

# KIT SAFETY DATA SHEET



**Kit Product Name** Kallestad Anti-dsNDA Microplate EIA Kit

**Kit Catalog Number(s)** 31008

**Revision date** 26-Mar-2024

## Kit Contents

Catalog Number(s)	Product Name
C0/FCOM175	Kallestad Negative Control
C2/FARO175, C2/FMPO175, C2/FRNP175, C7/FARO275, C6/FRNP175	Kallestad Positive Control
C1/FARO370, C1/FASM370, C1/FRNP370, C1/FALA370, C1/FTPO270, C1/FDNA170, C1/SSCL170, C1/FAJO170, C1/FANA170, C1/FCEN170, C1/FHIS170, C1/FMIT170, C1/FMPO170, C1/FATG170, C1/FGBM170, C2/FRNP370, C3/FARO370, C4/FALA370, C1/FCCP170	Kallestad Reference Controls C1, C2, C3, C4
S0/FMPO120, S0/FTPO220	Kallestad Calibrator 0
S1/FMPO130, S2/FMPO140, S3/FMPO150, S4/FMPO160, S1/FTPO230, S2/FTPO240, S3/FTPO250, S4/FTPO260	Kallestad Calibrators 1-4
R4/FAID110MPO, R4/FAID160TPO	IgG/IgM Conjugate
R3/FAID120	Wash Buffer Concentrate (16X)
R2/FAID130, R2/FCOM190	Sample Diluent Concentrate A
R6/FCOM130	Stop Solution
R5/FCOM120	Substrate

# SAFETY DATA SHEET

**BIO-RAD**

Revision date 26-Mar-2024

Revision Number 1.2

## 1. Identification

### 1.1 Product identifier

1.1.1 Technical Name

Kallestad Negative Control

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use: In-vitro laboratory reagent or component.

Catalog Number(s)

C0/FCOM175

### 1.2 Detailed information about the manufacturer, supplier, and/or importer

1.2.1 Company Name

1.2.2

#### 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  
USA

#### Legal Entity / Contact Address

ООО «Био-Рад Лаборатории»  
Нижний Сусальный переулок, дом 5,  
строение 5А  
105064  
Москва  
Российская Федерация

1.2.3 Emergency contact information

8-800-700-30-78.

1.2.4 FAX

None

1.2.5 E-mail

diag\_support\_rcis@bio-rad.com

## 2. Hazard(s) identification

### 2.1 Classification of the substance or mixture

GHS Classification

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

### 2.2 GHS Label elements, including precautionary statements

2.2.1

2.2.2 Hazard symbols

2.2.3 Hazard statements

PBT and vPvB assessment

No information available.

Chemical name	PBT and vPvB assessment
Sodium azide	The substance is not PBT / vPvB

Endocrine Disruptor Information

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

### 2.3 Other hazards

Not applicable.

### 3. Composition/information on ingredients

#### 3.1 General product information

3.1.1 Chemical name (according to IUPAC)

3.1.2 Chemical formula

3.1.3 General characteristics of the product  
(including brand and product range; production method)

#### 3.2 Mixture

(name, CAS and EC numbers, mass fractions (totaling 100%), MAC (Maximum Available Concentrations) or TSEL (Tentative Safe Exposure Level), hazard classifications and references to the sources of data)

		Occupational exposure limits			
Chemical name	Weight-%	MAC, mg/m <sup>3</sup>	Hazard class	CAS No	EC No (EU Index No)
Sodium azide	0.09			26628-22-8	247-852-1 (011-004-00-7)

### 4. First-aid measures

#### 4.1 Symptoms

4.1.1

In case of inhalation poisoning (inhalation)

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

4.1.2

Skin contact

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

4.1.3

Eye contact

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

4.1.4

Ingestion

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

#### 4.2 Description of necessary first aid measures

4.2.1

Inhalation

Remove to fresh air.

4.2.2

Skin contact

Wash skin with soap and water.

4.2.3

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. Contains human source material and / or potentially infectious components.

4.2.4

Ingestion

Call a physician. Contains human source material and / or potentially infectious components. Contains human source material and / or potentially infectious

4.2.5	components.
Contraindications	Contains human source material and / or potentially infectious components. Contains human source material and / or potentially infectious components.

## 5. Fire-fighting measures

5.1	
General description of fire and explosion hazards (according to GOST 12.1.044-89)	No information available.
5.2	
Indicators of fire and explosion hazards	Flammability group: No information available.
Flash point	Not applicable
Minimum Ignition Temperature (°C)	Not applicable
Autoignition temperature	Not applicable
Lower and upper explosion limit/flammability limit	Concentration limit (%): Not applicable
SADT (self-accelerating decomposition temperature)	Temperature range: Not applicable
Smoke production	Not applicable
Polymer combustion product toxicity index	Not applicable
Maximum Pressure Rise (bar)	Not applicable
Maximum Rate of Pressure Rise (bar/sec)	Not applicable
5.3	
Combustion and/or thermal decomposition products and their hazards	No information available.
5.4	
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
5.5	
Unsuitable extinguishing media	No information available.
5.6	
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
5.7	
Advice for firefighters	Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

## 6. Accidental release measures

### 6.1 Measures to prevent harm to people, property and the environment in case of an accident or an emergency

## 6.1.1

Personal precautions, protective equipment and emergency procedures

See section 8 for more information.

## 6.1.2

Personal Protective Equipment for emergency situations (PPE for first responders)

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

**6.2 Procedures for dealing with accidents and emergencies**

## 6.2.1

Actions in case of leaks and spills (including measures for containment and clean-up, and to ensure protection of the environment)

Do not allow into any sewer, on the ground or into any body of water. Clean contaminated surface thoroughly. Use: Disinfectant. Do not allow into any sewer, on the ground or into any body of water.

## 6.2.2

Actions in case of fire

Evacuate area and fight fire from a safe distance.

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

## 7.1.1

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

## 7.1.2

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Ensure control measures are regularly inspected and maintained. Prevent leaks and prevent soil / water pollution caused by leaks.

## 7.1.3

Recommendations for safe movement and transportation

See section 14 for more information:

Transport in accordance with the rules for the carriage of goods in force for each mode of transport. 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.

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

## 7.2.1

Storage Conditions

Incompatible materials

Store according to product and label instructions. Metals. Metals.

## 7.2.2

Packaging materials

No information available.

## 7.3

Safety measures for household use and storage

Not intended for household use.

## 8. Exposure controls/personal protection

### 8.1

Control parameters

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

### 8.2

Appropriate engineering controls

Provide adequate ventilation. When not in use, keep containers tightly closed.

## 8.3 Personal protective equipment

### 8.3.1

General hygiene considerations

Follow universal and standard precautions for handling potentially infectious materials. Follow universal and standard precautions for handling potentially infectious materials.

### 8.3.2

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.

### 8.3.3

Personal protection equipment

Skin and body protection:

Wear suitable protective clothing.

Hand protection:

Wear suitable gloves.

Eye/face protection:

Wear safety glasses with side shields (or goggles).

### 8.3.4

Personal protective equipment for household use

Not intended for household use.

## 9. Physical and chemical properties

### 9.1 Physical state

(aggregate state, color, odor)

Liquid

Appearance: Liquid

Color: light yellow

Odor: Odorless

### 9.2 Information on basic physical and chemical properties

(transition temperatures, pH, solubility, Log Kow (coefficient of n-Octanol/water) and other parameters specific to the type of product)

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7.4	
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Upper/lower flammability or explosive limits		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	

Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Solubility(ies)		
Water solubility	No data available	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	No data available	None known
Viscosity		
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<b>Other information</b>		
Oxidizing properties	Not applicable	
Explosive properties	Not applicable	
Softening point	Not applicable	

## 10. Stability and reactivity

### 10.1

Chemical stability	Stable under normal conditions.
Sensitivity to mechanical impact:	None.
Sensitivity to static discharge:	None.
Hazardous decomposition products:	None under normal use conditions.

### 10.2

Reactivity	No information available.
Possibility of hazardous reactions:	Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases. Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases.

### 10.3

Conditions to avoid	None known.
Incompatible materials:	Metals. Metals.

## 11. Toxicological information

### 11.1

General characteristics of exposure (assessment of health hazard (toxicity) and typical symptoms of exposure)	None known.
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### 11.2 Information on the likely routes of exposure

In case of inhalation poisoning (inhalation)	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.

Ingestion	Specific test data for the substance or mixture is not available.
11.3 Target organs, tissues and biological systems	No information available.
11.4 Information on hazard of direct contact with the product, as well as the consequences of such contact (e.g. irritation of upper respiratory tract, eyes or skin; skin-absorption and sensitizing actions)	The information presented below only applies to the material as supplied.
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.
11.5 Information on long-term effects of exposure (e.g. reproductive toxicity, carcinogenicity, mutagenicity, cumulative and other chronic effects)	The information presented below only applies to the material as supplied.
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.
Aspiration hazard:	Based on available data, the classification criteria are not met.
11.6 Acute toxicity data (LD50 with route of exposure and animal species; LC50 with exposure time (h)	



and animal species)

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

ATEmix (oral) 30,000.00 mg/kg

ATEmix (dermal) 22,222.20 mg/kg

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium azide	= 27 mg/kg ( Rat )	= 20 mg/kg ( Rabbit )	0.054 - 0.52 mg/L ( Rat ) 4 h

## 12. Ecological information

### 12.1

General description of the effects on the environment (atmospheric air, water, soil, including symptoms of exposure)

Environment, air: Air emission controls are not applicable as there is no direct release to air.

Environment, water: Negligible wastewater emissions as process operates without water contact.

Environment, soil: Soil emission controls are not applicable as there is no direct release to soil. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases. A leak prevention plan is needed to prevent low level continual releases.

### 12.2

Possible routes of release to the environment

Violation of the rules on storage and transportation of products. This product could affect the environment if incorrectly stored and transported, the waste is incinerated, it is discharged into bodies of water, or if there is an accident or emergency. Chemical Incidents.

## 12.3 Most important characteristics of the environmental impact

### 12.3.1

Hygienic standards (allowable concentrations in atmospheric air, water, including fishery waters, soils) Not established

1 - LHI – Limiting Hazard Indicator (tox. – toxicological; s.-t. (san.-tox.) – sanitary-toxicological; org. – organoleptic with indication of the nature of changes regarding organoleptic properties of water; sm. – changes the smell of the water; turb. – increases turbidity; col. – gives color to water; foam – causes foaming; film – forms a film on the water surface; taste. – gives the taste to water; opa. – causes opalescence; refl. – reflexive; res. – resorptive; refl.-res. – reflexive-resorptive; fishery – fishery (changes in commercial quality of aquatic organisms); san. – general-sanitary)

2 - Bodies of water used for drinking and household use

3 - Bodies of water with fishery significance (including sea waters)

### 12.3.2

Ecotoxicity data (LC50, EC50, NOEC for fish, Daphnia magna, algae and other)

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sodium azide	-	LC50: =0.8mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: =0.7mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =5.46mg/L (96h, <i>Pimephales promelas</i> )	-

## 12.3.3

Migration and transformation in the environment due to biodegradation and other processes (oxidation, hydrolysis, etc.) Persistence and degradability: No information available. Bioaccumulation: No information available. Mobility in soil: No information available. Mobility: No information available.

### 13. Disposal considerations

## 13.1

Safety precautions when handling waste arising from use, storage and transportation Ensure waste is collected and contained.

## 13.2

Information about the places and methods of decontamination, recycling or disposal of waste, including packaging material

Waste from residues/unused products:

Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.

## 13.3

Recommendations regarding disposal of waste generated when products are used in household applications

Not intended for household use.

### 14. Transport information

14.1 UN Number (according to the UN Recommendations on the Transport of Dangerous Goods)

14.2 Proper shipping name

14.3 Appropriate transportation methods

May be transported by all modes of transport in

accordance with the rules of transport for dangerous goods effective for the transport of each type.

14.4 Classification of dangerous goods according to GOST 19433-88

14.5 Classification of dangerous goods according to the UN Recommendations on the Transport of Dangerous Goods

14.6 Transport labeling (symbols according to GOST 14192-96)

14.7 Emergency cards (for transportation by rail, sea and other ways)

IMDG EmS-No:

None

IATA ERG Code:

None

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

Marine transport (IMDG) Special Provisions

None

## 15. Regulatory information

### 15.1 National regulations

15.1.1 Laws of the Russian Federation

Federal law "On the sanitary-epidemiological welfare of the population"  
Federal law "On technical regulation"  
Federal law "On production and consumption wastes"  
Federal law "On industrial safety of hazardous industrial objects"  
Federal law "On Environmental Protection"  
Federal law "On the protection of atmospheric air"  
Federal law "On Fire Safety"  
The Law of the Russian Federation "On Standardization"  
"Law on Consumer Protection"

15.1.2 Information about the documents regulating the requirements for protection of people and the environment

None

15.2 International conventions and agreements (e.g. whether the product is regulated by the Montreal Protocol, the Stockholm Convention and others)

The Montreal Protocol on Substances that Deplete the Ozone Layer:

The Stockholm Convention on Persistent Organic Pollutants

Not applicable

The Rotterdam Convention

Not applicable

## 16. Other information

16.1 Safety Passport Revision Information (for example, "First issue" or "SP has been reissued due to expiration of the original SP. The prior SP No... ." or "Changes have been made to the following sections... revision date...")

Revision date	26-Mar-2024
Revision Number	1.2
Revision Note	Reformatted and updated existing information

### 16.2 Key literature references and sources for data used to compile the SDS

This safety data sheet was created pursuant to the requirements of: The Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Technical Regulation "On Safety of Chemical Products", GOST 30333, GOST 31340, GOST 19433, GOST 14192, GOST 32419, GOST 32421, GOST 32423, GOST 32424, GOST 32425, R 50.1.102, R 50.1.101.

Hazardous Substance Database:

Agency for Toxic Substances and Disease Registry (ATSDR) - Agency for Toxic Substances and Disease Registry (ATSDR)  
CHEMVIEW not translate code - U.S. Environmental Protection Agency ChemView Database  
EFSA not translate code - European Food Safety Authority (EFSA)  
EPA not translate code - EPA (Environmental Protection Agency)  
EPA\_AEGL not translate code - Acute Exposure Guideline Level(s) (AEGL(s))  
EPA\_FIFRA not translate code - U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
EPA\_HPV not translate code - U.S. Environmental Protection Agency High Production Volume Chemicals  
FOOD\_JOURN not translate code - Food Research Journal  
HSDB not translate code - Hazardous Substance Database  
IUCLID not translate code - International Uniform Chemical Information Database (IUCLID)  
JAPAN\_GHS not translate code - Japan GHS Classification  
NICNAS not translate code - Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH not translate code - NIOSH (National Institute for Occupational Safety and Health)  
NLM\_CIP not translate code - National Library of Medicine's ChemID Plus (NLM CIP)  
NLM\_PUBMED not translate code - National Library of Medicine's PubMed database (NLM PUBMED)  
NTP not translate code - National Toxicology Program (NTP)  
NZ\_CCID not translate code - New Zealand's Chemical Classification and Information Database (CCID)  
OECD\_EHSP not translate code - Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
OECD\_HPV not translate code - Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
OECD\_SIDS not translate code - Organization for Economic Co-operation and Development Screening Information Data Set  
WHO not translate code - World Health Organization

4 The item numbers of the data sources are given in each paragraph of the SDS as links

#### 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

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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

# SAFETY DATA SHEET

**BIO-RAD**

Revision date 26-Mar-2024

Revision Number 1.1

## 1. Identification

### 1.1 Product identifier

1.1.1 Technical Name

Kallestad Positive Control

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use: In-vitro laboratory reagent or component.

Catalog Number(s)

C2/FARO175, C2/FMPO175, C2/FRNP175, C7/FARO275, C6/FRNP175

### 1.2 Detailed information about the manufacturer, supplier, and/or importer

1.2.1 Company Name

1.2.2

#### 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  
USA

#### Legal Entity / Contact Address

ООО «Био-Рад Лаборатории»  
Нижний Сусальный переулок, дом 5,  
строение 5А  
105064  
Москва  
Российская Федерация

1.2.3 Emergency contact information

8-800-700-30-78.

1.2.4 FAX

None

1.2.5 E-mail

diag\_support\_rcis@bio-rad.com

## 2. Hazard(s) identification

### 2.1 Classification of the substance or mixture

GHS Classification

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

### 2.2 GHS Label elements, including precautionary statements

2.2.1

2.2.2 Hazard symbols

2.2.3 Hazard statements

PBT and vPvB assessment

No information available.

Chemical name	PBT and vPvB assessment
Sodium azide	The substance is not PBT / vPvB

Endocrine Disruptor Information

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

### 2.3 Other hazards

Not applicable.

### 3. Composition/information on ingredients

#### 3.1 General product information

3.1.1 Chemical name (according to IUPAC)

3.1.2 Chemical formula

3.1.3 General characteristics of the product  
(including brand and product range; production method)

#### 3.2 Mixture

(name, CAS and EC numbers, mass fractions (totaling 100%), MAC (Maximum Available Concentrations) or TSEL (Tentative Safe Exposure Level), hazard classifications and references to the sources of data)

		Occupational exposure limits			
Chemical name	Weight-%	MAC, mg/m <sup>3</sup>	Hazard class	CAS No	EC No (EU Index No)
Sodium azide	0.09			26628-22-8	247-852-1 (011-004-00-7)

### 4. First-aid measures

#### 4.1 Symptoms

4.1.1

In case of inhalation poisoning (inhalation)

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

4.1.2

Skin contact

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

4.1.3

Eye contact

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

4.1.4

Ingestion

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

#### 4.2 Description of necessary first aid measures

4.2.1

Inhalation

Remove to fresh air.

4.2.2

Skin contact

Wash skin with soap and water.

4.2.3

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. Contains human source material and / or potentially infectious components.

4.2.4

Ingestion

Call a physician. Contains human source material and / or potentially infectious components. Contains

4.2.5 Contraindications	human source material and / or potentially infectious components.  Contains human source material and / or potentially infectious components. Contains human source material and / or potentially infectious components.
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## 5. Fire-fighting measures

5.1 General description of fire and explosion hazards (according to GOST 12.1.044-89)	No information available.
5.2 Indicators of fire and explosion hazards	Flammability group: No information available.
Flash point	Not applicable
Minimum Ignition Temperature (°C)	Not applicable
Autoignition temperature	Not applicable
Lower and upper explosion limit/flammability limit	Concentration limit (%): Not applicable
SADT (self-accelerating decomposition temperature)	Temperature range: Not applicable
Smoke production	Not applicable
Polymer combustion product toxicity index	Not applicable
Maximum Pressure Rise (bar)	Not applicable
Maximum Rate of Pressure Rise (bar/sec)	Not applicable
5.3 Combustion and/or thermal decomposition products and their hazards	No information available.
5.4 Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
5.5 Unsuitable extinguishing media	No information available.
5.6 Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
5.7 Advice for firefighters	Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

## 6. Accidental release measures

### 6.1 Measures to prevent harm to people, property and the environment in case of an accident or an



**emergency**

## 6.1.1

Personal precautions, protective equipment and emergency procedures

See section 8 for more information.

