

## Hazard statements

Causes skin irritation Causes serious eye irritation May damage fertility or the unborn child



## **Precautionary Statements - Prevention**

Wear protective gloves/protective clothing/eye protection/face protection Wash face, hands and any exposed skin thoroughly after handling

## **Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

## Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention

## Skin

IF ON SKIN: Wash with plenty of water and soap If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash it before reuse

## **Precautionary Statements - Disposal**

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

## Other information

# 3. Composition/information on ingredients

## Substance

Not applicable.

## Mixture

Chemical name	CAS No	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Sodium chloride	7647-14-5	1 - 5	-	
1-Imidazole	288-32-4	1 - 5	-	

## 4. First-aid measures

## **Description of first aid measures**

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

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

Symptoms May cause redness and tearing of the eyes. Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

# 5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.
Specific hazards arising from the chemical	None known.
Explosion data Sensitivity to mechanical impac Sensitivity to static discharge	t None. None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

# 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.	
Other information	Refer to protective measures listed in Sections 7 and 8.	
Methods and material for containment and cleaning up		
Methods for containment	Prevent further leakage or spillage if safe to do so.	
Methods for cleaning up	Pick up and transfer to properly labeled containers.	

# 7. Handling and storage

Precautions for safe handling	
Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse.
Conditions for safe storage, inclue	ling any incompatibilities
Storage Conditions	Store locked up. Keep containers tightly closed in a dry, cool and well-ventilated place. Store according to product and label instructions.

# 8. Exposure controls/personal protection

Control parameters

Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Appropriate engineering controls	
Engineering controls	Showers Eyewash stations Ventilation systems.
Individual protection measures, su	ch as personal protective equipment
Eye/face protection	If splashes are likely to occur, wear safety glasses with side-shields.
Hand protection	Wear suitable gloves. Impervious gloves.
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

# 9. Physical and chemical properties

## Information on basic physical and chemical properties

information on pasic physical and c		
Physical state	Liquid	
Appearance	aqueous solution	
Color	colorless	
Odor	Odorless	
Odor threshold	No information available	
Property	<u>Values</u>	Remarks • Method
рН	8	
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive	No data available	
limits		
Lower flammability or explosive	No data available	
limits		
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Miscible in water	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Other information	Neteralizable	
Explosive properties	Not applicable.	
Oxidizing properties	Not applicable.	
Softening point	Not applicable	

Molecular weight	Not applicable
VOC Content (%)	Not applicable

# 10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.

Hazardous decomposition products None known based on information supplied.

11. Toxicological information	

Information on likely routes of exposure

**Product Information** 

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.	
Eye contact	Specific test data for the substance or mixture is not available. Irritating to eyes. (based on components). Causes serious eye irritation.	
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).	
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.	
Symptoms related to the physical, chemical and toxicological characteristics		
Symptoms	Redness. May cause redness and tearing of the eyes.	

Acute toxicity

## Numerical measures of toxicity

# The following values are calculated based on chapter 3.1 of the GHS document<br/>ATEmix (oral)25,073.10 mg/kg

#### Component Information

Chemical r	ame	Oral LD50	Dermal LD50	Inhalation LC50
Sodium ch 7647-14		= 3 g/kg (Rat)	> 10000 mg/kg (Rabbit)	> 42 mg/L (Rat)1 h
1-Imidaz 288-32-		= 220 mg/kg (Rat)	-	-

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

Skin corrosion/irritation	Classification based on data available for ingredients. Irritating to skin.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes serious eye irritation.
Respiratory or skin sensitization	Based on available data, the classification criteria are not met.

Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.
STOT - single exposure	Based on available data, the classification criteria are not met.
STOT - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

# 12. Ecological information

## Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium chloride 7647-14-5	-	LC50: 4747 - 7824mg/L (96h, Oncorhynchus mykiss) LC50: 5560 - 6080mg/L (96h, Lepomis macrochirus) LC50: 6020 - 7070mg/L (96h, Pimephales promelas) LC50: 6420 - 6700mg/L (96h, Pimephales promelas) LC50: =12946mg/L (96h, Lepomis macrochirus) LC50: =7050mg/L (96h, Pimephales promelas)	-	EC50: 340.7 - 469.2mg/L (48h, Daphnia magna) EC50: =1000mg/L (48h, Daphnia magna)
1-Imidazole 288-32-4	EC50: =130mg/L (72h, Desmodesmus subspicatus) EC50: =82mg/L (96h, Desmodesmus subspicatus)	-	-	EC50: =341.5mg/L (48h, Daphnia magna)

Persistence and degradability

No information available.

**Bioaccumulation** 

There is no data for this product.

**Component Information** 

Chemical name	Partition coefficient
1-Imidazole	-0.02
288-32-4	

Other adverse effects

No information available.

# 13. Disposal considerations

## 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.

# 14. Transport information

TDG	Not regulated
DOT	Not regulated
MEX	Not regulated
IATA	Not regulated
IMDG	Not regulated

## 15. Regulatory information

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

## **International Regulations**

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

## International Inventories

Contact supplier for inventory compliance status

16. Other information					
<u>NFPA</u>	Health hazards 2	Flammability	0	Instability 0	Physical and chemical properties -
HMIS Chronic Hazard Star Lege	Health hazards 2 * end *= Chronic H	Flammability Health Hazard	0	Physical hazards 0	Personal protection X
Key or legend to abbre	viations and acronyms u	ised in the safe	ty data she	eet	
TWA TWA	POSURE CONTROLS/PE (time-weighted average) mum limit value		ECTION STEL	STEL (Short Term Skin designation	Exposure Limit)
Key literature references and sources for data used to compile the SDS Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database European Food Safety Authority (EFSA) EPA (Environmental Protection Agency) Acute Exposure Guideline Level(s) (AEGL(s)) U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal Hazardous Substance Database International Uniform Chemical Information Database (IUCLID) Japan GHS Classification Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS) NIOSH (National Institute for Occupational Safety and Health) National Library of Medicine's ChemID Plus (NLM CIP) National Library of Medicine's PubMed database (NLM PUBMED)					

## National Toxicology Program (NTP)

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

Prepared By	Bio-Rad Laboratories, Environmental Health and Safety.
Revision date	21-Jan-2022
Revision Note Disclaimer	Significant changes throughout SDS. Review all sections.

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** 



Revision date 21-Jan-2022

SAFETY DATA SHEET

**Revision Number** 1

1. Identification Product identifier **Product Name** 20% Sterile Glucose Other means of identification Catalog Number(s) 10021397 Recommended use of the chemical and restrictions on use **Recommended use** Laboratory chemicals **Restrictions on use** No information available Details of the supplier of the safety data sheet **Corporate Headquarters** Manufacturer Address Legal Entity / Contact Address **Bio-Rad Laboratories Inc.** Bio-Rad Laboratories, Life Science Group Bio-Rad Laboratories (Canada) Ltd. 1000 Alfred Nobel Drive 2000 Alfred Nobel Drive 1329 Meyerside Drive Hercules, CA 94547 Hercules, California 94547 Mississauga, ON L5T 1C9 USA Canada USA **Technical Service** 1-800-361-1808 support@bio-rad.com Emergency telephone number 24 Hour Emergency Phone Number CHEMTREC Canada:1 (800) 424-9300

## 2. Hazard(s) identification

#### **Classification**

Not classified

Label elements

#### **Hazard statements**

Not classified.

Other information

# 3. Composition/information on ingredients

## Substance

Not applicable.

## Mixture

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

## 4. First-aid measures

Description of first aid measures		
General advice	No hazards which require special first aid measures.	
Inhalation	Remove to fresh air.	
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.	
Skin contact	Wash skin with soap and water.	
Ingestion	Rinse mouth thoroughly with water.	
Most important symptoms and effects, both acute and delayed		
Symptoms	No information available.	
Indication of any immediate medical attention and special treatment needed		
Note to physicians	Treat symptomatically.	

