



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
The Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Revision date 05-Mar-2021

Revision Number 1

1. IDENTIFICATION

Product identifier

Product Name Luminol/Enhancer Buffer

Other means of identification

Catalogue Number(s) 9724442

Registration Number(s) No information available

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Supplier's details

Corporate Headquarters

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

Manufacturer

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

Legal Entity / Contact Address

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South Africa

Technical Service

India: 91-124-4029300 or 1-800-180-1224
South Africa: 27-11-442-85-08
India: support.india@bio-rad.com
South Africa: cdg_techsupport_eemea@bio-rad.com

Emergency telephone number

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

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS)

GHS Label elements, including precautionary statements

Other hazards which do not result in classification

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical name	CAS No	Weight-%
Ethylene glycol 107-21-1	107-21-1	1.5

4. FIRST AID MEASURES

Description of necessary first aid measures

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

For emergency responders

Self-protection of the first aider No information available.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Note to doctors Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media

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

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

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

Specific hazards arising from the chemical

Specific hazards arising from the chemical No information available.

Special protective actions for fire-fighters

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 Ensure adequate ventilation.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological 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 labelled containers.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

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 guidelines

Chemical name	ACGIH TLV		OSHA PEL		Ontario	European Union	
Ethylene glycol 107-21-1	STEL: 50 ppm vapor fraction STEL: 10 mg/m³ inhalable particulate matter, aerosol only TWA: 25 ppm vapor fraction		(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m³		CEV: 100 mg/m³	TWA: 20 ppm TWA: 52 mg/m³ STEL: 40 ppm STEL: 104 mg/m³ *	
Chemical name	China	Japan Society of Occupational Health	Korea	Australia	Taiwan		
Ethylene glycol 107-21-1	TWA: 20 mg/m³ STEL: 40 mg/m³	-	Ceiling: 100 mg/m³	10 mg/m³ 20 ppm 52 mg/m³ 40 ppm STEL 104 mg/m³ STEL	TWA: 10 mg/m³ STEL: 15 mg/m³ Ceiling: 50 ppm Ceiling: 127 mg/m³		

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

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state	Liquid	Odour	Odourless
Appearance	aqueous solution	Odour threshold	No information available
Colour	colourless		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH		No information available	
Melting point / freezing point	0 °C / 32 °F		
Boiling point / boiling range		No information available	
Flash point		No information available	
Evaporation rate		No information available	
Flammability (solid, gas)		No information available	
Upper/lower flammability or explosive limits			
Upper flammability or explosive limits	Not applicable		
Lower flammability or explosive limits	Not applicable		
Vapour pressure		No information available	
Vapour density		No information available	
Relative density		No information available	
Solubility(ies)			
Water solubility	Miscible in water		
Solubility in other solvents		No information available	
Partition coefficient		No information available	
Autoignition temperature		No information available	
Decomposition temperature		No information available	
Viscosity			
Kinematic viscosity		No information available	
Dynamic viscosity			
<u>Other information</u>			
Oxidising properties	Not applicable		
Explosive properties	Not applicable		

10. STABILITY AND REACTIVITY

Reactivity

Reactivity No information available.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None
Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid None known based on information supplied.

Incompatible materials

Incompatible materials None known based on information supplied.

Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on the 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 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) 33,333.30 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylene glycol	= 4700 mg/kg (Rat)	= 10600 mg/kg (Rat) = 9530 µL/kg (Rabbit)	-

Delayed and immediate effects and also chronic effects from short and long term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/irritation	No information available.
Respiratory or skin sensitisation	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target organ effects	Respiratory system, Eyes, Skin, Central nervous system.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION

Toxicity

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

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Crustacea
Ethylene glycol	EC50: 6500 - 13000mg/L (96h, <i>Pseudokirchneriella subcapitata</i>)	LC50: 14 - 18mL/L (96h, <i>Oncorhynchus mykiss</i>) LC50: 40000 - 60000mg/L (96h, <i>Pimephales promelas</i>) LC50: =16000mg/L (96h, <i>Poecilia reticulata</i>) LC50: =27540mg/L (96h, <i>Lepomis macrochirus</i>) LC50: =40761mg/L (96h, <i>Oncorhynchus mykiss</i>) LC50: =41000mg/L (96h, <i>Oncorhynchus mykiss</i>)	EC50: =46300mg/L (48h, <i>Daphnia magna</i>)

Persistence and degradability

No information available.

Bioaccumulative potential

There is no data for this product.

Mobility

Mobility in soil No information available.

Mobility No information available.

Chemical name	Partition coefficient
Ethylene glycol	-1.93

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Disposal 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

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

IATA Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

Special precautions for user Special provisions from the regulations relative to the specified mode of transport are noted by numeric code. Refer to the regulations for the full text of special provisions.

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

Prepared By Bio-Rad Laboratories, Environmental Health and Safety

Revision date 05-Mar-2021

Revision Note *** Indicates this information has changed since the previous revision.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Disclaimer

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End of Safety Data Sheet