## 6.1.2

Personal Protective Equipment for emergency situations (PPE for first responders)

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

**6.2 Procedures for dealing with accidents and emergencies**

## 6.2.1

Actions in case of leaks and spills (including measures for containment and clean-up, and to ensure protection of the environment)

Do not allow into any sewer, on the ground or into any body of water. Clean contaminated surface thoroughly. Use: Disinfectant. Do not allow into any sewer, on the ground or into any body of water.

## 6.2.2

Actions in case of fire

Evacuate area and fight fire from a safe distance.

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

## 7.1.1

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

## 7.1.2

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Ensure control measures are regularly inspected and maintained. Prevent leaks and prevent soil / water pollution caused by leaks.

## 7.1.3

Recommendations for safe movement and transportation

See section 14 for more information:

Transport in accordance with the rules for the carriage of goods in force for each mode of transport. 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.

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

## 7.2.1

Storage Conditions

Incompatible materials

Store according to product and label instructions. Metals. Metals.

## 7.2.2

Packaging materials

No information available.

## 7.3

Safety measures for household use and storage

Not intended for household use.

## 8. Exposure controls/personal protection

### 8.1

Control parameters

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

### 8.2

Appropriate engineering controls

Provide adequate ventilation. When not in use, keep containers tightly closed.

## 8.3 Personal protective equipment

### 8.3.1

General hygiene considerations

Follow universal and standard precautions for handling potentially infectious materials. Follow universal and standard precautions for handling potentially infectious materials.

### 8.3.2

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.

### 8.3.3

Personal protection equipment

Skin and body protection:

Wear suitable protective clothing.

Hand protection:

Wear suitable gloves.

Eye/face protection:

Wear safety glasses with side shields (or goggles).

### 8.3.4

Personal protective equipment for household use

Not intended for household use.

## 9. Physical and chemical properties

### 9.1 Physical state

(aggregate state, color, odor)

Liquid

Appearance: aqueous solution

Color: colorless

Odor: Odorless

### 9.2 Information on basic physical and chemical properties

(transition temperatures, pH, solubility, Log Kow (coefficient of n-Octanol/water) and other parameters specific to the type of product)

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7.4	
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	> 100 °C	
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Upper/lower flammability or explosive limits		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive	No data available	

<b>limits</b>		
<b>Vapor pressure</b>	No data available	None known
<b>Relative vapor density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Solubility(ies)</b>		
<b>Water solubility</b>	No data available	Miscible in water
<b>Solubility in other solvents</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Viscosity</b>		
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b><u>Other information</u></b>		
<b>Oxidizing properties</b>	Not applicable	
<b>Explosive properties</b>	Not applicable	
<b>Softening point</b>	Not applicable	

## 10. Stability and reactivity

### 10.1

<b>Chemical stability</b>	Stable under normal conditions.
Sensitivity to mechanical impact:	None.
Sensitivity to static discharge:	None.
Hazardous decomposition products:	None under normal use conditions.

### 10.2

<b>Reactivity</b>	No information available.
Possibility of hazardous reactions:	Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases. Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases.

### 10.3

<b>Conditions to avoid</b>	None known.
Incompatible materials:	Metals. Metals.

## 11. Toxicological information

### 11.1

<b>General characteristics of exposure (assessment of health hazard (toxicity) and typical symptoms of exposure)</b>	None known.
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### 11.2 Information on the likely routes of exposure

In case of inhalation poisoning (inhalation)	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not

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Ingestion	available. Specific test data for the substance or mixture is not available.
11.3 Target organs, tissues and biological systems	No information available.
11.4 Information on hazard of direct contact with the product, as well as the consequences of such contact (e.g. irritation of upper respiratory tract, eyes or skin; skin-absorption and sensitizing actions)	The information presented below only applies to the material as supplied.
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.
11.5 Information on long-term effects of exposure (e.g. reproductive toxicity, carcinogenicity, mutagenicity, cumulative and other chronic effects)	The information presented below only applies to the material as supplied.
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.
Aspiration hazard:	Based on available data, the classification criteria are not met.

## 11.6 Acute toxicity data (LD50 with route of exposure and animal species; LC50 with exposure time (h) and animal species)

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

ATEmix (oral) 30,000.00 mg/kg

ATEmix (dermal) 22,222.20 mg/kg

### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium azide	= 27 mg/kg ( Rat )	= 20 mg/kg ( Rabbit )	0.054 - 0.52 mg/L ( Rat ) 4 h

## 12. Ecological information

### 12.1

General description of the effects on the environment (atmospheric air, water, soil, including symptoms of exposure)

Environment, air: Air emission controls are not applicable as there is no direct release to air.

Environment, water: Negligible wastewater emissions as process operates without water contact.

Environment, soil: Soil emission controls are not applicable as there is no direct release to soil. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases. A leak prevention plan is needed to prevent low level continual releases.

### 12.2

Possible routes of release to the environment

Violation of the rules on storage and transportation of products. This product could affect the environment if incorrectly stored and transported, the waste is incinerated, it is discharged into bodies of water, or if there is an accident or emergency. Chemical Incidents.

## 12.3 Most important characteristics of the environmental impact

### 12.3.1

Hygienic standards (allowable concentrations in atmospheric air, water, including fishery waters, soils) Not established

1 - LHI – Limiting Hazard Indicator (tox. – toxicological; s.-t. (san.-tox.) – sanitary-toxicological; org. – organoleptic with indication of the nature of changes regarding organoleptic properties of water; sm. – changes the smell of the water; turb. – increases turbidity; col. – gives color to water; foam – causes foaming; film – forms a film on the water surface; taste. – gives the taste to water; opa. – causes opalescence; refl. – reflexive; res.. – resorptive; refl.-res. – reflexive-resorptive; fishery – fishery (changes in commercial quality of aquatic organisms); san. – general-sanitary)

2 - Bodies of water used for drinking and household use

3 - Bodies of water with fishery significance (including sea waters)

### 12.3.2

Ecotoxicity data (LC50, EC50, NOEC for fish,

Daphnia magna, algae and other)

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sodium azide	-	LC50: =0.8mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: =0.7mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =5.46mg/L (96h, <i>Pimephales promelas</i> )	-

## 12.3.3

Migration and transformation in the environment due to biodegradation and other processes (oxidation, hydrolysis, etc.) Persistence and degradability: No information available. Bioaccumulation: No information available. Mobility in soil: No information available. Mobility: No information available.

### 13. Disposal considerations

## 13.1

Safety precautions when handling waste arising from use, storage and transportation Ensure waste is collected and contained.

## 13.2

Information about the places and methods of decontamination, recycling or disposal of waste, including packaging material

Waste from residues/unused products:

Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.

## 13.3

Recommendations regarding disposal of waste generated when products are used in household applications

Not intended for household use.

### 14. Transport information

14.1 UN Number (according to the UN Recommendations on the Transport of Dangerous Goods)

14.2 Proper shipping name

14.3 Appropriate transportation methods	May be transported by all modes of transport in accordance with the rules of transport for dangerous goods effective for the transport of each type.
14.4 Classification of dangerous goods according to GOST 19433-88	
14.5 Classification of dangerous goods according to the UN Recommendations on the Transport of Dangerous Goods	
14.6 Transport labeling (symbols according to GOST 14192-96)	None
14.7 Emergency cards (for transportation by rail, sea and other ways)	
IMDG EmS-No:	None
IATA ERG Code:	None
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
Marine transport (IMDG) Special Provisions	None

## 15. Regulatory information

### 15.1 National regulations

15.1.1 Laws of the Russian Federation	<p>Federal law "On the sanitary-epidemiological welfare of the population"</p> <p>Federal law "On technical regulation"</p> <p>Federal law "On production and consumption wastes"</p> <p>Federal law "On industrial safety of hazardous industrial objects"</p> <p>Federal law "On Environmental Protection"</p> <p>Federal law "On the protection of atmospheric air"</p> <p>Federal law "On Fire Safety"</p> <p>The Law of the Russian Federation "On Standardization"</p> <p>"Law on Consumer Protection"</p>
15.1.2 Information about the documents regulating the requirements for protection of people and the environment	None
15.2 International conventions and agreements (e.g. whether the product is regulated by the Montreal Protocol, the Stockholm Convention and others)	
The Montreal Protocol on Substances that Deplete the Ozone Layer:	Not applicable
The Stockholm Convention on Persistent Organic	Not applicable

## Pollutants

The Rotterdam Convention

Not applicable

## 16. Other information

16.1 Safety Passport Revision Information (for example, "First issue" or "SP has been reissued due to expiration of the original SP. The prior SP No... ." or "Changes have been made to the following sections... revision date...")

Revision date	26-Mar-2024
Revision Number	1.1
Revision Note	Reformatted and updated existing information

### 16.2 Key literature references and sources for data used to compile the SDS

This safety data sheet was created pursuant to the requirements of: The Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Technical Regulation "On Safety of Chemical Products", GOST 30333, GOST 31340, GOST 19433, GOST 14192, GOST 32419, GOST 32421, GOST 32423, GOST 32424, GOST 32425, R 50.1.102, R 50.1.101.

Hazardous Substance Database:

Agency for Toxic Substances and Disease Registry (ATSDR) - Agency for Toxic Substances and Disease Registry (ATSDR)

CHEMVIEW not translate code - U.S. Environmental Protection Agency ChemView Database

EFSA not translate code - European Food Safety Authority (EFSA)

EPA not translate code - EPA (Environmental Protection Agency)

EPA\_AEGL not translate code - Acute Exposure Guideline Level(s) (AEGL(s))

EPA\_FIFRA not translate code - U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

EPA\_HPV not translate code - U.S. Environmental Protection Agency High Production Volume Chemicals

FOOD\_JOURN not translate code - Food Research Journal

HSDB not translate code - Hazardous Substance Database

IUCLID not translate code - International Uniform Chemical Information Database (IUCLID)

JAPAN\_GHS not translate code - Japan GHS Classification

NICNAS not translate code - Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH not translate code - NIOSH (National Institute for Occupational Safety and Health)

NLM\_CIP not translate code - National Library of Medicine's ChemID Plus (NLM CIP)

NLM\_PUBMED not translate code - National Library of Medicine's PubMed database (NLM PUBMED)

NTP not translate code - National Toxicology Program (NTP)

NZ\_CCID not translate code - New Zealand's Chemical Classification and Information Database (CCID)

OECD\_EHSP not translate code - Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

OECD\_HPV not translate code - Organization for Economic Co-operation and Development High Production Volume Chemicals Program

OECD\_SIDS not translate code - Organization for Economic Co-operation and Development Screening Information Data Set

WHO not translate code - World Health Organization

4 The item numbers of the data sources are given in each paragraph of the SDS as links

#### 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



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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

# SAFETY DATA SHEET



Revision date 26-Mar-2024

Revision Number 1.1

## 1. Identification

### 1.1 Product identifier

1.1.1 Technical Name

Kallestad Reference Controls C1, C2, C3, C4

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use: In-vitro laboratory reagent or component.

Catalog Number(s)

C1/FARO370, C1/FASM370, C1/FRNP370, C1/FALA370, C1/FTPO270, C1/FDNA170, C1/SSCL170, C1/FAJO170, C1/FANA170, C1/FCEN170, C1/FHIS170, C1/FMIT170, C1/FMPO170, C1/FATG170, C1/FGBM170, C2/FRNP370, C3/FARO370, C4/FALA370, C1/FCCP170

### 1.2 Detailed information about the manufacturer, supplier, and/or importer

1.2.1 Company Name

1.2.2

#### 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  
USA

#### Legal Entity / Contact Address

ООО «Био-Рад Лаборатории»  
Нижний Сусальный переулок, дом 5,  
строение 5А  
105064  
Москва  
Российская Федерация

1.2.3 Emergency contact information

8-800-700-30-78.

1.2.4 FAX

None

1.2.5 E-mail

diag\_support\_rcis@bio-rad.com

## 2. Hazard(s) identification

### 2.1 Classification of the substance or mixture

GHS Classification

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

### 2.2 GHS Label elements, including precautionary statements

2.2.1

2.2.2 Hazard symbols

2.2.3 Hazard statements

PBT and vPvB assessment

No information available.

Chemical name	PBT and vPvB assessment
Sodium azide	The substance is not PBT / vPvB

Endocrine Disruptor Information

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

**2.3 Other hazards**

Not applicable.

**3. Composition/information on ingredients****3.1 General product information**

3.1.1 Chemical name (according to IUPAC)

3.1.2 Chemical formula

3.1.3 General characteristics of the product  
(including brand and product range; production method)**3.2 Mixture**

(name, CAS and EC numbers, mass fractions (totaling 100%), MAC (Maximum Available Concentrations) or TSEL (Tentative Safe Exposure Level), hazard classifications and references to the sources of data)

		Occupational exposure limits			
Chemical name	Weight-%	MAC, mg/m <sup>3</sup>	Hazard class	CAS No	EC No (EU Index No)
Sodium azide	0.09			26628-22-8	247-852-1 (011-004-00-7)

**4. First-aid measures****4.1 Symptoms**

4.1.1

In case of inhalation poisoning (inhalation)

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

4.1.2

Skin contact

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

4.1.3

Eye contact

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

4.1.4

Ingestion

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

**4.2 Description of necessary first aid measures**

4.2.1

Inhalation

Remove to fresh air.

4.2.2

Skin contact

Wash skin with soap and water.

4.2.3

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. Contains human source material and / or potentially infectious components.

4.2.4

Ingestion	Call a physician. Contains human source material and / or potentially infectious components. Contains human source material and / or potentially infectious components.
4.2.5 Contraindications	Contains human source material and / or potentially infectious components. Contains human source material and / or potentially infectious components.

## 5. Fire-fighting measures

5.1 General description of fire and explosion hazards (according to GOST 12.1.044-89)	No information available.
5.2 Indicators of fire and explosion hazards	Flammability group: No information available.
Flash point	Not applicable
Minimum Ignition Temperature (°C)	Not applicable
Autoignition temperature	Not applicable
Lower and upper explosion limit/flammability limit	Concentration limit (%): Not applicable
SADT (self-accelerating decomposition temperature)	Temperature range: Not applicable
Smoke production	Not applicable
Polymer combustion product toxicity index	Not applicable
Maximum Pressure Rise (bar)	Not applicable
Maximum Rate of Pressure Rise (bar/sec)	Not applicable
5.3 Combustion and/or thermal decomposition products and their hazards	No information available.
5.4 Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
5.5 Unsuitable extinguishing media	No information available.
5.6 Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
5.7 Advice for firefighters	Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

## 6. Accidental release measures

## 6.1 Measures to prevent harm to people, property and the environment in case of an accident or an emergency

### 6.1.1

Personal precautions, protective equipment and emergency procedures

See section 8 for more information.

### 6.1.2

Personal Protective Equipment for emergency situations (PPE for first responders)

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

## 6.2 Procedures for dealing with accidents and emergencies

### 6.2.1

Actions in case of leaks and spills (including measures for containment and clean-up, and to ensure protection of the environment)

Do not allow into any sewer, on the ground or into any body of water. Clean contaminated surface thoroughly. Use: Disinfectant. Do not allow into any sewer, on the ground or into any body of water.

### 6.2.2

Actions in case of fire

Evacuate area and fight fire from a safe distance.

## 7. Handling and storage

### 7.1 Precautions for safe handling

#### 7.1.1

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

#### 7.1.2

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Ensure control measures are regularly inspected and maintained. Prevent leaks and prevent soil / water pollution caused by leaks.

#### 7.1.3

Recommendations for safe movement and transportation

See section 14 for more information:

Transport in accordance with the rules for the carriage of goods in force for each mode of transport. 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.

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

#### 7.2.1

Storage Conditions

Incompatible materials

Store according to product and label instructions. Metals. Metals.

#### 7.2.2

Packaging materials

No information available.

## 7.3

Safety measures for household use and storage

Not intended for household use.

**8. Exposure controls/personal protection**

## 8.1

Control parameters

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

## 8.2

Appropriate engineering controls

Provide adequate ventilation. When not in use, keep containers tightly closed.

**8.3 Personal protective equipment**

## 8.3.1

General hygiene considerations

Follow universal and standard precautions for handling potentially infectious materials. Follow universal and standard precautions for handling potentially infectious materials.

## 8.3.2

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.

## 8.3.3

Personal protection equipment

Skin and body protection:

Wear suitable protective clothing.

Hand protection:

Wear suitable gloves.

Eye/face protection:

Wear safety glasses with side shields (or goggles).

## 8.3.4

Personal protective equipment for household use

Not intended for household use.

**9. Physical and chemical properties**

## 9.1 Physical state

(aggregate state, color, odor)

Liquid

Appearance: aqueous solution

Color: colorless

Odor: Odorless

## 9.2 Information on basic physical and chemical properties

(transition temperatures, pH, solubility, Log Kow (coefficient of n-Octanol/water) and other parameters specific to the type of product)

**Property****Values****Remarks • Method****pH**

7.4

**Melting point / freezing point**

No data available

None known

**Initial boiling point and boiling range**

&gt; 100 °C

**Flash point**

No data available

None known

**Evaporation rate**

No data available

None known

**Flammability**

No data available

None known

**Upper/lower flammability or explosive limits**

Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Solubility(ies)		
Water solubility	No data available	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	No data available	None known
Viscosity		
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

**Other information**

Oxidizing properties	Not applicable
Explosive properties	Not applicable
Softening point	Not applicable

**10. Stability and reactivity****10.1**

Chemical stability	Stable under normal conditions.
Sensitivity to mechanical impact:	None.
Sensitivity to static discharge:	None.
Hazardous decomposition products:	None under normal use conditions.

**10.2**

Reactivity	No information available.
Possibility of hazardous reactions:	Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases. Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases.

**10.3**

Conditions to avoid	None known.
Incompatible materials:	Metals. Metals.

**11. Toxicological information****11.1**

General characteristics of exposure (assessment of health hazard (toxicity) and typical symptoms of exposure)	None known.
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**11.2 Information on the likely routes of exposure**

In case of inhalation poisoning (inhalation)	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not

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Eye contact	available. Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.
11.3 Target organs, tissues and biological systems	No information available.
11.4 Information on hazard of direct contact with the product, as well as the consequences of such contact (e.g. irritation of upper respiratory tract, eyes or skin; skin-absorption and sensitizing actions)	The information presented below only applies to the material as supplied.
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.
11.5 Information on long-term effects of exposure (e.g. reproductive toxicity, carcinogenicity, mutagenicity, cumulative and other chronic effects)	The information presented below only applies to the material as supplied.
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.



