

# KIT SAFETY DATA SHEET



**Kit Product Name** qUAntify Plus Control

**Kit Catalogue Number(s)** 962, 962X, 995, 995X

**Revision date** 06-Jan-2021

## Kit Contents

Catalogue Number(s)	Product Name
963	qUAntify Plus Control, Level 1
964	qUAntify Plus Control, Level 2



# SAFETY DATA SHEET

This safety data sheet complies with the requirements of:  
SS586: 2008 (2014)

Revision date 06-Jan-2021

Revision Number 1

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

### Product identifier

**Product Name** qUAntify Plus Control, Level 1

### Other means of identification

**Catalogue Number(s)** 963

**Pure substance/mixture** Mixture

Contains Phosphoric acid

### Recommended use of the chemical and restrictions on use

**Recommended use** In vitro diagnostic

**Uses advised against** No information available

### Details of the supplier of the safety data sheet

#### Corporate Headquarters

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

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
9500 Jeronimo Road  
Irvine, California 92618-2017  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.  
1st and 2nd Floor, Lumpini 1 Building  
239/2, Rajdamri Road, Lumpini,  
Pathumwan, Bangkok 10330  
Thailand

For further information, please contact

**Technical Service** +66 2 652 8313  
ctsthailand@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Singapore: 65-31581349

## SECTION 2: Hazards identification

### GHS Classification

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

### Label elements



**Signal word**

Warning

**Hazard statements**

H332 - Harmful if inhaled

H315 - Causes skin irritation

H319 - Causes serious eye irritation

**Precautionary Statements - Prevention**

Avoid breathing dust/fume/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

Specific treatment (see .? on this label)

If skin irritation occurs: Get medical advice/attention

Take off all contaminated clothing and wash it before reuse

IF ON SKIN: Wash with plenty of water and soap

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

Call a POISON CENTRE or doctor if you feel unwell

IF INHALED: Remove person to fresh air and keep comfortable for breathing

**Other hazards which do not result in classification****SECTION 3: Composition/information on ingredients****Substance**

Not applicable

**Mixture**

Chemical name	EC No	CAS No	Weight-%
Phosphoric acid	231-633-2	7664-38-2	1 - 2.5
Sodium hydroxide	215-185-5	1310-73-2	0.3 - 0.999
Sodium azide	247-852-1	26628-22-8	0.01 - 0.099
Benzyl alcohol	202-859-9	100-51-6	0.01 - 0.099

Non-hazardous  
ingredients

Proprietary

Balance

**SECTION 4: First aid measures****Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance.

**Inhalation**

Get medical attention immediately if symptoms occur. Remove to fresh air. If symptoms persist, call a doctor. If breathing has stopped, give artificial respiration. Get medical attention immediately.

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

**Skin contact**

Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists. Wash skin with soap and water.

**Ingestion** Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention. Call a doctor. Contains human source material and / or potentially infectious components.

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

**Symptoms** May cause redness and tearing of the eyes. Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

**For emergency responders**

**Self-protection of the first aider** Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapours or mists. Use personal protective equipment as required. See section 8 for more information.

**Indication of any immediate medical attention and special treatment needed**

**Note to doctors** Contains human source material and / or potentially infectious components.

## **SECTION 5: Firefighting measures**

**Suitable Extinguishing Media**

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

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** None known.

**Special protective actions for fire-fighters**

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

## **SECTION 6: Accidental release measures**

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

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Avoid breathing vapours or mists. Use personal protective equipment as required.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up**

**Methods for containment** Do not allow into any sewer, on the ground or into any body of water.

**Methods for cleaning up** Clean contaminated surface thoroughly. Use: Disinfectant.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## SECTION 7: Handling and storage

### Precautions for safe handling

**Advice on safe handling** Take off contaminated clothing and wash it before reuse. Avoid contact with skin, eyes or clothing. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapours or mists. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product.

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

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store according to product and label instructions.

## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Chemical name	Singapore	ACGIH TLV
Phosphoric acid 7664-38-2	PEL: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	STEL: 3 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>
Sodium hydroxide 1310-73-2	STEL: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>
Sodium azide 26628-22-8	STEL: 0.29 mg/m <sup>3</sup> STEL: 0.11 ppm	Ceiling: 0.29 mg/m <sup>3</sup> Sodium azide Ceiling: 0.11 ppm Hydrazoic acid vapor

#### Biological occupational exposure limits

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

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

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

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear suitable protective clothing.

