



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 27-Aug-2021

Revision Number 2.1

1. IDENTIFICATION

Product identifier

Product Name UMETS by HPLC Mobile Phase

Other means of identification

Catalogue Number(s) 1956076

Registration Number(s) No information available

Recommended use of the chemical and restrictions on use

Recommended use In-vitro laboratory reagent or component

Supplier's details

Corporate Headquarters

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

Manufacturer

Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547
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Legal Entity / Contact Address

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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

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-%
Water 7732-18-5	7732-18-5	93.742
Isopropyl alcohol 67-63-0	67-63-0	5.577
Diammonium phosphate 7783-28-0	7783-28-0	0.402
Citric acid 77-92-9	77-92-9	0.256
Phosphoric acid 7664-38-2	7664-38-2	0.023

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 physician.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
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 physicians 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 and precautions 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 labeled 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 Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines

Chemical name	ACGIH TLV	OSHA PEL	Ontario	European Union	
Isopropyl alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³ (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³	TWA: 200 ppm STEL: 400 ppm	-	
Phosphoric acid 7664-38-2	STEL: 3 mg/m ³ TWA: 1 mg/m ³	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³ (vacated) STEL: 3 mg/m ³	TWA: 1 mg/m ³ STEL: 3 mg/m ³	TWA: 1 mg/m ³ STEL: 2 mg/m ³	
Chemical name	China	Japan Society of Occupational Health	Korea	Australia	Taiwan
Isopropyl alcohol 67-63-0	TWA: 350 mg/m ³ STEL: 700 mg/m ³	Ceiling: 400 ppm Ceiling: 980 mg/m ³	TWA: 200 ppm STEL: 400 ppm	400 ppm 983 mg/m ³ 500 ppm STEL 1230 mg/m ³ STEL	TWA: 400 ppm TWA: 983 mg/m ³ STEL: 500 ppm STEL: 1228.75 mg/m ³
Phosphoric acid 7664-38-2	TWA: 1 mg/m ³ STEL: 3 mg/m ³	TWA: 1 mg/m ³	TWA: 1 mg/m ³ STEL: 3 mg/m ³	1 mg/m ³ 3 mg/m ³ STEL	TWA: 1 mg/m ³ STEL: 2 mg/m ³

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	No information available		
Property	Values	Remarks • Method	
pH	5.5	No information available	
Melting point / freezing point		No information available	
Boiling point / boiling range	93 °C / 199.4 °F	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			

Other information

Oxidising properties	Not applicable
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10. STABILITY AND REACTIVITY

Reactivity

Reactivity	No information available.
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Chemical stability

Stability	Stable under normal conditions.
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Explosion data

Sensitivity to mechanical impact	None
Sensitivity to static discharge	None.

Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
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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**

5.577 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

5.577 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

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

ATEmix (oral) 33,530.60 mg/kg

ATEmix (dermal) 72,781.10 mg/kg

ATEmix (inhalation-dust/mist) 1,301.80 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)	-	-
Isopropyl alcohol	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m ³ (Rat) 4 h
Diammonium phosphate	> 2000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	-
Citric acid	= 3 g/kg (Rat) = 3000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
Phosphoric acid	= 1530 mg/kg (Rat)	= 2740 mg/kg (Rabbit)	> 850 mg/m ³ (Rat) 1 h

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 sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Chemical name	IARC
Isopropyl alcohol	Group 3

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target organ effects Respiratory system, Eyes, Skin.

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
Isopropyl alcohol	EC50: >1000mg/L (72h, <i>Desmodesmus subspicatus</i>) EC50: >1000mg/L (96h, <i>Desmodesmus subspicatus</i>)	LC50: =11130mg/L (96h, <i>Pimephales promelas</i>) LC50: =9640mg/L (96h, <i>Pimephales promelas</i>) LC50: >1400000µg/L (96h, <i>Lepomis macrochirus</i>)	EC50: =13299mg/L (48h, <i>Daphnia magna</i>)
Diammonium phosphate	-	LC50: 24.8 - 29.4mg/L (96h, <i>Oncorhynchus mykiss</i>) LC50: =26.5mg/L (96h, <i>Oncorhynchus mykiss</i>) LC50: =3.3mg/L (96h, <i>Pimephales promelas</i>) LC50: =33mg/L (96h, <i>Pimephales promelas</i>)	-
Citric acid	-	LC50: =1516mg/L (96h, <i>Lepomis macrochirus</i>)	EC50: =120mg/L (72h, <i>Daphnia magna</i>)
Phosphoric acid	-	LC50: 3 - 3.5mg/L (96h, <i>Gambusia affinis</i>)	EC50: =4.6mg/L (12h, <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
Isopropyl alcohol	0.05
Citric acid	-1.72

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**

Transport in bulk according to Annex II of MARPOL and the IBC Code

Not regulated

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

27-Aug-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

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Skin designation

C Carcinogen

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