Aspiration hazard: Based on available data, the classification criteria are not met.

11.6 Acute toxicity data (LD50 with route of exposure and animal species; LC50 with exposure time (h) and animal species)

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

ATEmix (oral) 30,000.00 mg/kg  
ATEmix (dermal) 22,222.20 mg/kg

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium azide	= 27 mg/kg ( Rat )	= 20 mg/kg ( Rabbit )	0.054 - 0.52 mg/L ( Rat ) 4 h

## 12. Ecological information

### 12.1

General description of the effects on the environment (atmospheric air, water, soil, including symptoms of exposure)

Environment, air: Air emission controls are not applicable as there is no direct release to air.  
Environment, water: Negligible wastewater emissions as process operates without water contact.  
Environment, soil: Soil emission controls are not applicable as there is no direct release to soil. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases. A leak prevention plan is needed to prevent low level continual releases.

### 12.2

Possible routes of release to the environment

Violation of the rules on storage and transportation of products. This product could affect the environment if incorrectly stored and transported, the waste is incinerated, it is discharged into bodies of water, or if there is an accident or emergency. Chemical Incidents.

## 12.3 Most important characteristics of the environmental impact

### 12.3.1

Hygienic standards (allowable concentrations in atmospheric air, water, including fishery waters, soils) Not established

1 - LHI – Limiting Hazard Indicator (tox. – toxicological; s.-t. (san.-tox.) – sanitary-toxicological; org. – organoleptic with indication of the nature of changes regarding organoleptic properties of water; sm. – changes the smell of the water; turb. – increases turbidity; col. – gives color to water; foam – causes foaming; film – forms a film on the water surface; taste. – gives the taste to water; opa. – causes opalescence); refl. – reflexive; res. – resorptive; refl.-res. – reflexive-resorptive; fishery – fishery (changes in commercial quality of aquatic organisms); san. – general-sanitary)

2 - Bodies of water used for drinking and household use

3 - Bodies of water with fishery significance (including sea waters)

## 12.3.2

Ecotoxicity data (LC50, EC50, NOEC for fish, *Daphnia magna*, algae and other)

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sodium azide	-	<i>LC50: =0.8mg/L (96h, <i>Oncorhynchus mykiss</i>)</i> <i>LC50: =0.7mg/L (96h, <i>Lepomis macrochirus</i>)</i> <i>LC50: =5.46mg/L (96h, <i>Pimephales promelas</i>)</i>	-

## 12.3.3

Migration and transformation in the environment due to biodegradation and other processes (oxidation, hydrolysis, etc.)

Persistence and degradability: No information available. Bioaccumulation: No information available. Mobility in soil: No information available. Mobility: No information available.

## 13. Disposal considerations

## 13.1

Safety precautions when handling waste arising from use, storage and transportation

Ensure waste is collected and contained.

## 13.2

Information about the places and methods of decontamination, recycling or disposal of waste, including packaging material

Waste from residues/unused products:

Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.

## 13.3

Recommendations regarding disposal of waste generated when products are used in household applications

Not intended for household use.

## 14. Transport information

14.1 UN Number (according to the UN Recommendations on the Transport of Dangerous Goods)

## 14.2 Proper shipping name

## 14.3 Appropriate transportation methods

May be transported by all modes of transport in accordance with the rules of transport for dangerous goods effective for the transport of each type.

## 14.4 Classification of dangerous goods according to GOST 19433-88

## 14.5 Classification of dangerous goods according to the UN Recommendations on the Transport of Dangerous Goods

## 14.6 Transport labeling (symbols according to GOST 14192-96)

## 14.7 Emergency cards (for transportation by rail, sea and other ways)

IMDG EmS-No:

None

IATA ERG Code:

None

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

Marine transport (IMDG) Special Provisions

None

## 15. Regulatory information

### 15.1 National regulations

## 15.1.1 Laws of the Russian Federation

Federal law "On the sanitary-epidemiological welfare of the population"  
 Federal law "On technical regulation"  
 Federal law "On production and consumption wastes"  
 Federal law "On industrial safety of hazardous industrial objects"  
 Federal law "On Environmental Protection"  
 Federal law "On the protection of atmospheric air"  
 Federal law "On Fire Safety"  
 The Law of the Russian Federation "On Standardization"  
 "Law on Consumer Protection"

## 15.1.2 Information about the documents regulating the requirements for protection of people and the environment

None

## 15.2 International conventions and agreements (e.g. whether the product is regulated by the Montreal Protocol, the Stockholm Convention and others)

The Montreal Protocol on Substances that Deplete the Not applicable

## Ozone Layer:

The Stockholm Convention on Persistent Organic Pollutants      Not applicable

The Rotterdam Convention      Not applicable

## 16. Other information

**16.1 Safety Passport Revision Information** (for example, "First issue" or "SP has been reissued due to expiration of the original SP. The prior SP No... ." or "Changes have been made to the following sections... revision date...")

Revision date	26-Mar-2024
Revision Number	1.1
Revision Note	Reformatted and updated existing information

### 16.2 Key literature references and sources for data used to compile the SDS

This safety data sheet was created pursuant to the requirements of: The Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Technical Regulation "On Safety of Chemical Products", GOST 30333, GOST 31340, GOST 19433, GOST 14192, GOST 32419, GOST 32421, GOST 32423, GOST 32424, GOST 32425, R 50.1.102, R 50.1.101.

#### Hazardous Substance Database:

Agency for Toxic Substances and Disease Registry (ATSDR) - Agency for Toxic Substances and Disease Registry (ATSDR)

CHEMVIEW not translate code - U.S. Environmental Protection Agency ChemView Database

EFSA not translate code - European Food Safety Authority (EFSA)

EPA not translate code - EPA (Environmental Protection Agency)

EPA\_AEGL not translate code - Acute Exposure Guideline Level(s) (AEGL(s))

EPA\_FIFRA not translate code - U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

EPA\_HPV not translate code - U.S. Environmental Protection Agency High Production Volume Chemicals

FOOD\_JOURN not translate code - Food Research Journal

HSDB not translate code - Hazardous Substance Database

IUCLID not translate code - International Uniform Chemical Information Database (IUCLID)

JAPAN\_GHS not translate code - Japan GHS Classification

NICNAS not translate code - Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH not translate code - NIOSH (National Institute for Occupational Safety and Health)

NLM\_CIP not translate code - National Library of Medicine's ChemID Plus (NLM CIP)

NLM\_PUBMED not translate code - National Library of Medicine's PubMed database (NLM PUBMED)

NTP not translate code - National Toxicology Program (NTP)

NZ\_CCID not translate code - New Zealand's Chemical Classification and Information Database (CCID)

OECD\_EHSP not translate code - Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

OECD\_HPV not translate code - Organization for Economic Co-operation and Development High Production Volume Chemicals Program

OECD\_SIDS not translate code - Organization for Economic Co-operation and Development Screening Information Data Set

WHO not translate code - World Health Organization

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*4 The item numbers of the data sources are given in each paragraph of the SDS as links*

**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

# SAFETY DATA SHEET

**BIO-RAD**

Revision date 26-Mar-2024

Revision Number 1.1

## 1. Identification

### 1.1 Product identifier

1.1.1 Technical Name

Kallestad Calibrator 0

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use: In-vitro laboratory reagent or component.

Catalog Number(s)

S0/FMPO120, S0/FTPO220

### 1.2 Detailed information about the manufacturer, supplier, and/or importer

1.2.1 Company Name

1.2.2

#### 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  
USA

#### Legal Entity / Contact Address

ООО «Био-Рад Лаборатории»  
Нижний Сусальный переулок, дом 5,  
строение 5А  
105064  
Москва  
Российская Федерация

1.2.3 Emergency contact information

8-800-700-30-78.

1.2.4 FAX

None

1.2.5 E-mail

diag\_support\_rcis@bio-rad.com

## 2. Hazard(s) identification

### 2.1 Classification of the substance or mixture

GHS Classification

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

### 2.2 GHS Label elements, including precautionary statements

2.2.1

2.2.2 Hazard symbols

2.2.3 Hazard statements

PBT and vPvB assessment

No information available.

Chemical name	PBT and vPvB assessment
Sodium azide	The substance is not PBT / vPvB

Endocrine Disruptor Information

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

### 2.3 Other hazards

Not applicable.

### 3. Composition/information on ingredients

#### 3.1 General product information

3.1.1 Chemical name (according to IUPAC)

3.1.2 Chemical formula

3.1.3 General characteristics of the product  
(including brand and product range; production method)

#### 3.2 Mixture

(name, CAS and EC numbers, mass fractions (totaling 100%), MAC (Maximum Available Concentrations) or TSEL (Tentative Safe Exposure Level), hazard classifications and references to the sources of data)

		Occupational exposure limits			
Chemical name	Weight-%	MAC, mg/m <sup>3</sup>	Hazard class	CAS No	EC No (EU Index No)
Sodium azide	0.09			26628-22-8	247-852-1 (011-004-00-7)

### 4. First-aid measures

#### 4.1 Symptoms

4.1.1

In case of inhalation poisoning (inhalation)

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

4.1.2

Skin contact

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

4.1.3

Eye contact

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

4.1.4

Ingestion

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

#### 4.2 Description of necessary first aid measures

4.2.1

Inhalation

Remove to fresh air.

4.2.2

Skin contact

Wash skin with soap and water.

4.2.3

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. Contains human source material and / or potentially infectious components.

4.2.4

Ingestion

Call a physician. Contains human source material and / or potentially infectious components. Contains human source material and / or potentially infectious

4.2.5	components.
Contraindications	Contains human source material and / or potentially infectious components. Contains human source material and / or potentially infectious components.

## 5. Fire-fighting measures

5.1	
General description of fire and explosion hazards (according to GOST 12.1.044-89)	No information available.
5.2	
Indicators of fire and explosion hazards	Flammability group: No information available.
Flash point	Not applicable
Minimum Ignition Temperature (°C)	Not applicable
Autoignition temperature	Not applicable
Lower and upper explosion limit/flammability limit	Concentration limit (%): Not applicable
SADT (self-accelerating decomposition temperature)	Temperature range: Not applicable
Smoke production	Not applicable
Polymer combustion product toxicity index	Not applicable
Maximum Pressure Rise (bar)	Not applicable
Maximum Rate of Pressure Rise (bar/sec)	Not applicable
5.3	
Combustion and/or thermal decomposition products and their hazards	No information available.
5.4	
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
5.5	
Unsuitable extinguishing media	No information available.
5.6	
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
5.7	
Advice for firefighters	Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

## 6. Accidental release measures

### 6.1 Measures to prevent harm to people, property and the environment in case of an accident or an emergency



## 6.1.1

Personal precautions, protective equipment and emergency procedures

See section 8 for more information.

## 6.1.2

Personal Protective Equipment for emergency situations (PPE for first responders)

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

## 6.2 Procedures for dealing with accidents and emergencies

## 6.2.1

Actions in case of leaks and spills (including measures for containment and clean-up, and to ensure protection of the environment)

Do not allow into any sewer, on the ground or into any body of water. Clean contaminated surface thoroughly. Use: Disinfectant. Do not allow into any sewer, on the ground or into any body of water.

## 6.2.2

Actions in case of fire

Evacuate area and fight fire from a safe distance.

## 7. Handling and storage

### 7.1 Precautions for safe handling

## 7.1.1

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

## 7.1.2

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Ensure control measures are regularly inspected and maintained. Prevent leaks and prevent soil / water pollution caused by leaks.

## 7.1.3

Recommendations for safe movement and transportation

See section 14 for more information:

Transport in accordance with the rules for the carriage of goods in force for each mode of transport. 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.

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

## 7.2.1

Storage Conditions

Incompatible materials

Store according to product and label instructions. Metals. Metals.

## 7.2.2

Packaging materials

No information available.

## 7.3

Safety measures for household use and storage

Not intended for household use.

## 8. Exposure controls/personal protection

### 8.1

Control parameters

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

### 8.2

Appropriate engineering controls

Provide adequate ventilation. When not in use, keep containers tightly closed.

## 8.3 Personal protective equipment

### 8.3.1

General hygiene considerations

Follow universal and standard precautions for handling potentially infectious materials. Follow universal and standard precautions for handling potentially infectious materials.

### 8.3.2

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.

### 8.3.3

Personal protection equipment

Skin and body protection:

Wear suitable protective clothing.

Hand protection:

Wear suitable gloves.

Eye/face protection:

Wear safety glasses with side shields (or goggles).

### 8.3.4

Personal protective equipment for household use

Not intended for household use.

## 9. Physical and chemical properties

### 9.1 Physical state

(aggregate state, color, odor)

Liquid

Appearance: aqueous solution

Color: colorless

Odor: Odorless

### 9.2 Information on basic physical and chemical properties

(transition temperatures, pH, solubility, Log Kow (coefficient of n-Octanol/water) and other parameters specific to the type of product)

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7.4	
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	> 100 °C	
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Upper/lower flammability or explosive limits		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	

Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Solubility(ies)		
Water solubility	No data available	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	No data available	None known
Viscosity		
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<b>Other information</b>		
Oxidizing properties	Not applicable	
Explosive properties	Not applicable	
Softening point	Not applicable	

## 10. Stability and reactivity

### 10.1

Chemical stability	Stable under normal conditions.
Sensitivity to mechanical impact:	None.
Sensitivity to static discharge:	None.
Hazardous decomposition products:	None under normal use conditions.

### 10.2

Reactivity	No information available.
Possibility of hazardous reactions:	Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases. Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases.

### 10.3

Conditions to avoid	None known.
Incompatible materials:	Metals. Metals.

## 11. Toxicological information

### 11.1

General characteristics of exposure (assessment of health hazard (toxicity) and typical symptoms of exposure)	None known.
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### 11.2 Information on the likely routes of exposure

In case of inhalation poisoning (inhalation)	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.

Ingestion	Specific test data for the substance or mixture is not available.
11.3 Target organs, tissues and biological systems	No information available.
11.4 Information on hazard of direct contact with the product, as well as the consequences of such contact (e.g. irritation of upper respiratory tract, eyes or skin; skin-absorption and sensitizing actions)	The information presented below only applies to the material as supplied.
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.
11.5 Information on long-term effects of exposure (e.g. reproductive toxicity, carcinogenicity, mutagenicity, cumulative and other chronic effects)	The information presented below only applies to the material as supplied.
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.
Aspiration hazard:	Based on available data, the classification criteria are not met.
11.6 Acute toxicity data (LD50 with route of exposure and animal species; LC50 with exposure time (h)	

and animal species)

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

ATEmix (oral) 30,000.00 mg/kg

ATEmix (dermal) 22,222.20 mg/kg

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium azide	= 27 mg/kg ( Rat )	= 20 mg/kg ( Rabbit )	0.054 - 0.52 mg/L ( Rat ) 4 h

## 12. Ecological information

### 12.1

General description of the effects on the environment (atmospheric air, water, soil, including symptoms of exposure)

Environment, air: Air emission controls are not applicable as there is no direct release to air.

Environment, water: Negligible wastewater emissions as process operates without water contact.

Environment, soil: Soil emission controls are not applicable as there is no direct release to soil. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases. A leak prevention plan is needed to prevent low level continual releases.

### 12.2

Possible routes of release to the environment

Violation of the rules on storage and transportation of products. This product could affect the environment if incorrectly stored and transported, the waste is incinerated, it is discharged into bodies of water, or if there is an accident or emergency. Chemical Incidents.

## 12.3 Most important characteristics of the environmental impact

### 12.3.1

Hygienic standards (allowable concentrations in atmospheric air, water, including fishery waters, soils) Not established

1 - LHI – Limiting Hazard Indicator (tox. – toxicological; s.-t. (san.-tox.) – sanitary-toxicological; org. – organoleptic with indication of the nature of changes regarding organoleptic properties of water; sm. – changes the smell of the water; turb. – increases turbidity; col. – gives color to water; foam – causes foaming; film – forms a film on the water surface; taste. – gives the taste to water; opa. – causes opalescence; refl. – reflexive; res. – resorptive; refl.-res. – reflexive-resorptive; fishery – fishery (changes in commercial quality of aquatic organisms); san. – general-sanitary)

2 - Bodies of water used for drinking and household use

3 - Bodies of water with fishery significance (including sea waters)

### 12.3.2

Ecotoxicity data (LC50, EC50, NOEC for fish, Daphnia magna, algae and other)

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sodium azide	-	<i>LC50: =0.8mg/L (96h, Oncorhynchus mykiss)</i> <i>LC50: =0.7mg/L (96h, Lepomis macrochirus)</i> <i>LC50: =5.46mg/L (96h, Pimephales promelas)</i>	-

## 12.3.3

Migration and transformation in the environment due to biodegradation and other processes (oxidation, hydrolysis, etc.)

Persistence and degradability: No information available. Bioaccumulation: No information available. Mobility in soil: No information available. Mobility: No information available.

### 13. Disposal considerations

## 13.1

Safety precautions when handling waste arising from use, storage and transportation

Ensure waste is collected and contained.

## 13.2

Information about the places and methods of decontamination, recycling or disposal of waste, including packaging material

Waste from residues/unused products:

Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.

## 13.3

Recommendations regarding disposal of waste generated when products are used in household applications

Not intended for household use.

### 14. Transport information

14.1 UN Number (according to the UN Recommendations on the Transport of Dangerous Goods)

14.2 Proper shipping name

14.3 Appropriate transportation methods

May be transported by all modes of transport in

accordance with the rules of transport for dangerous goods effective for the transport of each type.

14.4 Classification of dangerous goods according to GOST 19433-88

14.5 Classification of dangerous goods according to the UN Recommendations on the Transport of Dangerous Goods

14.6 Transport labeling (symbols according to GOST 14192-96)

14.7 Emergency cards (for transportation by rail, sea and other ways)

IMDG EmS-No:

None

IATA ERG Code:

None

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

Marine transport (IMDG) Special Provisions

None

## 15. Regulatory information

### 15.1 National regulations

15.1.1 Laws of the Russian Federation

Federal law "On the sanitary-epidemiological welfare of the population"  
Federal law "On technical regulation"  
Federal law "On production and consumption wastes"  
Federal law "On industrial safety of hazardous industrial objects"  
Federal law "On Environmental Protection"  
Federal law "On the protection of atmospheric air"  
Federal law "On Fire Safety"  
The Law of the Russian Federation "On Standardization"  
"Law on Consumer Protection"

15.1.2 Information about the documents regulating the requirements for protection of people and the environment

None

15.2 International conventions and agreements (e.g. whether the product is regulated by the Montreal Protocol, the Stockholm Convention and others)

The Montreal Protocol on Substances that Deplete the Ozone Layer:

The Stockholm Convention on Persistent Organic Pollutants

Not applicable

The Rotterdam Convention

Not applicable

## 16. Other information

16.1 Safety Passport Revision Information (for example, "First issue" or "SP has been reissued due to expiration of the original SP. The prior SP No... ." or "Changes have been made to the following sections... revision date...")