**Hand protection** Impervious gloves. Wear suitable gloves.

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

**Environmental exposure controls** No information available.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	Clear to slightly cloudy
<b>Colour</b>	yellow
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	5.0-6.0	
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	Not applicable
<b>Flash point</b>	No data available	Not applicable
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapour pressure</b>	No data available	None known
<b>Vapour density</b>	No data available	None known
<b>Relative density</b>	No data available	None known
<b>Water solubility</b>	Miscible in water	
<b>Solubility(ies)</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>		None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	Not applicable	
<b>Oxidising properties</b>	Not applicable	
<b><u>Other information</u></b>	No information available	

## SECTION 10: Stability and reactivity

### Reactivity

<b>Reactivity</b>	No information available.
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### Chemical stability

<b>Stability</b>	Stable under normal conditions.
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### Explosion data

<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.

<b>Possibility of hazardous reactions</b>	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.
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### Conditions to avoid

<b>Conditions to avoid</b>	Excessive heat.
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### Incompatible materials

<b>Incompatible materials</b>	Strong acids. Strong bases. Strong oxidising agents. Metals.
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### Hazardous decomposition products

<b>Hazardous decomposition products</b>	None known based on information supplied.
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## SECTION 11: Toxicological information

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	May cause irritation of respiratory tract. Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components).
<b>Eye contact</b>	Irritating to eyes. Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components).
<b>Skin contact</b>	Causes skin irritation. (based on components). Specific test data for the substance or mixture is not available.
<b>Ingestion</b>	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Symptoms</b>	Redness. May cause redness and tearing of the eyes. Coughing and/ or wheezing.
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### Acute toxicity

#### Numerical measures of toxicity

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

<b>ATEmix (oral)</b>	88,745.40 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	2.26 mg/l

3.3 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )		
Urea	= 8471 mg/kg ( Rat )		
Phosphoric acid	= 1530 mg/kg ( Rat )	= 2740 mg/kg ( Rabbit )	> 850 mg/m <sup>3</sup> ( Rat ) 1 h
Sodium hydroxide	= 325 mg/kg ( Rat )	= 1350 mg/kg ( Rabbit )	
Sodium bicarbonate	= 4220 mg/kg ( Rat )		
Sodium azide	= 27 mg/kg ( Rat )	= 20 mg/kg ( Rabbit ) = 50 mg/kg ( Rat )	
Benzyl alcohol	= 1230 mg/kg ( Rat )	= 2 g/kg ( Rabbit )	= 8.8 mg/L ( Rat ) 4 h
Gentamicin, sulfate (salt)	> 5 g/kg ( Rat )		

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

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

<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>STOT - single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### Ecotoxicity

#### Ecotoxicity

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

Chemical name	Algae/aquatic plants	Fish	Crustacea
Phosphoric acid	-	LC50: 3 - 3.5mg/L (96h, <i>Gambusia affinis</i> )	EC50: =4.6mg/L (12h, <i>Daphnia magna</i> )
Sodium hydroxide	-	LC50: =45.4mg/L (96h, <i>Oncorhynchus mykiss</i> )	-
Sodium azide	-	LC50: =0.7mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =0.8mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: =5.46mg/L (96h, <i>Pimephales promelas</i> )	-
Benzyl alcohol	EC50: =35mg/L (3h, <i>Anabaena variabilis</i> )	LC50: =10mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =460mg/L (96h, <i>Pimephales promelas</i> )	EC50: =23mg/L (48h, water flea)

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

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

Chemical name	Partition coefficient
Benzyl alcohol	1.1

### Mobility

**Mobility in soil** No information available.

**PBT and vPvB assessment** . The product contains substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Phosphoric acid	The substance is not PBT / vPvB PBT assessment does not apply
Sodium hydroxide	The substance is not PBT / vPvB PBT assessment does not apply
Sodium azide	PBT assessment does not apply
Benzyl alcohol	The substance is not PBT / vPvB

### Other adverse effects



Other adverse effects No information available

## SECTION 13: Disposal considerations

### Waste treatment methods

**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.

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

## SECTION 14: Transport information

**ADR** Not regulated

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

**IATA** Not regulated

## SECTION 15: Regulatory information

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

#### Singapore

#### Environmental Protection and Management (Hazardous Substances) Regulations

Verify that licence requirements are met.

Chemical name	Hazardous Substances	transport
Phosphoric acid	Exclusions: Substances containing <=50%, weight in weight, of Phosphoric acid	
Sodium hydroxide	Exclusions: 1. Substances containing <=17%, weight in weight, of Sodium hydroxide. 2. Made-up formulated preparations either liquid or solid for biochemical tests	1000kg
Sodium azide	Exclusions: Air bag devices in motor vehicles	0kg

#### Environmental Public Health Act

Dispose of waste product or used containers according to local regulations.

#### Hazardous Waste (Control of Export, Import and Transit) Act

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

#### Workplace Safety and Health Act

See section 8 for national exposure control parameters. Comply with the health and safety at work laws.