# 5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.
Specific hazards arising from the chemical	None known.
Explosion data Sensitivity to mechanical impac Sensitivity to static discharge	t None. None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

# 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions See section 8 for more information.

## Methods and material for containment and cleaning up

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

Methods for cleaning up Pick up and transf

Pick up and transfer to properly labeled containers.

## 7. Handling and storage

Precautions 1	for safe	handling	

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store according to product and label instructions.

## 8. Exposure controls/personal protection

## 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.

## Appropriate engineering controls

Engineering controls	Showers		
	Eyewash stations		
	Ventilation systems.		

## Individual protection measures, such as personal protective equipment

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

## 9. Physical and chemical properties

Information on basic physical and	chemical properties	
Physical state	Liquid	
Appearance	aqueous solution	
Color	colorless	
Odor	Odorless	
Odor threshold	No information available	
Property_	Values	Remarks • Method
pH	7	
Melting point / freezing point	No data available	None known
Melting point / freezing point Boiling point / boiling range	No data available No data available	None known None known
01 01		
Boiling point / boiling range	No data available	None known
Boiling point / boiling range Flash point	No data available No data available	None known None known
Boiling point / boiling range Flash point Evaporation rate	No data available No data available No data available	None known None known None known

Upper flammability or explosive	No data available	
limits		
Lower flammability or explosive	No data available	
limits		
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Miscible in water	
Solubility in other solvents	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Other information		
Explosive properties	Not applicable.	
Oxidizing properties	Not applicable.	
Softening point	Not applicable	
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	
	••	

# 10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

# 11. Toxicological information

## Information on likely routes of exposure

**Product Information** 

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

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

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

12. Ecological information	
Ecotoxicity	The environmental impact of this product has not been fully investigated.
Persistence and degradability Bioaccumulation	No information available. No information available.
Other adverse effects	No information available.

13. Disposal consideration	ons
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.

# 14. Transport information

TDG	Not regulated
DOT	Not regulated
MEX	Not regulated
IATA	Not regulated
IMDG	Not regulated

15. Regulatory information Safety, health and environmental regulations/legislation specific for the substance or mixture

**International Regulations** 

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

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Contact supplier for inventory compliance status

16. Other information	on					
NFPA H	lealth hazards 0	Flammability (	0 <b>In</b> s	stability 0		Physical and chemical properties -
HMIS H	lealth hazards 0	Flammability (	0 <b>Ph</b>	ysical hazards	0	Personal protection X
Key or legend to abbrevia	tions and acronyms	used in the safety	data sheet	_		
Ceiling Maximu Key literature references	me-weighted average) Im limit value and sources for data	ST * used to compile t	EL	STEL (Short <sup>-</sup> Skin designat		Exposure Limit)
Agency for Toxic Substance U.S. Environmental Protect European Food Safety Auth EPA (Environmental Protect Acute Exposure Guideline I U.S. Environmental Protect U.S. Environmental Protect Food Research Journal Hazardous Substance Data International Uniform Cherr Japan GHS Classification Australia National Industrial NIOSH (National Institute for National Library of Medicine	ion Agency ChemView hority (EFSA) Level(s) (AEGL(s)) ion Agency Federal Ins ion Agency High Produ abase hical Information Databa Chemicals Notification or Occupational Safety e's ChemID Plus (NLM e's PubMed database (	Database secticide, Fungicide iction Volume Che ase (IUCLID) and Assessment and Health) CIP)	micals			
National Toxicology Progra New Zealand's Chemical C Organization for Economic Organization for Economic Organization for Economic RTECS (Registry of Toxic E World Health Organization	lassification and Inform Co-operation and Deve Co-operation and Deve Co-operation and Deve	elopment Environm elopment High Proc elopment Screening	nent, Health, a duction Volur	ne Chemicals Pro		
Prepared By	Bio-Rad La	aboratories, Enviro	nmental Hea	Ith and Safety.		
Revision date	21-Jan-202	22				
Revision Note <u>Disclaimer</u>	Significant	changes througho	out SDS. Revi	iew all sections.		

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**End of Safety Data Sheet**