Revision date	26-Mar-2024
Revision Number	1.1
Revision Note	Reformatted and updated existing information

### 16.2 Key literature references and sources for data used to compile the SDS

This safety data sheet was created pursuant to the requirements of: The Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Technical Regulation "On Safety of Chemical Products", GOST 30333, GOST 31340, GOST 19433, GOST 14192, GOST 32419, GOST 32421, GOST 32423, GOST 32424, GOST 32425, R 50.1.102, R 50.1.101.

Hazardous Substance Database:

Agency for Toxic Substances and Disease Registry (ATSDR) - Agency for Toxic Substances and Disease Registry (ATSDR)  
CHEMVIEW not translate code - U.S. Environmental Protection Agency ChemView Database  
EFSA not translate code - European Food Safety Authority (EFSA)  
EPA not translate code - EPA (Environmental Protection Agency)  
EPA\_AEGL not translate code - Acute Exposure Guideline Level(s) (AEGL(s))  
EPA\_FIFRA not translate code - U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
EPA\_HPV not translate code - U.S. Environmental Protection Agency High Production Volume Chemicals  
FOOD\_JOURN not translate code - Food Research Journal  
HSDB not translate code - Hazardous Substance Database  
IUCLID not translate code - International Uniform Chemical Information Database (IUCLID)  
JAPAN\_GHS not translate code - Japan GHS Classification  
NICNAS not translate code - Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH not translate code - NIOSH (National Institute for Occupational Safety and Health)  
NLM\_CIP not translate code - National Library of Medicine's ChemID Plus (NLM CIP)  
NLM\_PUBMED not translate code - National Library of Medicine's PubMed database (NLM PUBMED)  
NTP not translate code - National Toxicology Program (NTP)  
NZ\_CCID not translate code - New Zealand's Chemical Classification and Information Database (CCID)  
OECD\_EHSP not translate code - Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
OECD\_HPV not translate code - Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
OECD\_SIDS not translate code - Organization for Economic Co-operation and Development Screening Information Data Set  
WHO not translate code - World Health Organization

4 The item numbers of the data sources are given in each paragraph of the SDS as links

#### 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



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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

# SAFETY DATA SHEET

**BIO-RAD**

Revision date 26-Mar-2024

Revision Number 1.3

## 1. Identification

### 1.1 Product identifier

1.1.1 Technical Name

Kallestad Calibrators 1-4

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use: In-vitro laboratory reagent or component.

Catalog Number(s)

S1/FMPO130, S2/FMPO140, S3/FMPO150, S4/FMPO160, S1/FTPO230, S2/FTPO240, S3/FTPO250, S4/FTPO260

### 1.2 Detailed information about the manufacturer, supplier, and/or importer

1.2.1 Company Name

1.2.2

#### 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  
USA

#### Legal Entity / Contact Address

ООО «Био-Рад Лаборатории»  
Нижний Сусальный переулок, дом 5,  
строение 5А  
105064  
Москва  
Российская Федерация

1.2.3 Emergency contact information

8-800-700-30-78.

1.2.4 FAX

None

1.2.5 E-mail

diag\_support\_rcis@bio-rad.com

## 2. Hazard(s) identification

### 2.1 Classification of the substance or mixture

GHS Classification

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

### 2.2 GHS Label elements, including precautionary statements

2.2.1

2.2.2 Hazard symbols

2.2.3 Hazard statements

PBT and vPvB assessment

No information available.

Chemical name	PBT and vPvB assessment
Sodium azide	The substance is not PBT / vPvB

Endocrine Disruptor Information

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

### 2.3 Other hazards

Not applicable.

### 3. Composition/information on ingredients

#### 3.1 General product information

3.1.1 Chemical name (according to IUPAC)

3.1.2 Chemical formula

3.1.3 General characteristics of the product  
(including brand and product range; production method)

#### 3.2 Mixture

(name, CAS and EC numbers, mass fractions (totaling 100%), MAC (Maximum Available Concentrations) or TSEL (Tentative Safe Exposure Level), hazard classifications and references to the sources of data)

		Occupational exposure limits			
Chemical name	Weight-%	MAC, mg/m <sup>3</sup>	Hazard class	CAS No	EC No (EU Index No)
Sodium azide	0.09			26628-22-8	247-852-1 (011-004-00-7)

### 4. First-aid measures

#### 4.1 Symptoms

4.1.1

In case of inhalation poisoning (inhalation)

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

4.1.2

Skin contact

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

4.1.3

Eye contact

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

4.1.4

Ingestion

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

#### 4.2 Description of necessary first aid measures

4.2.1

Inhalation

Remove to fresh air.

4.2.2

Skin contact

Wash skin with soap and water.

4.2.3

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. Contains human source material and / or potentially infectious components.

4.2.4

Ingestion

Call a physician. Contains human source material and / or potentially infectious components. Contains

4.2.5	human source material and / or potentially infectious components.
Contraindications	Contains human source material and / or potentially infectious components. Contains human source material and / or potentially infectious components.

## 5. Fire-fighting measures

5.1	
General description of fire and explosion hazards (according to GOST 12.1.044-89)	No information available.
5.2	
Indicators of fire and explosion hazards	Flammability group: No information available.
Flash point	Not applicable
Minimum Ignition Temperature (°C)	Not applicable
Autoignition temperature	Not applicable
Lower and upper explosion limit/flammability limit	Concentration limit (%): Not applicable
SADT (self-accelerating decomposition temperature)	Temperature range: Not applicable
Smoke production	Not applicable
Polymer combustion product toxicity index	Not applicable
Maximum Pressure Rise (bar)	Not applicable
Maximum Rate of Pressure Rise (bar/sec)	Not applicable
5.3	
Combustion and/or thermal decomposition products and their hazards	No information available.
5.4	
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
5.5	
Unsuitable extinguishing media	No information available.
5.6	
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
5.7	
Advice for firefighters	Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

## 6. Accidental release measures

### 6.1 Measures to prevent harm to people, property and the environment in case of an accident or an

**emergency**

## 6.1.1

Personal precautions, protective equipment and emergency procedures

See section 8 for more information.

## 6.1.2

Personal Protective Equipment for emergency situations (PPE for first responders)

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

**6.2 Procedures for dealing with accidents and emergencies**

## 6.2.1

Actions in case of leaks and spills (including measures for containment and clean-up, and to ensure protection of the environment)

Do not allow into any sewer, on the ground or into any body of water. Clean contaminated surface thoroughly. Use: Disinfectant. Do not allow into any sewer, on the ground or into any body of water.

## 6.2.2

Actions in case of fire

Evacuate area and fight fire from a safe distance.

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

## 7.1.1

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

## 7.1.2

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Ensure control measures are regularly inspected and maintained. Prevent leaks and prevent soil / water pollution caused by leaks.

## 7.1.3

Recommendations for safe movement and transportation

See section 14 for more information:

Transport in accordance with the rules for the carriage of goods in force for each mode of transport. 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.

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

## 7.2.1

Storage Conditions

Incompatible materials

Store according to product and label instructions. Metals. Metals.

## 7.2.2

Packaging materials

No information available.

## 7.3

Safety measures for household use and storage

Not intended for household use.

## 8. Exposure controls/personal protection

### 8.1

Control parameters

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

### 8.2

Appropriate engineering controls

Provide adequate ventilation. When not in use, keep containers tightly closed.

## 8.3 Personal protective equipment

### 8.3.1

General hygiene considerations

Follow universal and standard precautions for handling potentially infectious materials. Follow universal and standard precautions for handling potentially infectious materials.

### 8.3.2

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.

### 8.3.3

Personal protection equipment

Skin and body protection:

Wear suitable protective clothing.

Hand protection:

Wear suitable gloves.

Eye/face protection:

Wear safety glasses with side shields (or goggles).

### 8.3.4

Personal protective equipment for household use

Not intended for household use.

## 9. Physical and chemical properties

### 9.1 Physical state

(aggregate state, color, odor)

Liquid

Appearance: aqueous solution

Color: colorless

Odor: Odorless

### 9.2 Information on basic physical and chemical properties

(transition temperatures, pH, solubility, Log Kow (coefficient of n-Octanol/water) and other parameters specific to the type of product)

#### Property

#### Values

#### Remarks • Method

pH

None known

Melting point / freezing point

No data available

None known

Initial boiling point and boiling range

&gt; 100 °C

Flash point

No data available

None known

Evaporation rate

No data available

None known

Flammability

No data available

None known

Upper/lower flammability or explosive limits

Upper flammability or explosive limits No data available

Lower flammability or explosive No data available

<b>limits</b>		
<b>Vapor pressure</b>	No data available	None known
<b>Relative vapor density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Solubility(ies)</b>		
<b>Water solubility</b>	No data available	Miscible in water
<b>Solubility in other solvents</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	No data available	None known
<b>Viscosity</b>		
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b><u>Other information</u></b>		
<b>Oxidizing properties</b>	Not applicable	
<b>Explosive properties</b>	Not applicable	
<b>Softening point</b>	Not applicable	

## 10. Stability and reactivity

### 10.1

Chemical stability	Stable under normal conditions.
Sensitivity to mechanical impact:	None.
Sensitivity to static discharge:	None.
Hazardous decomposition products:	None under normal use conditions.

### 10.2

Reactivity	No information available.
Possibility of hazardous reactions:	Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases. Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases.

### 10.3

Conditions to avoid	None known.
Incompatible materials:	Metals. Metals.

## 11. Toxicological information

### 11.1

General characteristics of exposure (assessment of health hazard (toxicity) and typical symptoms of exposure)	None known.
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### 11.2 Information on the likely routes of exposure

In case of inhalation poisoning (inhalation)	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not

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Ingestion	available. Specific test data for the substance or mixture is not available.
11.3 Target organs, tissues and biological systems	No information available.
11.4 Information on hazard of direct contact with the product, as well as the consequences of such contact (e.g. irritation of upper respiratory tract, eyes or skin; skin-absorption and sensitizing actions)	The information presented below only applies to the material as supplied.
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.
11.5 Information on long-term effects of exposure (e.g. reproductive toxicity, carcinogenicity, mutagenicity, cumulative and other chronic effects)	The information presented below only applies to the material as supplied.
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.
Aspiration hazard:	Based on available data, the classification criteria are not met.



## 11.6 Acute toxicity data (LD50 with route of exposure and animal species; LC50 with exposure time (h) and animal species)

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

ATEmix (oral) 30,000.00 mg/kg

ATEmix (dermal) 22,222.20 mg/kg

### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium azide	= 27 mg/kg ( Rat )	= 20 mg/kg ( Rabbit )	0.054 - 0.52 mg/L ( Rat ) 4 h

## 12. Ecological information

### 12.1

General description of the effects on the environment (atmospheric air, water, soil, including symptoms of exposure)

Environment, air: Air emission controls are not applicable as there is no direct release to air.

Environment, water: Negligible wastewater emissions as process operates without water contact.

Environment, soil: Soil emission controls are not applicable as there is no direct release to soil. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases. A leak prevention plan is needed to prevent low level continual releases.

### 12.2

Possible routes of release to the environment

Violation of the rules on storage and transportation of products. This product could affect the environment if incorrectly stored and transported, the waste is incinerated, it is discharged into bodies of water, or if there is an accident or emergency. Chemical Incidents.

## 12.3 Most important characteristics of the environmental impact

### 12.3.1

Hygienic standards (allowable concentrations in atmospheric air, water, including fishery waters, soils) Not established

1 - LHI – Limiting Hazard Indicator (tox. – toxicological; s.-t. (san.-tox.) – sanitary-toxicological; org. – organoleptic with indication of the nature of changes regarding organoleptic properties of water; sm. – changes the smell of the water; turb. – increases turbidity; col. – gives color to water; foam – causes foaming; film – forms a film on the water surface; taste. – gives the taste to water; opa. – causes opalescence; refl. – reflexive; res.. – resorptive; refl.-res. – reflexive-resorptive; fishery – fishery (changes in commercial quality of aquatic organisms); san. – general-sanitary)

2 - Bodies of water used for drinking and household use

3 - Bodies of water with fishery significance (including sea waters)

### 12.3.2

Ecotoxicity data (LC50, EC50, NOEC for fish,

Daphnia magna, algae and other)

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sodium azide	-	LC50: =0.8mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: =0.7mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =5.46mg/L (96h, <i>Pimephales promelas</i> )	-

### 12.3.3

Migration and transformation in the environment due to biodegradation and other processes (oxidation, hydrolysis, etc.) Persistence and degradability: No information available. Bioaccumulation: No information available. Mobility in soil: No information available. Mobility: No information available.

## 13. Disposal considerations

### 13.1

Safety precautions when handling waste arising from use, storage and transportation Ensure waste is collected and contained.

### 13.2

Information about the places and methods of decontamination, recycling or disposal of waste, including packaging material

Waste from residues/unused products:

Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.

### 13.3

Recommendations regarding disposal of waste generated when products are used in household applications

Not intended for household use.

## 14. Transport information

14.1 UN Number (according to the UN Recommendations on the Transport of Dangerous Goods)

14.2 Proper shipping name

14.3 Appropriate transportation methods	May be transported by all modes of transport in accordance with the rules of transport for dangerous goods effective for the transport of each type.
14.4 Classification of dangerous goods according to GOST 19433-88	
14.5 Classification of dangerous goods according to the UN Recommendations on the Transport of Dangerous Goods	
14.6 Transport labeling (symbols according to GOST 14192-96)	None
14.7 Emergency cards (for transportation by rail, sea and other ways)	
IMDG EmS-No:	None
IATA ERG Code:	None
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
Marine transport (IMDG) Special Provisions	None

## 15. Regulatory information

### 15.1 National regulations

15.1.1 Laws of the Russian Federation	Federal law "On the sanitary-epidemiological welfare of the population" Federal law "On technical regulation" Federal law "On production and consumption wastes" Federal law "On industrial safety of hazardous industrial objects" Federal law "On Environmental Protection" Federal law "On the protection of atmospheric air" Federal law "On Fire Safety" The Law of the Russian Federation "On Standardization" "Law on Consumer Protection"
15.1.2 Information about the documents regulating the requirements for protection of people and the environment	None
15.2 International conventions and agreements (e.g. whether the product is regulated by the Montreal Protocol, the Stockholm Convention and others)	
The Montreal Protocol on Substances that Deplete the Ozone Layer:	Not applicable
The Stockholm Convention on Persistent Organic	Not applicable

## Pollutants

The Rotterdam Convention

Not applicable

**16. Other information**

**16.1 Safety Passport Revision Information** (for example, "First issue" or "SP has been reissued due to expiration of the original SP. The prior SP No... ." or "Changes have been made to the following sections... revision date...")

Revision date	26-Mar-2024
Revision Number	1.3
Revision Note	Reformatted and updated existing information

**16.2 Key literature references and sources for data used to compile the SDS**

This safety data sheet was created pursuant to the requirements of: The Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Technical Regulation "On Safety of Chemical Products", GOST 30333, GOST 31340, GOST 19433, GOST 14192, GOST 32419, GOST 32421, GOST 32423, GOST 32424, GOST 32425, R 50.1.102, R 50.1.101.

Hazardous Substance Database:

Agency for Toxic Substances and Disease Registry (ATSDR) - Agency for Toxic Substances and Disease Registry (ATSDR)

CHEMVIEW not translate code - U.S. Environmental Protection Agency ChemView Database

EFSA not translate code - European Food Safety Authority (EFSA)

EPA not translate code - EPA (Environmental Protection Agency)

EPA\_AEGL not translate code - Acute Exposure Guideline Level(s) (AEGL(s))

EPA\_FIFRA not translate code - U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

EPA\_HPV not translate code - U.S. Environmental Protection Agency High Production Volume Chemicals

FOOD\_JOURN not translate code - Food Research Journal

HSDB not translate code - Hazardous Substance Database

IUCLID not translate code - International Uniform Chemical Information Database (IUCLID)

JAPAN\_GHS not translate code - Japan GHS Classification

NICNAS not translate code - Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH not translate code - NIOSH (National Institute for Occupational Safety and Health)

NLM\_CIP not translate code - National Library of Medicine's ChemID Plus (NLM CIP)

NLM\_PUBMED not translate code - National Library of Medicine's PubMed database (NLM PUBMED)

NTP not translate code - National Toxicology Program (NTP)

NZ\_CCID not translate code - New Zealand's Chemical Classification and Information Database (CCID)

OECD\_EHSP not translate code - Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

OECD\_HPV not translate code - Organization for Economic Co-operation and Development High Production Volume Chemicals Program

OECD\_SIDS not translate code - Organization for Economic Co-operation and Development Screening Information Data Set

WHO not translate code - World Health Organization

*4 The item numbers of the data sources are given in each paragraph of the SDS as links*

**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

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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

# SAFETY DATA SHEET

**BIO-RAD**

Revision date 26-Mar-2024

Revision Number 1.1

## 1. Identification

### 1.1 Product identifier

1.1.1 Technical Name

IgG/IgM Conjugate

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use: In-vitro laboratory reagent or component.

Catalog Number(s)

R4/FAID110MPO, R4/FAID160TPO

### 1.2 Detailed information about the manufacturer, supplier, and/or importer

1.2.1 Company Name

1.2.2

#### 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  
USA

#### Legal Entity / Contact Address

ООО «Био-Рад Лаборатории»  
Нижний Сусальный переулок, дом 5,  
строение 5А  
105064  
Москва  
Российская Федерация

1.2.3 Emergency contact information

8-800-700-30-78.

1.2.4 FAX

None

1.2.5 E-mail

diag\_support\_rcis@bio-rad.com

## 2. Hazard(s) identification

### 2.1 Classification of the substance or mixture

GHS Classification

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

### 2.2 GHS Label elements, including precautionary statements

2.2.1

2.2.2 Hazard symbols

2.2.3 Hazard statements

PBT and vPvB assessment

No information available.

Chemical name	PBT and vPvB assessment
Sodium azide	The substance is not PBT / vPvB

Endocrine Disruptor Information

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

### 2.3 Other hazards

Not applicable.

### 3. Composition/information on ingredients

#### 3.1 General product information

3.1.1 Chemical name (according to IUPAC)

3.1.2 Chemical formula

3.1.3 General characteristics of the product  
(including brand and product range; production method)

#### 3.2 Mixture

(name, CAS and EC numbers, mass fractions (totaling 100%), MAC (Maximum Available Concentrations) or TSEL (Tentative Safe Exposure Level), hazard classifications and references to the sources of data)

		Occupational exposure limits			
Chemical name	Weight-%	MAC, mg/m <sup>3</sup>	Hazard class	CAS No	EC No (EU Index No)
Sodium azide	0.09			26628-22-8	247-852-1 (011-004-00-7)

### 4. First-aid measures

#### 4.1 Symptoms

4.1.1

In case of inhalation poisoning (inhalation)

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

4.1.2

Skin contact

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

4.1.3

Eye contact

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

4.1.4

Ingestion

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

#### 4.2 Description of necessary first aid measures

4.2.1

Inhalation

Remove to fresh air.

4.2.2

Skin contact

In the case of skin irritation or allergic reactions see a physician. Wash skin with soap and water.

4.2.3

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

4.2.4

Ingestion

Clean mouth with water and drink afterwards plenty of water.

4.2.5

Contraindications	Treat symptomatically. Never give anything by mouth to an unconscious person.
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## 5. Fire-fighting measures

### 5.1

General description of fire and explosion hazards (according to GOST 12.1.044-89)	No information available.
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### 5.2

Indicators of fire and explosion hazards	Flammability group: No information available.
Flash point	Not applicable
Minimum Ignition Temperature (°C)	Not applicable
Autoignition temperature	Not applicable
Lower and upper explosion limit/flammability limit	Concentration limit (%): Not applicable
SADT (self-accelerating decomposition temperature)	Temperature range: Not applicable
Smoke production	Not applicable
Polymer combustion product toxicity index	Not applicable
Maximum Pressure Rise (bar)	Not applicable
Maximum Rate of Pressure Rise (bar/sec)	Not applicable

### 5.3

Combustion and/or thermal decomposition products and their hazards	No information available.
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### 5.4

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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### 5.5

Unsuitable extinguishing media	No information available.
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### 5.6

Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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### 5.7

Advice for firefighters	Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.
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## 6. Accidental release measures

### 6.1 Measures to prevent harm to people, property and the environment in case of an accident or an emergency

#### 6.1.1

Personal precautions, protective equipment and emergency procedures	See section 8 for more information.
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## 6.1.2

Personal Protective Equipment for emergency situations (PPE for first responders)

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

**6.2 Procedures for dealing with accidents and emergencies**

## 6.2.1

Actions in case of leaks and spills (including measures for containment and clean-up, and to ensure protection of the environment)

Pick up and transfer to properly labeled containers. Prevent further leakage or spillage if safe to do so. See Section 12 for additional Ecological Information. Clean contaminated objects and areas thoroughly observing environmental regulations.

## 6.2.2

Actions in case of fire

Evacuate area and fight fire from a safe distance.

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

## 7.1.1

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

## 7.1.2

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Ensure control measures are regularly inspected and maintained. Prevent leaks and prevent soil / water pollution caused by leaks.

## 7.1.3

Recommendations for safe movement and transportation

See section 14 for more information:

Transport in accordance with the rules for the carriage of goods in force for each mode of transport. 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.

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

## 7.2.1

Storage Conditions  
Incompatible materials

Store according to product and label instructions.  
Metals. Metals.

## 7.2.2

Packaging materials

No information available.

## 7.3

Safety measures for household use and storage

Not intended for household use.

**8. Exposure controls/personal protection**

## 8.1

Control parameters

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

## 8.2

Appropriate engineering controls

Provide adequate ventilation. When not in use, keep containers tightly closed.

**8.3 Personal protective equipment**

## 8.3.1

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

## 8.3.2

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.

## 8.3.3

Personal protection equipment

Skin and body protection:

No special protective equipment required.

Hand protection:

No special protective equipment required.

Eye/face protection:

No special protective equipment required.

## 8.3.4

Personal protective equipment for household use

Not intended for household use.

**9. Physical and chemical properties**

## 9.1 Physical state

(aggregate state, color, odor)

Liquid

Appearance: aqueous solution

Color: blue

Odor: Odorless

## 9.2 Information on basic physical and chemical properties

(transition temperatures, pH, solubility, Log Kow (coefficient of n-Octanol/water) and other parameters specific to the type of product)

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	8	
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	> 100 °C	
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Upper/lower flammability or explosive limits		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Solubility(ies)		
Water solubility	No data available	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	No data available	None known
Viscosity		
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<b>Other information</b>		
Oxidizing properties	Not applicable	
Explosive properties	Not applicable	
Softening point	Not applicable	

## 10. Stability and reactivity

### 10.1

Chemical stability	Stable under normal conditions.
Sensitivity to mechanical impact:	None.
Sensitivity to static discharge:	None.
Hazardous decomposition products:	None under normal use conditions.

### 10.2

Reactivity	No information available.
Possibility of hazardous reactions:	Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases. Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases.

### 10.3

Conditions to avoid	None known.
Incompatible materials:	Metals. Metals.

## 11. Toxicological information

### 11.1

General characteristics of exposure (assessment of health hazard (toxicity) and typical symptoms of exposure)	None known.
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### 11.2 Information on the likely routes of exposure

In case of inhalation poisoning (inhalation)	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available.

11.3 Target organs, tissues and biological systems	No information available.
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## 11.4

Information on hazard of direct contact with the product, as well as the consequences of such contact (e.g. irritation of upper respiratory tract, eyes or skin; skin-absorption and sensitizing actions)

The information presented below only applies to the material as supplied.

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.

11.5 Information on long-term effects of exposure (e.g. reproductive toxicity, carcinogenicity, mutagenicity, cumulative and other chronic effects)

The information presented below only applies to the material as supplied.

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.

Aspiration hazard:

Based on available data, the classification criteria are not met.

11.6 Acute toxicity data (LD50 with route of exposure and animal species; LC50 with exposure time (h) and animal species)

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

ATEmix (oral)	28,274.80 mg/kg
ATEmix (dermal)	21,097.00 mg/kg

## Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium azide	= 27 mg/kg ( Rat )	= 20 mg/kg ( Rabbit )	0.054 - 0.52 mg/L ( Rat ) 4 h

## 12. Ecological information

### 12.1

General description of the effects on the environment (atmospheric air, water, soil, including symptoms of exposure)

Environment, air: Air emission controls are not applicable as there is no direct release to air.

Environment, water: Negligible wastewater emissions as process operates without water contact.

Environment, soil: Soil emission controls are not applicable as there is no direct release to soil. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases. A leak prevention plan is needed to prevent low level continual releases.

### 12.2

Possible routes of release to the environment

Violation of the rules on storage and transportation of products. This product could affect the environment if incorrectly stored and transported, the waste is incinerated, it is discharged into bodies of water, or if there is an accident or emergency. Chemical Incidents.

## 12.3 Most important characteristics of the environmental impact

### 12.3.1

Hygienic standards (allowable concentrations in atmospheric air, water, including fishery waters, soils) Not established

1 - LHI – Limiting Hazard Indicator (tox. – toxicological; s.-t. (san.-tox.) – sanitary-toxicological; org. – organoleptic with indication of the nature of changes regarding organoleptic properties of water; sm. – changes the smell of the water; turb. – increases turbidity; col. – gives color to water; foam – causes foaming; film – forms a film on the water surface; taste. – gives the taste to water; opa. – causes opalescence; refl. – reflexive; res.. – resorptive; refl.-res. – reflexive-resorptive; fishery – fishery (changes in commercial quality of aquatic organisms); san. – general-sanitary)

2 - Bodies of water used for drinking and household use

3 - Bodies of water with fishery significance (including sea waters)

### 12.3.2

Ecotoxicity data (LC50, EC50, NOEC for fish, Daphnia magna, algae and other)

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sodium azide	-	LC50: =0.8mg/L (96h, <i>Oncorhynchus mykiss</i> )	-

		LC50: =0.7mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =5.46mg/L (96h, <i>Pimephales promelas</i> )	
--	--	---	--

## 12.3.3

Migration and transformation in the environment due to biodegradation and other processes (oxidation, hydrolysis, etc.)

Persistence and degradability: No information available. Bioaccumulation: No information available. Mobility in soil: No information available. Mobility: No information available.

### 13. Disposal considerations

## 13.1

Safety precautions when handling waste arising from use, storage and transportation

Ensure waste is collected and contained.

## 13.2

Information about the places and methods of decontamination, recycling or disposal of waste, including packaging material

Waste from residues/unused products:

Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.

## 13.3

Recommendations regarding disposal of waste generated when products are used in household applications

Not intended for household use.

### 14. Transport information

14.1 UN Number (according to the UN Recommendations on the Transport of Dangerous Goods)

14.2 Proper shipping name

14.3 Appropriate transportation methods

May be transported by all modes of transport in accordance with the rules of transport for dangerous goods effective for the transport of each type.

14.4 Classification of dangerous goods according to

GOST 19433-88

14.5 Classification of dangerous goods according to the UN Recommendations on the Transport of Dangerous Goods

14.6 Transport labeling (symbols according to GOSTNone 14192-96)

14.7 Emergency cards (for transportation by rail, sea and other ways)

IMDG EmS-No: None

IATA ERG Code: None

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

Marine transport (IMDG) Special Provisions None

## 15. Regulatory information

### 15.1 National regulations

15.1.1 Laws of the Russian Federation Federal law "On the sanitary-epidemiological welfare of the population"  
Federal law "On technical regulation"  
Federal law "On production and consumption wastes"  
Federal law "On industrial safety of hazardous industrial objects"  
Federal law "On Environmental Protection"  
Federal law "On the protection of atmospheric air"  
Federal law "On Fire Safety"  
The Law of the Russian Federation "On Standardization"  
"Law on Consumer Protection"

15.1.2 Information about the documents regulating the requirements for protection of people and the environment None

15.2 International conventions and agreements (e.g. whether the product is regulated by the Montreal Protocol, the Stockholm Convention and others)  
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

## 16. Other information

16.1 Safety Passport Revision Information (for example, "First issue" or "SP has been reissued due to expiration of the original SP. The prior SP No... ." or "Changes have been made to the following sections... revision date...")

Revision date	26-Mar-2024
Revision Number	1.1
Revision Note	Reformatted and updated existing information

## 16.2 Key literature references and sources for data used to compile the SDS

This safety data sheet was created pursuant to the requirements of: The Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Technical Regulation "On Safety of Chemical Products", GOST 30333, GOST 31340, GOST 19433, GOST 14192, GOST 32419, GOST 32421, GOST 32423, GOST 32424, GOST 32425, R 50.1.102, R 50.1.101.

Hazardous Substance Database:

Agency for Toxic Substances and Disease Registry (ATSDR) - Agency for Toxic Substances and Disease Registry (ATSDR)  
CHEMVIEW not translate code - U.S. Environmental Protection Agency ChemView Database  
EFSA not translate code - European Food Safety Authority (EFSA)  
EPA not translate code - EPA (Environmental Protection Agency)  
EPA\_AEGL not translate code - Acute Exposure Guideline Level(s) (AEGL(s))  
EPA\_FIFRA not translate code - U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
EPA\_HPVC not translate code - U.S. Environmental Protection Agency High Production Volume Chemicals  
FOOD\_JOURN not translate code - Food Research Journal  
HSDB not translate code - Hazardous Substance Database  
IUCLID not translate code - International Uniform Chemical Information Database (IUCLID)  
JAPAN\_GHS not translate code - Japan GHS Classification  
NICNAS not translate code - Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH not translate code - NIOSH (National Institute for Occupational Safety and Health)  
NLM\_CIP not translate code - National Library of Medicine's ChemID Plus (NLM CIP)  
NLM\_PUBMED not translate code - National Library of Medicine's PubMed database (NLM PUBMED)  
NTP not translate code - National Toxicology Program (NTP)  
NZ\_CCID not translate code - New Zealand's Chemical Classification and Information Database (CCID)  
OECD\_EHSP not translate code - Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
OECD\_HPVC not translate code - Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
OECD\_SIDS not translate code - Organization for Economic Co-operation and Development Screening Information Data Set  
WHO not translate code - World Health Organization

4 The item numbers of the data sources are given in each paragraph of the SDS as links

### 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



# SAFETY DATA SHEET

**BIO-RAD**

Revision date 22-Oct-2021

Revision Number 1

## 1. Identification

### 1.1 Product identifier

1.1.1 Technical Name

Wash Buffer Concentrate (16X)

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use: In-vitro laboratory reagent or component.

Catalog Number(s)

R3/FAID120

### 1.2 Detailed information about the manufacturer, supplier, and/or importer

1.2.1 Company Name

1.2.2

#### 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  
USA

#### Legal Entity / Contact Address

ООО «Био-Рад Лаборатории»  
Нижний Сусальный переулок, дом 5,  
строение 5А  
105064  
Москва  
Российская Федерация

1.2.3 Emergency contact information

8-800-700-30-78.

1.2.4 FAX

None

1.2.5 E-mail

diag\_support\_rcis@bio-rad.com

## 2. Hazard(s) identification

### 2.1 Classification of the substance or mixture

#### GHS Classification

Acute toxicity - Dermal	Category 5
Skin corrosion/irritation	Category 3
Serious eye damage/eye irritation	Category 2A
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3

### 2.2 GHS Label elements, including precautionary statements

2.2.1 Signal word

Warning

2.2.2 Hazard symbols



2.2.3 Hazard statements

H313 - May be harmful in contact with skin

H316 - Causes mild skin irritation

H319 - Causes serious eye irritation

H412 - Harmful to aquatic life with long lasting

effects

## Precautionary statements

P312 - Call a POISON CENTER or doctor if you feel unwell. P264 - Wash face, hands and any exposed skin thoroughly after handling. P280 - Wear eye protection/ face protection. P337 + P313 - If eye irritation persists: Get medical advice/attention.

## PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Sodium azide	The substance is not PBT / vPvB

## Endocrine Disruptor Information

Contains a known or suspected endocrine disruptor.

Chemical name	EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation	EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances
Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy- - 9002-93-1	Endocrine disrupting properties	-

**2.3 Other hazards**

Not applicable.

**3. Composition/information on ingredients****3.1 General product information**

3.1.1 Chemical name (according to IUPAC)

3.1.2 Chemical formula

3.1.3 General characteristics of the product  
(including brand and product range; production method)

**3.2 Mixture**

(name, CAS and EC numbers, mass fractions (totaling 100%), MAC (Maximum Available Concentrations) or TSEL (Tentative Safe Exposure Level), hazard classifications and references to the sources of data)

		Occupational exposure limits			
Chemical name	Weight-%	MAC, mg/m <sup>3</sup>	Hazard class	CAS No	EC No (EU Index No)
Water	97.9			7732-18-5	231-791-2
Sodium azide	0.4			26628-22-8	247-852-1 (011-004-00-7)

**4. First-aid measures****4.1 Symptoms**

4.1.1

In case of inhalation poisoning (inhalation)	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
4.1.2 Skin contact	Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation. Causes mild skin irritation. May be harmful in contact with skin.
4.1.3 Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation (based on components). May cause redness, itching, and pain.
4.1.4 Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
<b>4.2 Description of necessary first aid measures</b>	
4.2.1 Inhalation	Remove to fresh air.
4.2.2 Skin contact	In the case of skin irritation or allergic reactions see a physician. Wash skin with soap and water.
4.2.3 Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
4.2.4 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.
4.2.5 Contraindications	Treat symptomatically. Never give anything by mouth to an unconscious person.

## 5. Fire-fighting measures

5.1 General description of fire and explosion hazards (according to GOST 12.1.044-89)	No information available.
5.2 Indicators of fire and explosion hazards	Flammability group: No information available.
Flash point	Not applicable
Minimum Ignition Temperature (°C)	Not applicable
Autoignition temperature	Not applicable
Lower and upper explosion limit/flammability limit	Concentration limit (%): Not applicable

SADT (self-accelerating decomposition temperature)	Temperature range: Not applicable Not applicable
Smoke production	Not applicable
Polymer combustion product toxicity index	Not applicable
Maximum Pressure Rise (bar)	Not applicable
Maximum Rate of Pressure Rise (bar/sec)	Not applicable
5.3	
Combustion and/or thermal decomposition products and their hazards	No information available.
5.4	
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
5.5	
Unsuitable extinguishing media	No information available.
5.6	
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
5.7	
Advice for firefighters	Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

## 6. Accidental release measures

### 6.1 Measures to prevent harm to people, property and the environment in case of an accident or an emergency

#### 6.1.1

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

#### 6.1.2

Personal Protective Equipment for emergency situations (PPE for first responders)

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

### 6.2 Procedures for dealing with accidents and emergencies

#### 6.2.1

Actions in case of leaks and spills (including measures for containment and clean-up, and to ensure protection of the environment)

Pick up and transfer to properly labeled containers. Prevent further leakage or spillage if safe to do so. See Section 12 for additional Ecological Information. Clean contaminated objects and areas thoroughly observing environmental regulations. Refer to protective measures listed in Sections 7 and 8.

#### 6.2.2

Actions in case of fire

Evacuate area and fight fire from a safe distance.

## 7. Handling and storage

### 7.1 Precautions for safe handling

#### 7.1.1

Appropriate engineering controls

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.

#### 7.1.2

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Ensure control measures are regularly inspected and maintained. Prevent leaks and prevent soil / water pollution caused by leaks.

#### 7.1.3

Recommendations for safe movement and transportation

See section 14 for more information:

Transport in accordance with the rules for the carriage of goods in force for each mode of transport. 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.

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

#### 7.2.1

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store according to product and label instructions.

Incompatible materials

Metals. Metals.

#### 7.2.2

Packaging materials

No information available.

#### 7.3

Safety measures for household use and storage

Not intended for household use.

## 8. Exposure controls/personal protection

#### 8.1

Control parameters

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

#### 8.2

Appropriate engineering controls

Provide adequate ventilation. When not in use, keep containers tightly closed.

### 8.3 Personal protective equipment

#### 8.3.1

General hygiene considerations

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat,

8.3.2	Respiratory protection	drink or smoke when using this product.  No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
8.3.3	Personal protection equipment	
	Skin and body protection:	Wear suitable protective clothing.
	Hand protection:	Wear suitable gloves.
	Eye/face protection:	Wear safety glasses with side shields (or goggles).
8.3.4	Personal protective equipment for household use	Not intended for household use.

## 9. Physical and chemical properties

9.1 Physical state (aggregate state, color, odor)	Liquid Appearance: aqueous solution Color: colorless Odor: Odorless
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9.2 Information on basic physical and chemical properties  
(transition temperatures, pH, solubility, Log Kow (coefficient of n-Octanol/water) and other parameters specific to the type of product)

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7.4	
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	> 100 °C	
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Upper/lower flammability or explosive limits		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Solubility(ies)		
Water solubility	No data available	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	No data available	None known
Viscosity		
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<u>Other information</u>		
Oxidizing properties	Not applicable	
Explosive properties	Not applicable	
Softening point	Not applicable	

## 10. Stability and reactivity

## 10.1

## Chemical stability

Sensitivity to mechanical impact:

Stable under normal conditions.

Sensitivity to static discharge:

None.

Hazardous decomposition products:

None.

None under normal use conditions.

## 10.2

## Reactivity

Possibility of hazardous reactions:

No information available.

Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases. Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases.

## 10.3

## Conditions to avoid

Incompatible materials:

None known.

Metals. Metals.

## 11. Toxicological information

## 11.1

General characteristics of exposure (assessment of health hazard (toxicity) and typical symptoms of exposure)

May cause redness and tearing of the eyes. Prolonged contact may cause redness and irritation.

## 11.2 Information on the likely routes of exposure

In case of inhalation poisoning (inhalation)

Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.

Skin contact

Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation. Causes mild skin irritation. May be harmful in contact with skin.

Eye contact

Specific test data for the substance or mixture is not available. Causes serious eye irritation (based on components). May cause redness, itching, and pain. Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Ingestion

## 11.3 Target organs, tissues and biological systems

No information available.

## 11.4

Information on hazard of direct contact with the product, as well as the consequences of such contact (e.g. irritation of upper respiratory tract, eyes or skin; skin-absorption and sensitizing actions)

The information presented below only applies to the material as supplied.

Skin corrosion/irritation: May cause skin irritation. Classification based on data available for ingredients.

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.

11.5 Information on long-term effects of exposure (e.g. reproductive toxicity, carcinogenicity, mutagenicity, cumulative and other chronic effects) The information presented below only applies to the material as supplied.

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.

Aspiration hazard: Based on available data, the classification criteria are not met.

11.6 Acute toxicity data (LD50 with route of exposure and animal species; LC50 with exposure time (h) and animal species)

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

ATEmix (oral)	6,345.50 mg/kg
ATEmix (dermal)	4,862.20 mg/kg

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
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Water	> 90 mL/kg ( Rat )	-	-
Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl )phenyl]-.omega.-hydroxy-	= 1800 mg/kg ( Rat )	-	-
Sodium azide	= 27 mg/kg ( Rat )	= 20 mg/kg ( Rabbit )	0.054 - 0.52 mg/L ( Rat ) 4 h

## 12. Ecological information

### 12.1

General description of the effects on the environment (atmospheric air, water, soil, including symptoms of exposure)

Environment, air: Air emission controls are not applicable as there is no direct release to air.  
 Environment, water: Negligible wastewater emissions as process operates without water contact.  
 Environment, soil: Soil emission controls are not applicable as there is no direct release to soil. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases. A leak prevention plan is needed to prevent low level continual releases.

### 12.2

Possible routes of release to the environment

Violation of the rules on storage and transportation of products. This product could affect the environment if incorrectly stored and transported, the waste is incinerated, it is discharged into bodies of water, or if there is an accident or emergency. Chemical Incidents.

## 12.3 Most important characteristics of the environmental impact

### 12.3.1

Hygienic standards (allowable concentrations in atmospheric air, water, including fishery waters, soils) Not established

1 - LHI – Limiting Hazard Indicator (tox. – toxicological; s.-t. (san.-tox.) – sanitary-toxicological; org. – organoleptic with indication of the nature of changes regarding organoleptic properties of water; sm. – changes the smell of the water; turb. – increases turbidity; col. – gives color to water; foam – causes foaming; film – forms a film on the water surface; taste. – gives the taste to water; opa. – causes opalescence); refl. – reflexive; res.. – resorptive; refl.-res. – reflexive-resorptive; fishery – fishery (changes in commercial quality of aquatic organisms); san. –general-sanitary)

2 - Bodies of water used for drinking and household use

3 - Bodies of water with fishery significance (including sea waters)

### 12.3.2

Ecotoxicity data (LC50, EC50, NOEC for fish, Daphnia magna, algae and other)

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sodium azide	-	LC50: =0.8mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: =0.7mg/L (96h, <i>Lepomis macrochirus</i> )	-

		LC50: =5.46mg/L (96h, <i>Pimephales promelas</i> )	
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## 12.3.3

Migration and transformation in the environment due to biodegradation and other processes (oxidation, hydrolysis, etc.) Persistence and degradability: No information available. Bioaccumulation: No information available. Mobility in soil: No information available. Mobility: No information available.

### 13. Disposal considerations

## 13.1

Safety precautions when handling waste arising from use, storage and transportation Ensure waste is collected and contained.

## 13.2

Information about the places and methods of decontamination, recycling or disposal of waste, including packaging material

Waste from residues/unused products:

Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.

## 13.3

Recommendations regarding disposal of waste generated when products are used in household applications

Not intended for household use.

### 14. Transport information

14.1 UN Number (according to the UN Recommendations on the Transport of Dangerous Goods)

14.2 Proper shipping name

14.3 Appropriate transportation methods

May be transported by all modes of transport in accordance with the rules of transport for dangerous goods effective for the transport of each type.

14.4 Classification of dangerous goods according to GOST 19433-88

14.5 Classification of dangerous goods according to the UN Recommendations on the Transport of Dangerous Goods

14.6 Transport labeling (symbols according to GOST 14192-96)

14.7 Emergency cards (for transportation by rail, sea and other ways)

IMDG EmS-No:

None

IATA ERG Code:

None

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

Marine transport (IMDG) Special Provisions

None

## 15. Regulatory information

### 15.1 National regulations

15.1.1 Laws of the Russian Federation

Federal law "On the sanitary-epidemiological welfare of the population"

Federal law "On technical regulation"

Federal law "On production and consumption wastes"

Federal law "On industrial safety of hazardous industrial objects"

Federal law "On Environmental Protection"

Federal law "On the protection of atmospheric air"

Federal law "On Fire Safety"

The Law of the Russian Federation "On Standardization"

"Law on Consumer Protection"

15.1.2 Information about the documents regulating the requirements for protection of people and the environment

None

15.2 International conventions and agreements (e.g. whether the product is regulated by the Montreal Protocol, the Stockholm Convention and others)

The Montreal Protocol on Substances that Deplete the Ozone Layer:

The Stockholm Convention on Persistent Organic Pollutants

Not applicable

The Rotterdam Convention

Not applicable

## 16. Other information

16.1 Safety Passport Revision Information (for example, "First issue" or "SP has been reissued due to expiration of the

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original SP. The prior SP No... ." or "Changes have been made to the following sections... revision date...")

Revision date	22-Oct-2021
Revision Number	1
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Hazardous Substance Database:

Agency for Toxic Substances and Disease Registry (ATSDR) - Agency for Toxic Substances and Disease Registry (ATSDR)  
CHEMVIEW not translate code - U.S. Environmental Protection Agency ChemView Database  
EFSA not translate code - European Food Safety Authority (EFSA)  
EPA not translate code - EPA (Environmental Protection Agency)  
EPA\_AEGL not translate code - Acute Exposure Guideline Level(s) (AEGL(s))  
EPA\_FIFRA not translate code - U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
EPA\_HPV not translate code - U.S. Environmental Protection Agency High Production Volume Chemicals  
FOOD\_JOURN not translate code - Food Research Journal  
HSDB not translate code - Hazardous Substance Database  
IUCLID not translate code - International Uniform Chemical Information Database (IUCLID)  
JAPAN\_GHS not translate code - Japan GHS Classification  
NICNAS not translate code - Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH not translate code - NIOSH (National Institute for Occupational Safety and Health)  
NLM\_CIP not translate code - National Library of Medicine's ChemID Plus (NLM CIP)  
NLM\_PUBMED not translate code - National Library of Medicine's PubMed database (NLM PUBMED)  
NTP not translate code - National Toxicology Program (NTP)  
NZ\_CCID not translate code - New Zealand's Chemical Classification and Information Database (CCID)  
OECD\_EHSP not translate code - Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
OECD\_HPV not translate code - Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
OECD\_SIDS not translate code - Organization for Economic Co-operation and Development Screening Information Data Set  
WHO not translate code - World Health Organization

4 The item numbers of the data sources are given in each paragraph of the SDS as links

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

# SAFETY DATA SHEET

**BIO-RAD**

Revision date 26-Mar-2024

Revision Number 1.1

## 1. Identification

### 1.1 Product identifier

1.1.1 Technical Name

Sample Diluent Concentrate A

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use: In-vitro laboratory reagent or component.

Catalog Number(s)

R2/FAID130, R2/FCOM190

### 1.2 Detailed information about the manufacturer, supplier, and/or importer

1.2.1 Company Name

1.2.2

#### 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  
USA

#### Legal Entity / Contact Address

ООО «Био-Рад Лаборатории»  
Нижний Сусальный переулок, дом 5,  
строение 5А  
105064  
Москва  
Российская Федерация

1.2.3 Emergency contact information

8-800-700-30-78.

1.2.4 FAX

None

1.2.5 E-mail

diag\_support\_rcis@bio-rad.com

## 2. Hazard(s) identification

### 2.1 Classification of the substance or mixture

#### GHS Classification

Acute toxicity - Dermal	Category 5
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3

### 2.2 GHS Label elements, including precautionary statements

2.2.1 Signal word

Warning

2.2.2 Hazard symbols

2.2.3 Hazard statements

H313 - May be harmful in contact with skin  
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements

P312 - Call a POISON CENTER or doctor if you feel unwell.

PBT and vPvB assessment

No information available.

Chemical name	PBT and vPvB assessment
Sodium azide	The substance is not PBT / vPvB

## Endocrine Disruptor Information

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

**2.3 Other hazards**

Not applicable.

**3. Composition/information on ingredients****3.1 General product information**

3.1.1 Chemical name (according to IUPAC)

3.1.2 Chemical formula

3.1.3 General characteristics of the product  
(including brand and product range; production method)

**3.2 Mixture**

(name, CAS and EC numbers, mass fractions (totaling 100%), MAC (Maximum Available Concentrations) or TSEL (Tentative Safe Exposure Level), hazard classifications and references to the sources of data)

		Occupational exposure limits			
Chemical name	Weight-%	MAC, mg/m <sup>3</sup>	Hazard class	CAS No	EC No (EU Index No)
Sodium azide	0.5			26628-22-8	247-852-1 (011-004-00-7)

**4. First-aid measures****4.1 Symptoms**

4.1.1

In case of inhalation poisoning (inhalation)

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

4.1.2

Skin contact

May be harmful in contact with skin.

4.1.3

Eye contact

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

4.1.4

Ingestion

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

**4.2 Description of necessary first aid measures**

4.2.1

Inhalation

Remove to fresh air.

4.2.2

Skin contact

In the case of skin irritation or allergic reactions see a physician. Wash skin with soap and water.

4.2.3

Eye contact

Rinse thoroughly with plenty of water for at least 15

---

4.2.4	minutes, lifting lower and upper eyelids. Consult a physician.
Ingestion	Clean mouth with water and drink afterwards plenty of water.
4.2.5	
Contraindications	Treat symptomatically. Never give anything by mouth to an unconscious person.

## 5. Fire-fighting measures

5.1	
General description of fire and explosion hazards (according to GOST 12.1.044-89)	No information available.
5.2	
Indicators of fire and explosion hazards	Flammability group: No information available.
Flash point	Not applicable
Minimum Ignition Temperature (°C)	Not applicable
Autoignition temperature	Not applicable
Lower and upper explosion limit/flammability limit	Concentration limit (%): Not applicable
SADT (self-accelerating decomposition temperature)	Temperature range: Not applicable
Smoke production	Not applicable
Polymer combustion product toxicity index	Not applicable
Maximum Pressure Rise (bar)	Not applicable
Maximum Rate of Pressure Rise (bar/sec)	Not applicable
5.3	
Combustion and/or thermal decomposition products and their hazards	No information available.
5.4	
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
5.5	
Unsuitable extinguishing media	No information available.
5.6	
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
5.7	
Advice for firefighters	Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

## 6. Accidental release measures

## 6.1 Measures to prevent harm to people, property and the environment in case of an accident or an emergency

### 6.1.1

Personal precautions, protective equipment and emergency procedures

See section 8 for more information.

### 6.1.2

Personal Protective Equipment for emergency situations (PPE for first responders)

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

## 6.2 Procedures for dealing with accidents and emergencies

### 6.2.1

Actions in case of leaks and spills (including measures for containment and clean-up, and to ensure protection of the environment)

Pick up and transfer to properly labeled containers. Prevent further leakage or spillage if safe to do so. See Section 12 for additional Ecological Information. Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.2.2

Actions in case of fire

Evacuate area and fight fire from a safe distance.

## 7. Handling and storage

### 7.1 Precautions for safe handling

#### 7.1.1

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

#### 7.1.2

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Ensure control measures are regularly inspected and maintained. Prevent leaks and prevent soil / water pollution caused by leaks.

#### 7.1.3

Recommendations for safe movement and transportation

See section 14 for more information:

Transport in accordance with the rules for the carriage of goods in force for each mode of transport. 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.

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

#### 7.2.1

Storage Conditions

Store according to product and label instructions.

Incompatible materials

Metals. Metals.

#### 7.2.2



Packaging materials No information available.

7.3

Safety measures for household use and storage Not intended for household use.

## 8. Exposure controls/personal protection

8.1

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

8.2

Appropriate engineering controls Provide adequate ventilation. When not in use, keep containers tightly closed.

### 8.3 Personal protective equipment

8.3.1

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

8.3.2

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.

8.3.3

Personal protection equipment

Skin and body protection:

No special protective equipment required.

Hand protection:

No special protective equipment required.

Eye/face protection:

No special protective equipment required.

8.3.4

Personal protective equipment for household use Not intended for household use.

## 9. Physical and chemical properties

9.1 Physical state

(aggregate state, color, odor)

Liquid

Appearance: aqueous solution

Color: red

Odor: Odorless

9.2 Information on basic physical and chemical properties

(transition temperatures, pH, solubility, Log Kow (coefficient of n-Octanol/water) and other parameters specific to the type of product)

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7.4	
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	100 °C	
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Upper/lower flammability or explosive limits		
Upper flammability or explosive limits	No data available	

Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Solubility(ies)		
Water solubility	No data available	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	No data available	None known
Viscosity		
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<b>Other information</b>		
Oxidizing properties	Not applicable	
Explosive properties	Not applicable	
Softening point	Not applicable	

## 10. Stability and reactivity

### 10.1

Chemical stability	Stable under normal conditions.
Sensitivity to mechanical impact:	None.
Sensitivity to static discharge:	None.
Hazardous decomposition products:	None under normal use conditions.

### 10.2

Reactivity	No information available.
Possibility of hazardous reactions:	Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases. Avoid contact with metals. This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds and toxic gases.

### 10.3

Conditions to avoid	None known.
Incompatible materials:	Metals. Metals.

## 11. Toxicological information

### 11.1

General characteristics of exposure (assessment of health hazard (toxicity) and typical symptoms of exposure)	None known.
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### 11.2 Information on the likely routes of exposure

In case of inhalation poisoning (inhalation)	Specific test data for the substance or mixture is not available.
Skin contact	May be harmful in contact with skin.
Eye contact	Specific test data for the substance or mixture is not

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Ingestion	available. Specific test data for the substance or mixture is not available.
11.3 Target organs, tissues and biological systems	No information available.
11.4 Information on hazard of direct contact with the product, as well as the consequences of such contact (e.g. irritation of upper respiratory tract, eyes or skin; skin-absorption and sensitizing actions)	The information presented below only applies to the material as supplied.
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.
11.5 Information on long-term effects of exposure (e.g. reproductive toxicity, carcinogenicity, mutagenicity, cumulative and other chronic effects)	The information presented below only applies to the material as supplied.
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.
Aspiration hazard:	Based on available data, the classification criteria are not met.

## 11.6 Acute toxicity data (LD50 with route of exposure and animal species; LC50 with exposure time (h) and animal species)

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

ATEmix (oral) 5,400.00 mg/kg

ATEmix (dermal) 4,000.00 mg/kg

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium azide	= 27 mg/kg ( Rat )	= 20 mg/kg ( Rabbit )	0.054 - 0.52 mg/L ( Rat ) 4 h

## 12. Ecological information

### 12.1

General description of the effects on the environment (atmospheric air, water, soil, including symptoms of exposure)

Environment, air: Air emission controls are not applicable as there is no direct release to air.  
 Environment, water: Negligible wastewater emissions as process operates without water contact.  
 Environment, soil: Soil emission controls are not applicable as there is no direct release to soil. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases. A leak prevention plan is needed to prevent low level continual releases.

### 12.2

Possible routes of release to the environment

Violation of the rules on storage and transportation of products. This product could affect the environment if incorrectly stored and transported, the waste is incinerated, it is discharged into bodies of water, or if there is an accident or emergency. Chemical Incidents.

## 12.3 Most important characteristics of the environmental impact

### 12.3.1

Hygienic standards (allowable concentrations in atmospheric air, water, including fishery waters, soils) Not established

1 - LHI – Limiting Hazard Indicator (tox. – toxicological; s.-t. (san.-tox.) – sanitary-toxicological; org. – organoleptic with indication of the nature of changes regarding organoleptic properties of water; sm. – changes the smell of the water; turb. – increases turbidity; col. – gives color to water; foam – causes foaming; film – forms a film on the water surface; taste. – gives the taste to water; opa. – causes opalescence); refl. – reflexive; res.. – resorptive; refl.-res. – reflexive-resorptive; fishery – fishery (changes in commercial quality of aquatic organisms); san. – general-sanitary)

2 - Bodies of water used for drinking and household use

3 - Bodies of water with fishery significance (including sea waters)

## 12.3.2

Ecotoxicity data (LC50, EC50, NOEC for fish, *Daphnia magna*, algae and other)

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sodium azide	-	LC50: =0.8mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: =0.7mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =5.46mg/L (96h, <i>Pimephales promelas</i> )	-

## 12.3.3

Migration and transformation in the environment due to biodegradation and other processes (oxidation, hydrolysis, etc.) Persistence and degradability: No information available. Bioaccumulation: No information available. Mobility in soil: No information available. Mobility: No information available.

## 13. Disposal considerations

## 13.1

Safety precautions when handling waste arising from use, storage and transportation Ensure waste is collected and contained.

## 13.2

Information about the places and methods of decontamination, recycling or disposal of waste, including packaging material

Waste from residues/unused products:

Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.

## 13.3

Recommendations regarding disposal of waste generated when products are used in household applications

Not intended for household use.

## 14. Transport information

14.1 UN Number (according to the UN Recommendations on the Transport of Dangerous Goods)

14.2 Proper shipping name

14.3 Appropriate transportation methods

May be transported by all modes of transport in accordance with the rules of transport for dangerous goods effective for the transport of each type.

14.4 Classification of dangerous goods according to GOST 19433-88

14.5 Classification of dangerous goods according to the UN Recommendations on the Transport of Dangerous Goods

14.6 Transport labeling (symbols according to GOST 14192-96)

14.7 Emergency cards (for transportation by rail, sea and other ways)

IMDG EmS-No:

None

IATA ERG Code:

None

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

Marine transport (IMDG) Special Provisions

None

## 15. Regulatory information

### 15.1 National regulations

15.1.1 Laws of the Russian Federation

Federal law "On the sanitary-epidemiological welfare of the population"  
Federal law "On technical regulation"  
Federal law "On production and consumption wastes"  
Federal law "On industrial safety of hazardous industrial objects"  
Federal law "On Environmental Protection"  
Federal law "On the protection of atmospheric air"  
Federal law "On Fire Safety"  
The Law of the Russian Federation "On Standardization"  
"Law on Consumer Protection"

15.1.2 Information about the documents regulating the requirements for protection of people and the environment

None

15.2 International conventions and agreements (e.g. whether the product is regulated by the Montreal Protocol, the Stockholm Convention and others)

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

## 16. Other information

16.1 Safety Passport Revision Information (for example, "First issue" or "SP has been reissued due to expiration of the original SP. The prior SP No... ." or "Changes have been made to the following sections... revision date...")

Revision date	26-Mar-2024
Revision Number	1.1
Revision Note	Reformatted and updated existing information

### 16.2 Key literature references and sources for data used to compile the SDS

This safety data sheet was created pursuant to the requirements of: The Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Technical Regulation "On Safety of Chemical Products", GOST 30333, GOST 31340, GOST 19433, GOST 14192, GOST 32419, GOST 32421, GOST 32423, GOST 32424, GOST 32425, R 50.1.102, R 50.1.101.

Hazardous Substance Database:

Agency for Toxic Substances and Disease Registry (ATSDR) - Agency for Toxic Substances and Disease Registry (ATSDR)

CHEMVIEW not translate code - U.S. Environmental Protection Agency ChemView Database

EFSA not translate code - European Food Safety Authority (EFSA)

EPA not translate code - EPA (Environmental Protection Agency)

EPA\_AEGL not translate code - Acute Exposure Guideline Level(s) (AEGL(s))

EPA\_FIFRA not translate code - U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

EPA\_HPV not translate code - U.S. Environmental Protection Agency High Production Volume Chemicals

FOOD\_JOURN not translate code - Food Research Journal

HSDB not translate code - Hazardous Substance Database

IUCLID not translate code - International Uniform Chemical Information Database (IUCLID)

JAPAN\_GHS not translate code - Japan GHS Classification

NICNAS not translate code - Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH not translate code - NIOSH (National Institute for Occupational Safety and Health)

NLM\_CIP not translate code - National Library of Medicine's ChemID Plus (NLM CIP)

NLM\_PUBMED not translate code - National Library of Medicine's PubMed database (NLM PUBMED)

NTP not translate code - National Toxicology Program (NTP)

NZ\_CCID not translate code - New Zealand's Chemical Classification and Information Database (CCID)

OECD\_EHSP not translate code - Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

OECD\_HPV not translate code - Organization for Economic Co-operation and Development High Production Volume Chemicals Program

OECD\_SIDS not translate code - Organization for Economic Co-operation and Development Screening Information Data Set

WHO not translate code - World Health Organization

4 The item numbers of the data sources are given in each paragraph of the SDS as links

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**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



# SAFETY DATA SHEET

**BIO-RAD**

Revision date 26-Mar-2024

Revision Number 1.1

## 1. Identification

### 1.1 Product identifier

1.1.1 Technical Name

Stop Solution

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use: In-vitro laboratory reagent or component.

Catalog Number(s)

R6/FCOM130

### 1.2 Detailed information about the manufacturer, supplier, and/or importer

1.2.1 Company Name

1.2.2

#### 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  
USA

#### Legal Entity / Contact Address

ООО «Био-Рад Лаборатории»  
Нижний Сусальный переулок, дом 5,  
строение 5А  
105064  
Москва  
Российская Федерация

1.2.3 Emergency contact information

8-800-700-30-78.

1.2.4 FAX

None

1.2.5 E-mail

diag\_support\_rcis@bio-rad.com

## 2. Hazard(s) identification

### 2.1 Classification of the substance or mixture

#### GHS Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3
Corrosive to metals	Category 1

### 2.2 GHS Label elements, including precautionary statements

2.2.1 Signal word

Warning



2.2.2 Hazard symbols

2.2.3 Hazard statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H412 - Harmful to aquatic life with long lasting effects

H290 - May be corrosive to metals

## Precautionary statements

P264 - Wash face, hands and any exposed skin thoroughly after handling. P280 - Wear eye protection/ face protection. P337 + P313 - If eye irritation persists: Get medical advice/attention. P234 - Keep only in original container. P406 - Store in corrosive resistant aluminum container with a resistant inner liner.

## PBT and vPvB assessment

No information available.

Chemical name	PBT and vPvB assessment
Ethylenediaminetetraacetic acid	The substance is not PBT / vPvB
Disodium carbonate	The substance is not PBT / vPvB
Sodium hydroxide	The substance is not PBT / vPvB

## Endocrine Disruptor Information

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

**2.3 Other hazards**

Not applicable.

**3. Composition/information on ingredients****3.1 General product information**

3.1.1 Chemical name (according to IUPAC)

3.1.2 Chemical formula

3.1.3 General characteristics of the product  
(including brand and product range; production method)

**3.2 Mixture**

(name, CAS and EC numbers, mass fractions (totaling 100%), MAC (Maximum Available Concentrations) or TSEL (Tentative Safe Exposure Level), hazard classifications and references to the sources of data)

		Occupational exposure limits			
Chemical name	Weight-%	MAC, mg/m <sup>3</sup>	Hazard class	CAS No	EC No (EU Index No)
Ethylenediaminetetraacetic acid	4.3	2	3	60-00-4	200-449-4 (607-429-00-8)
Disodium carbonate	4.2	2	3, +	497-19-8	207-838-8 (011-005-00-2)
Sodium hydroxide	1.6			1310-73-2	215-185-5 (011-002-00-6)

**4. First-aid measures****4.1 Symptoms**

4.1.1

In case of inhalation poisoning (inhalation)	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
4.1.2 Skin contact	Specific test data for the substance or mixture is not available Causes skin irritation (based on components).
4.1.3 Eye contact	Specific test data for the substance or mixture is not available Irritating to eyes (based on components). Causes serious eye irritation.
4.1.4 Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
<b>4.2 Description of necessary first aid measures</b>	
4.2.1 Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.
4.2.2 Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
4.2.3 Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
4.2.4 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.
4.2.5 Contraindications	Treat symptomatically. Never give anything by mouth to an unconscious person.

## 5. Fire-fighting measures

5.1 General description of fire and explosion hazards (according to GOST 12.1.044-89)	No information available.
5.2 Indicators of fire and explosion hazards	Flammability group: No information available.
Flash point	Not applicable
Minimum Ignition Temperature (°C)	Not applicable
Autoignition temperature	Not applicable
Lower and upper explosion limit/flammability	Concentration limit (%): Not applicable

limit	
SADT (self-accelerating decomposition temperature)	Temperature range: Not applicable Not applicable
Smoke production	Not applicable
Polymer combustion product toxicity index	Not applicable
Maximum Pressure Rise (bar)	Not applicable
Maximum Rate of Pressure Rise (bar/sec)	Not applicable
5.3	
Combustion and/or thermal decomposition products and their hazards	No information available.
5.4	
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
5.5	
Unsuitable extinguishing media	No information available.
5.6	
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
5.7	
Advice for firefighters	Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

## 6. Accidental release measures

### 6.1 Measures to prevent harm to people, property and the environment in case of an accident or an emergency

#### 6.1.1

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.

#### 6.1.2

Personal Protective Equipment for emergency situations (PPE for first responders)

Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

### 6.2 Procedures for dealing with accidents and emergencies

#### 6.2.1

Actions in case of leaks and spills (including measures for containment and clean-up, and to ensure protection of the environment)

Prevent further leakage or spillage if safe to do so.

Refer to protective measures listed in Sections 7 and 8.

#### 6.2.2

Actions in case of fire

Evacuate area and fight fire from a safe distance.

## 7. Handling and storage

### 7.1 Precautions for safe handling

#### 7.1.1

Appropriate engineering controls

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

#### 7.1.2

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Ensure control measures are regularly inspected and maintained. Prevent leaks and prevent soil / water pollution caused by leaks.

#### 7.1.3

Recommendations for safe movement and transportation

See section 14 for more information:

Transport in accordance with the rules for the carriage of goods in force for each mode of transport. 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.

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

#### 7.2.1

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials. Store according to product and label instructions.

Incompatible materials

Oxidizing agent. Strong acids. Strong bases.

#### 7.2.2

Packaging materials

No information available.

#### 7.3

Safety measures for household use and storage

Not intended for household use.

## 8. Exposure controls/personal protection

### 8.1

Control parameters

Chemical name	Type	MAC, mg/m <sup>3</sup>	Remarks
Ethylenediaminetetraacetic acid	MAC	2	Aerosol
Disodium carbonate	MAC	2	Aerosol, Avoid contact with skin and eyes

### 8.2

Appropriate engineering controls

Provide adequate ventilation. When not in use, keep

### 8.3 Personal protective equipment

#### 8.3.1

General hygiene considerations

containers tightly closed.

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing.

#### 8.3.2

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.

#### 8.3.3

Personal protection equipment

Skin and body protection:

Wear suitable protective clothing. Long sleeved clothing.

Hand protection:

Wear suitable gloves. Impervious gloves.

Eye/face protection:

If splashes are likely to occur, wear safety glasses with side-shields.

#### 8.3.4

Personal protective equipment for household use

Not intended for household use.

## 9. Physical and chemical properties

### 9.1 Physical state

(aggregate state, color, odor)

Liquid

Appearance: aqueous solution

Color: colorless

Odor: Odorless

### 9.2 Information on basic physical and chemical properties

(transition temperatures, pH, solubility, Log Kow (coefficient of n-Octanol/water) and other parameters specific to the type of product)

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	10.4	
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	> 100 °C	
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Upper/lower flammability or explosive limits		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Solubility(ies)		
Water solubility	No data available	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

<b>Decomposition temperature</b>	No data available	None known
<b>Viscosity</b>		
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Other information</b>		
<b>Oxidizing properties</b>	Not applicable	
<b>Explosive properties</b>	Not applicable	
<b>Softening point</b>	Not applicable	

## 10. Stability and reactivity

### 10.1

Chemical stability	Stable under normal conditions.
Sensitivity to mechanical impact:	None.
Sensitivity to static discharge:	None.
Hazardous decomposition products:	None under normal use conditions.

### 10.2

Reactivity	No information available.
Possibility of hazardous reactions:	None under normal processing.

### 10.3

Conditions to avoid	Exposure to air or moisture over prolonged periods.
Incompatible materials:	Oxidizing agent. Strong acids. Strong bases.

## 11. Toxicological information

### 11.1

General characteristics of exposure (assessment of health hazard (toxicity) and typical symptoms of exposure)	Redness. May cause redness and tearing of the eyes.
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### 11.2 Information on the likely routes of exposure

In case of inhalation poisoning (inhalation)	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
Skin contact	Specific test data for the substance or mixture is not available Causes skin irritation (based on components).
Eye contact	Specific test data for the substance or mixture is not available Irritating to eyes (based on components). Causes serious eye irritation.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

11.3 Target organs, tissues and biological systems	No information available.
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### 11.4

Information on hazard of direct contact with the product, as well as the consequences of such contact (e.g. irritation of upper respiratory tract, eyes or skin; skin-absorption and sensitizing actions)	The information presented below only applies to the material as supplied.
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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.

11.5 Information on long-term effects of exposure (e.g. reproductive toxicity, carcinogenicity, mutagenicity, cumulative and other chronic effects) The information presented below only applies to the material as supplied.

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.

Aspiration hazard: Based on available data, the classification criteria are not met.

11.6 Acute toxicity data (LD50 with route of exposure and animal species; LC50 with exposure time (h) and animal species)

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

ATEmix (oral) 12,345.70 mg/kg  
ATEmix (dermal) 34,901.80 mg/kg

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylenediaminetetraacetic acid	> 2000 mg/kg ( Rat )	-	-



Disodium carbonate	= 4090 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	= 2300 mg/m <sup>3</sup> ( Rat ) 2 h
Sodium hydroxide	= 325 mg/kg ( Rat )	= 1350 mg/kg ( Rabbit )	-

## 12. Ecological information

### 12.1

General description of the effects on the environment (atmospheric air, water, soil, including symptoms of exposure)

Environment, air: Air emission controls are not applicable as there is no direct release to air.

Environment, water: Negligible wastewater emissions as process operates without water contact.

Environment, soil: Soil emission controls are not applicable as there is no direct release to soil. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases. A leak prevention plan is needed to prevent low level continual releases.

### 12.2

Possible routes of release to the environment

Violation of the rules on storage and transportation of products. This product could affect the environment if incorrectly stored and transported, the waste is incinerated, it is discharged into bodies of water, or if there is an accident or emergency. Chemical Incidents.

## 12.3 Most important characteristics of the environmental impact

### 12.3.1

Hygienic standards (allowable concentrations in atmospheric air, water, including fishery waters, soils)

Chemical name	MAC or TSEL of atmospheric air, mg/m <sup>3</sup> (LHI <sup>1</sup> , hazard class)	MAC water <sup>2</sup> or AAL water, mg/l, (LHI, hazard class)	MAC or TAL of fishery waters <sup>3</sup> , mg/l (LHI, hazard class)	MAC or AAC of soil, mg/kg (LHI)
Ethylenediaminetetraacetic acid - 60-00-4	Not established	MACwater: 0.2 Hazard class 2	Not established	Not established
Disodium carbonate - 497-19-8	MAC <sub>atm</sub> : 0.15 0.05  res Hazard class 3	Not established	MAC <sub>fish</sub> : 5.0 2.83  san.-tox Hazard class 3 Hazard class 4	Not established
Sodium hydroxide - 1310-73-2	TSEL <sub>atm</sub> : 0.01	Not established	Hazard class 4	Not established

*1 - LHI – Limiting Hazard Indicator (tox. – toxicological; s.-t. (san.-tox.) – sanitary-toxicological; org. – organoleptic with indication of the nature of changes regarding organoleptic properties of water; sm. – changes the smell of the water; turb. – increases turbidity; col. – gives color to water; foam – causes foaming; film – forms a film on the water surface; taste. – gives the taste to water; opa. – causes opalescence); refl. – reflexive; res.. – resorptive; refl.-res. – reflexive-resorptive; fishery – fishery (changes in commercial quality of aquatic organisms); san. – general-sanitary)*

2 - Bodies of water used for drinking and household use

3 - Bodies of water with fishery significance (including sea waters)

### 12.3.2

Ecotoxicity data (LC50, EC50, NOEC for fish, Daphnia magna, algae and other)

Chemical name	Algae/aquatic plants	Fish	Crustacea
Ethylenediaminetetraacetic acid	EC50: =1.01mg/L (72h, <i>Desmodesmus subspicatus</i> )	LC50: 34 - 62mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: 44.2 - 76.5mg/L (96h, <i>Pimephales promelas</i> )	EC50: =113mg/L (48h, <i>Daphnia magna</i> )
Disodium carbonate	-	LC50: =300mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: 310 - 1220mg/L (96h, <i>Pimephales promelas</i> )	EC50: =265mg/L (48h, <i>Daphnia magna</i> )
Sodium hydroxide	-	LC50: =45.4mg/L (96h, <i>Oncorhynchus mykiss</i> )	-

### 12.3.3

Migration and transformation in the environment due to biodegradation and other processes (oxidation, hydrolysis, etc.)

Persistence and degradability: No information available. Bioaccumulation: No information available. Mobility in soil: No information available. Mobility: No information available.

## 13. Disposal considerations

### 13.1

Safety precautions when handling waste arising from use, storage and transportation

Ensure waste is collected and contained.

### 13.2

Information about the places and methods of decontamination, recycling or disposal of waste, including packaging material

Waste from residues/unused products:

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

### 13.3

Recommendations regarding disposal of waste generated when products are used in household applications

Not intended for household use.

## 14. Transport information

14.1 UN Number (according to the UN Recommendations on the Transport of Dangerous

UN3266

Goods)

14.2 Proper shipping name

Description

UN3266, CORROSIVE LIQUID, BASIC,  
INORGANIC, N.O.S. (Sodium hydroxide), 8, III

14.3 Appropriate transportation methods

May be transported by all modes of transport in accordance with the rules of transport for dangerous goods effective for the transport of each type.

14.4 Classification of dangerous goods according to GOST 19433-88

Transport hazard class(es)

8

Classification code

C5

14.5 Classification of dangerous goods according to the UN Recommendations on the Transport of Dangerous Goods

Transport hazard class(es)

8

Packing group

III

Special Provisions

274

14.6 Transport labeling (symbols according to GOST 14192-96)

14.7 Emergency cards (for transportation by rail, sea and other ways)

IMDG EmS-No:

F-A, S-B

IATA ERG Code:

None

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

Marine transport (IMDG) Special Provisions

223, 274

## 15. Regulatory information

### 15.1 National regulations

15.1.1 Laws of the Russian Federation

Federal law "On the sanitary-epidemiological welfare of the population"

Federal law "On technical regulation"

Federal law "On production and consumption wastes"

Federal law "On industrial safety of hazardous industrial objects"

Federal law "On Environmental Protection"

Federal law "On the protection of atmospheric air"

Federal law "On Fire Safety"

The Law of the Russian Federation "On Standardization"

"Law on Consumer Protection"

15.1.2 Information about the documents regulating the requirements for protection of people and the environment None

15.2 International conventions and agreements (e.g. whether the product is regulated by the Montreal Protocol, the Stockholm Convention and others)  
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

## 16. Other information

16.1 Safety Passport Revision Information (for example, "First issue" or "SP has been reissued due to expiration of the original SP. The prior SP No... ." or "Changes have been made to the following sections... revision date...")

Revision date	26-Mar-2024
Revision Number	1.1
Revision Note	Reformatted and updated existing information

### 16.2 Key literature references and sources for data used to compile the SDS

This safety data sheet was created pursuant to the requirements of: The Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Technical Regulation "On Safety of Chemical Products", GOST 30333, GOST 31340, GOST 19433, GOST 14192, GOST 32419, GOST 32421, GOST 32423, GOST 32424, GOST 32425, R 50.1.102, R 50.1.101.

Hazardous Substance Database:

Agency for Toxic Substances and Disease Registry (ATSDR) - Agency for Toxic Substances and Disease Registry (ATSDR)

CHEMVIEW not translate code - U.S. Environmental Protection Agency ChemView Database

EFSA not translate code - European Food Safety Authority (EFSA)

EPA not translate code - EPA (Environmental Protection Agency)

EPA\_AEGL not translate code - Acute Exposure Guideline Level(s) (AEGL(s))

EPA\_FIFRA not translate code - U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

EPA\_HPVS not translate code - U.S. Environmental Protection Agency High Production Volume Chemicals

FOOD\_JOURN not translate code - Food Research Journal

HSDB not translate code - Hazardous Substance Database

IUCLID not translate code - International Uniform Chemical Information Database (IUCLID)

JAPAN\_GHS not translate code - Japan GHS Classification

NICNAS not translate code - Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH not translate code - NIOSH (National Institute for Occupational Safety and Health)

NLM\_CIP not translate code - National Library of Medicine's ChemID Plus (NLM CIP)

NLM\_PUBMED not translate code - National Library of Medicine's PubMed database (NLM PUBMED)

NTP not translate code - National Toxicology Program (NTP)

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NZ\_CCID not translate code - New Zealand's Chemical Classification and Information Database (CCID)  
OECD\_EHSP not translate code - Organization for Economic Co-operation and Development  
Environment, Health, and Safety Publications  
OECD\_HPVS not translate code - Organization for Economic Co-operation and Development High  
Production Volume Chemicals Program  
OECD\_SIDS not translate code - Organization for Economic Co-operation and Development Screening  
Information Data Set  
WHO not translate code - World Health Organization

*4 The item numbers of the data sources are given in each paragraph of the SDS as links*

**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

# SAFETY DATA SHEET

**BIO-RAD**

Revision date 26-Mar-2024

Revision Number 1.1

## 1. Identification

### 1.1 Product identifier

1.1.1 Technical Name

Substrate

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use: In-vitro laboratory reagent or component.

Catalog Number(s)

R5/FCOM120

### 1.2 Detailed information about the manufacturer, supplier, and/or importer

1.2.1 Company Name

1.2.2

#### 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  
USA

#### Legal Entity / Contact Address

ООО «Био-Рад Лаборатории»  
Нижний Сусальный переулок, дом 5,  
строение 5А  
105064  
Москва  
Российская Федерация

1.2.3 Emergency contact information

8-800-700-30-78.

1.2.4 FAX

None

1.2.5 E-mail

diag\_support\_rcis@bio-rad.com

## 2. Hazard(s) identification

### 2.1 Classification of the substance or mixture

#### GHS Classification

Skin corrosion/irritation	Category 3
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 2
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3

### 2.2 GHS Label elements, including precautionary statements

2.2.1 Signal word

Danger



2.2.2 Hazard symbols

2.2.3 Hazard statements

H316 - Causes mild skin irritation

H318 - Causes serious eye damage

H351 - Suspected of causing cancer  
H371 - May cause damage to organs  
H412 - Harmful to aquatic life with long lasting effects

## Precautionary statements

P280 - Wear eye protection/ face protection. P310 - Immediately call a POISON CENTER or doctor.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection. P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

## PBT and vPvB assessment

No information available.

Chemical name	PBT and vPvB assessment
Diethanolamine	The substance is not PBT / vPvB
Hydrochloric acid	The substance is not PBT / vPvB
5-Bromo-5-nitro-1,3-dioxane	The substance is not PBT / vPvB

## Endocrine Disruptor Information

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

**2.3 Other hazards**

Not applicable.

**3. Composition/information on ingredients****3.1 General product information**

- 3.1.1 Chemical name (according to IUPAC)
- 3.1.2 Chemical formula
- 3.1.3 General characteristics of the product (including brand and product range; production method)

**3.2 Mixture**

(name, CAS and EC numbers, mass fractions (totaling 100%), MAC (Maximum Available Concentrations) or TSEL (Tentative Safe Exposure Level), hazard classifications and references to the sources of data)

		Occupational exposure limits			
Chemical name	Weight-%	MAC, mg/m <sup>3</sup>	Hazard class	CAS No	EC No (EU Index No)
Diethanolamine	5	5	3, +	111-42-2	203-868-0 (603-071-00-1)
Hydrochloric acid	0.21	5	2, O	7647-01-0	231-595-7 (017-002-00-2)
5-Bromo-5-nitro-1,3-dioxane	0.21	3	3, +	30007-47-7	250-001-7

**4. First-aid measures****4.1 Symptoms**

## 4.1.1

In case of inhalation poisoning (inhalation)

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

## 4.1.2

Skin contact

Specific test data for the substance or mixture is not available. May cause irritation. Causes mild skin irritation.

## 4.1.3

Eye contact

Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.

## 4.1.4

Ingestion

Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**4.2 Description of necessary first aid measures**

## 4.2.1

Inhalation

Remove to fresh air. Get medical attention immediately if symptoms occur. IF exposed or concerned: Get medical advice/attention.

## 4.2.2

Skin contact

Wash off immediately with soap and plenty of water for at least 15 minutes. If symptoms persist, call a physician.

## 4.2.3

Eye contact

Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

## 4.2.4

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.

## 4.2.5

Contraindications

Treat symptomatically. Never give anything by mouth to an unconscious person.

**5. Fire-fighting measures**

## 5.1

General description of fire and explosion hazards (according to GOST 12.1.044-89)

No information available.

## 5.2

Indicators of fire and explosion hazards

Flash point

Flammability group: No information available.

Minimum Ignition Temperature (°C)

Not applicable

Not applicable



Autoignition temperature	Not applicable
Lower and upper explosion limit/flammability limit	Concentration limit (%): Not applicable
SADT (self-accelerating decomposition temperature)	Temperature range: Not applicable
Smoke production	Not applicable
Polymer combustion product toxicity index	Not applicable
Maximum Pressure Rise (bar)	Not applicable
Maximum Rate of Pressure Rise (bar/sec)	Not applicable
5.3 Combustion and/or thermal decomposition products and their hazards	No information available.
5.4 Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
5.5 Unsuitable extinguishing media	No information available.
5.6 Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
5.7 Advice for firefighters	Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

## 6. Accidental release measures

### 6.1 Measures to prevent harm to people, property and the environment in case of an accident or an emergency

6.1.1 Personal precautions, protective equipment and emergency procedures	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas.
6.1.2 Personal Protective Equipment for emergency situations (PPE for first responders)	Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

### 6.2 Procedures for dealing with accidents and emergencies

6.2.1 Actions in case of leaks and spills (including measures for containment and clean-up, and to ensure protection of the environment)	Prevent further leakage or spillage if safe to do so.
	Refer to protective measures listed in Sections 7 and

## 6.2.2

Actions in case of fire

8.

Evacuate area and fight fire from a safe distance.

## 7. Handling and storage

### 7.1 Precautions for safe handling

## 7.1.1

Appropriate engineering controls

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.

## 7.1.2

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Ensure control measures are regularly inspected and maintained. Prevent leaks and prevent soil / water pollution caused by leaks.

## 7.1.3

Recommendations for safe movement and transportation

See section 14 for more information:

Transport in accordance with the rules for the carriage of goods in force for each mode of transport. 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.

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

## 7.2.1

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.

Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

## 7.2.2

Packaging materials

No information available.

## 7.3

Safety measures for household use and storage

Not intended for household use.

## 8. Exposure controls/personal protection

## 8.1

Control parameters

Chemical name	Type	MAC, mg/m <sup>3</sup>	Remarks
Diethanolamine	MAC	5	Aerosol, Vapor, Avoid contact with skin and eyes
Hydrochloric acid	MAC	5	Vapor, Substances requiring automatic control over their content in the air
5-Bromo-5-nitro-1,3-dioxane	MAC	3	Aerosol, Avoid contact with skin and eyes

## 8.2

Appropriate engineering controls

Provide adequate ventilation. When not in use, keep containers tightly closed. Where a chemical is classified for hazards such as carcinogenicity, it may not be possible to establish safe exposure limits. The principles of substitution and segregation of work areas from other activities should be used to minimize exposures.

**8.3 Personal protective equipment**

## 8.3.1

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. Wash hands before breaks and immediately after handling the product.

## 8.3.2

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.

## 8.3.3

Personal protection equipment

Skin and body protection:

Wear suitable protective clothing.

Hand protection:

Wear suitable gloves.

Eye/face protection:

Tight sealing safety goggles.

## 8.3.4

Personal protective equipment for household use

Not intended for household use.

**9. Physical and chemical properties**

## 9.1 Physical state

(aggregate state, color, odor)

Liquid

Appearance: aqueous solution

Color: light yellow

Odor: Odorless

## 9.2 Information on basic physical and chemical properties

(transition temperatures, pH, solubility, Log Kow (coefficient of n-Octanol/water) and other parameters specific to the type of product)

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	8.5	
<b>Melting point / freezing point</b>	No data available	None known
<b>Initial boiling point and boiling range</b>	> 100 °C	
<b>Flash point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability</b>	No data available	None known
<b>Upper/lower flammability or explosive limits</b>		
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known

Relative vapor density	No data available	None known
Relative density	No data available	None known
Solubility(ies)		
Water solubility	No data available	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	No data available	None known
Viscosity		
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
<b>Other information</b>		
Oxidizing properties	Not applicable	
Explosive properties	Not applicable	
Softening point	Not applicable	

## 10. Stability and reactivity

### 10.1

Chemical stability	Stable under normal conditions.
Sensitivity to mechanical impact:	None.
Sensitivity to static discharge:	None.
Hazardous decomposition products:	None under normal use conditions.

### 10.2

Reactivity	No information available.
Possibility of hazardous reactions:	None under normal processing.

### 10.3

Conditions to avoid	None known.
Incompatible materials:	Strong acids. Strong bases. Strong oxidizing agents.

## 11. Toxicological information

### 11.1

General characteristics of exposure (assessment of health hazard (toxicity) and typical symptoms of exposure)	Redness. Burning. May cause blindness. Prolonged contact may cause redness and irritation.
---	--

### 11.2 Information on the likely routes of exposure

In case of inhalation poisoning (inhalation)	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available. May cause irritation. Causes mild skin irritation.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

11.3 Target organs, tissues and biological systems	No information available.
--	---------------------------

## 11.4

Information on hazard of direct contact with the product, as well as the consequences of such contact (e.g. irritation of upper respiratory tract, eyes or skin; skin-absorption and sensitizing actions)

The information presented below only applies to the material as supplied.

Skin corrosion/irritation:

May cause skin irritation. Classification based on data available for ingredients.

Serious eye damage/eye irritation:

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

Respiratory or skin sensitization:

Based on available data, the classification criteria are not met.

11.5 Information on long-term effects of exposure (e.g. reproductive toxicity, carcinogenicity, mutagenicity, cumulative and other chronic effects)

The information presented below only applies to the material as supplied.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met

Carcinogenicity:

Contains a known or suspected carcinogen. Classification based on data available for ingredients. Suspected of causing cancer.

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

Chemical name	IARC	European Union
Diethanolamine 111-42-2	Group 2B	-
Hydrochloric acid 7647-01-0	Group 3	-

*Legend*

*IARC (International Agency for Research on Cancer)*

*Group 2B - Possibly Carcinogenic to Humans*

*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 the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target

organ toxicity from acute exposure. (STOT SE). May cause damage to organs.

Aspiration hazard:

Based on available data, the classification criteria are not met.

11.6 Acute toxicity data (LD50 with route of exposure and animal species; LC50 with exposure time (h) and animal species)

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

ATEmix (oral) 12,722.40 mg/kg

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Diethanolamine	= 780 mg/kg ( Rat )	= 11.9 mL/kg ( Rabbit )	-
Hydrochloric acid	238 - 277 mg/kg ( Rat )	> 5010 mg/kg ( Rabbit )	= 1.68 mg/L ( Rat ) 1 h
5-Bromo-5-nitro-1,3-dioxane	= 455 mg/kg ( Rat )	-	-

## 12. Ecological information

### 12.1

General description of the effects on the environment (atmospheric air, water, soil, including symptoms of exposure)

Environment, air: Air emission controls are not applicable as there is no direct release to air.  
 Environment, water: Negligible wastewater emissions as process operates without water contact.  
 Environment, soil: Soil emission controls are not applicable as there is no direct release to soil. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases. A leak prevention plan is needed to prevent low level continual releases.

### 12.2

Possible routes of release to the environment

Violation of the rules on storage and transportation of products. This product could affect the environment if incorrectly stored and transported, the waste is incinerated, it is discharged into bodies of water, or if there is an accident or emergency. Chemical Incidents.

## 12.3 Most important characteristics of the environmental impact

### 12.3.1

Hygienic standards (allowable concentrations in atmospheric air, water, including fishery waters, soils)

Chemical name	MAC or TSEL of atmospheric air, mg/m <sup>3</sup> (LHI <sup>1</sup> , hazard class)	MAC water <sup>2</sup> or AAL water, mg/l, (LHI, hazard class)	MAC or TAL of fishery waters <sup>3</sup> , mg/l (LHI, hazard class)	MAC or AAC of soil, mg/kg (LHI)
Diethanolamine - 111-42-2	TSELatm: 0.05	MACwater: 0.8  org.tast. Hazard class 4	MACfish: 0.01  toxicological Hazard class 3	Not established
Hydrochloric acid - 7647-01-0	MACatm: 0.2 0.1  refl. - res Hazard class 2	Not established	Not established	Not established

1 - LHI – Limiting Hazard Indicator (tox. – toxicological; s.-t. (san.-tox.) – sanitary-toxicological; org. – organoleptic with indication of the nature of changes regarding organoleptic properties of water; sm. – changes the smell of the water; turb. – increases turbidity; col. – gives color to water; foam – causes foaming; film – forms a film on the water surface; taste. – gives the taste to water; opa. – causes opalescence); refl. – reflexive; res.. – resorptive; refl.-res. – reflexive-resorptive; fishery – fishery (changes in commercial quality of aquatic organisms); san. – general-sanitary)

2 - Bodies of water used for drinking and household use

3 - Bodies of water with fishery significance (including sea waters)

### 12.3.2

Ecotoxicity data (LC50, EC50, NOEC for fish, Daphnia magna, algae and other)

Chemical name	Algae/aquatic plants	Fish	Crustacea
Diethanolamine	EC50: =7.8mg/L (72h, <i>Desmodesmus subspicatus</i> ) EC50: 2.1 - 2.3mg/L (96h, <i>Pseudokirchneriella subcapitata</i> )	LC50: 4460 - 4980mg/L (96h, <i>Pimephales promelas</i> ) LC50: 1200 - 1580mg/L (96h, <i>Pimephales promelas</i> ) LC50: 600 - 1000mg/L (96h, <i>Lepomis macrochirus</i> )	EC50: =55mg/L (48h, <i>Daphnia magna</i> )

### 12.3.3

Migration and transformation in the environment due to biodegradation and other processes (oxidation, hydrolysis, etc.)

Persistence and degradability: No information available. Bioaccumulation: There is no data for this product. Mobility in soil: No information available. Mobility: No information available.

## 13. Disposal considerations

### 13.1

Safety precautions when handling waste arising from use, storage and transportation

Ensure waste is collected and contained.

### 13.2

Information about the places and methods of decontamination, recycling or disposal of waste, including packaging material

Waste from residues/unused products:

Dispose of in accordance with local regulations.

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

13.3

Recommendations regarding disposal of waste generated when products are used in household applications

Not intended for household use.

## 14. Transport information

14.1 UN Number (according to the UN Recommendations on the Transport of Dangerous Goods)

14.2 Proper shipping name

14.3 Appropriate transportation methods

May be transported by all modes of transport in accordance with the rules of transport for dangerous goods effective for the transport of each type.

14.4 Classification of dangerous goods according to GOST 19433-88

14.5 Classification of dangerous goods according to the UN Recommendations on the Transport of Dangerous Goods

14.6 Transport labeling (symbols according to GOST 14192-96)

14.7 Emergency cards (for transportation by rail, sea and other ways)

IMDG EmS-No:

None

IATA ERG Code:

None

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

Marine transport (IMDG) Special Provisions

None

## 15. Regulatory information

### 15.1 National regulations

15.1.1 Laws of the Russian Federation

Federal law "On the sanitary-epidemiological welfare of the population"

Federal law "On technical regulation"

Federal law "On production and consumption wastes"

Federal law "On industrial safety of hazardous



industrial objects"  
 Federal law "On Environmental Protection"  
 Federal law "On the protection of atmospheric air"  
 Federal law "On Fire Safety"  
 The Law of the Russian Federation "On  
 Standardization"  
 "Law on Consumer Protection"

15.1.2 Information about the documents regulating the requirements for protection of people and the environment None

15.2 International conventions and agreements (e.g. whether the product is regulated by the Montreal Protocol, the Stockholm Convention and others)  
 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

## 16. Other information

16.1 Safety Passport Revision Information (for example, "First issue" or "SP has been reissued due to expiration of the original SP. The prior SP No... ." or "Changes have been made to the following sections... revision date...")

Revision date	26-Mar-2024
Revision Number	1.1
Revision Note	Reformatted and updated existing information

### 16.2 Key literature references and sources for data used to compile the SDS

This safety data sheet was created pursuant to the requirements of: The Globally Harmonized System of Classification and Labeling of Chemicals (GHS), Technical Regulation "On Safety of Chemical Products", GOST 30333, GOST 31340, GOST 19433, GOST 14192, GOST 32419, GOST 32421, GOST 32423, GOST 32424, GOST 32425, R 50.1.102, R 50.1.101.

Hazardous Substance Database:

Agency for Toxic Substances and Disease Registry (ATSDR) - Agency for Toxic Substances and Disease Registry (ATSDR)  
 CHEMVIEW not translate code - U.S. Environmental Protection Agency ChemView Database  
 EFSA not translate code - European Food Safety Authority (EFSA)  
 EPA not translate code - EPA (Environmental Protection Agency)  
 EPA\_AEGL not translate code - Acute Exposure Guideline Level(s) (AEGL(s))  
 EPA\_FIFRA not translate code - U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 EPA\_HPV not translate code - U.S. Environmental Protection Agency High Production Volume Chemicals  
 FOOD\_JOURN not translate code - Food Research Journal  
 HSDB not translate code - Hazardous Substance Database  
 IUCLID not translate code - International Uniform Chemical Information Database (IUCLID)

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JAPAN\_GHS not translate code - Japan GHS Classification

NICNAS not translate code - Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH not translate code - NIOSH (National Institute for Occupational Safety and Health)

NLM\_CIP not translate code - National Library of Medicine's ChemID Plus (NLM CIP)

NLM\_PUBMED not translate code - National Library of Medicine's PubMed database (NLM PUBMED)

NTP not translate code - National Toxicology Program (NTP)

NZ\_CCID not translate code - New Zealand's Chemical Classification and Information Database (CCID)

OECD\_EHSP not translate code - Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

OECD\_HPVP not translate code - Organization for Economic Co-operation and Development High Production Volume Chemicals Program

OECD\_SIDS not translate code - Organization for Economic Co-operation and Development Screening Information Data Set

WHO not translate code - World Health Organization

*4 The item numbers of the data sources are given in each paragraph of the SDS as links*

**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