#### International Regulations

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

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

#### **International Inventories**

Contact supplier for inventory compliance status

## **SECTION 16: Other information**

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
 Organisation for Economic Co-operation and Development Screening Information Data Set  
 RTECS (Registry of Toxic Effects of Chemical Substances)  
 World Health Organization

### **Label elements**

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray  
 P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P271 - Use only outdoors or in a well-ventilated area  
 P312 - Call a POISON CENTER or doctor if you feel unwell

**Issuing Date** Bio-Rad Laboratories, Environmental Health and Safety

**Revision date** 06-Jan-2021

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

**This safety data sheet complies with the requirements of: SS586: 2008 (2014)**

### **Disclaimer**

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

**End of Safety Data Sheet**



# SAFETY DATA SHEET

This safety data sheet complies with the requirements of:  
SS586: 2008 (2014)

Revision date 06-Jan-2021

Revision Number 1

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

### Product identifier

**Product Name** qUAntify Plus Control, Level 2

### Other means of identification

**Catalogue Number(s)** 964

**Pure substance/mixture** Mixture

Contains 5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone

### Recommended use of the chemical and restrictions on use

**Recommended use** In vitro diagnostic

**Uses advised against** No information available

### Details of the supplier of the safety data sheet

#### Corporate Headquarters

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

#### Manufacturer

Bio-Rad Laboratories, Diagnostic Group  
9500 Jeronimo Road  
Irvine, California 92618-2017  
USA

#### Legal Entity / Contact Address

Bio-Rad Laboratories Ltd.  
1st and 2nd Floor, Lumpini 1 Building  
239/2, Rajdamri Road, Lumpini,  
Pathumwan, Bangkok 10330  
Thailand

For further information, please contact

**Technical Service** +66 2 652 8313  
ctsthailand@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Singapore: 65-31581349

## SECTION 2: Hazards identification

### GHS Classification

<b>Skin sensitisation</b>	Category 1A
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### Label elements

**Signal word**

Warning

**Hazard statements**

H317 - May cause an allergic skin reaction

**Precautionary Statements - Prevention**

Avoid breathing dust/fume/gas/mist/vapours/spray

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves

**Precautionary Statements - Response**

If skin irritation or rash occurs: Get medical advice/attention

Take off all contaminated clothing and wash it before reuse

IF ON SKIN: Wash with plenty of water and soap

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other hazards which do not result in classification****SECTION 3: Composition/information on ingredients****Substance**

Not applicable

**Mixture**

Chemical name	EC No	CAS No	Weight-%
Trade secret	Listed	-	0.3 - 0.999
Acetone	200-662-2	67-64-1	0.3 - 0.999
Hydrochloric acid	231-595-7	7647-01-0	0.3 - 0.999
Benzyl alcohol	202-859-9	100-51-6	0.01 - 0.099
Sodium hydroxide	215-185-5	1310-73-2	0.01 - 0.099
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	-	55965-84-9	0.001 - 0.01

Non-hazardous ingredients

Proprietary

Balance

**SECTION 4: First aid measures****Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance.

**Inhalation**

Remove to fresh air.

**Eye contact**

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

**Skin contact**

Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. Wash skin with soap and water.

**Ingestion** Call a doctor. Contains human source material and / or potentially infectious components.

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

**Symptoms** Itching. Rashes. Hives.

**For emergency responders**

**Self-protection of the first aider** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to doctors** May cause sensitisation in susceptible persons. Treat symptomatically. Contains human source material and / or potentially infectious components.

## **SECTION 5: Firefighting measures**

**Suitable Extinguishing Media**

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

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** Product is or contains a sensitiser. May cause sensitisation by skin contact.

**Special protective actions for fire-fighters**

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

## **SECTION 6: Accidental release measures**

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

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

**Methods for containment** Do not allow into any sewer, on the ground or into any body of water.

**Methods for cleaning up** Clean contaminated surface thoroughly. Use: Disinfectant.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## **SECTION 7: Handling and storage**

**Precautions for safe handling**

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

**General hygiene considerations** Follow universal and standard precautions for handling potentially infectious materials.

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

**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.

## **SECTION 8: Exposure controls/personal protection**

### **Control parameters**

#### **Occupational exposure limits**

Chemical name	Singapore	ACGIH TLV
Trade secret	PEL: 1 mg/m <sup>3</sup>	STEL: 6 mg/m <sup>3</sup> inhalable particulate matter TWA: 2 mg/m <sup>3</sup> inhalable particulate matter
Acetone 67-64-1	PEL: 750 ppm PEL: 1780 mg/m <sup>3</sup> STEL: 1000 ppm STEL: 2380 mg/m <sup>3</sup>	STEL: 500 ppm TWA: 250 ppm
Hydrochloric acid 7647-01-0	STEL: 5 ppm STEL: 7.5 mg/m <sup>3</sup>	Ceiling: 2 ppm
Sodium hydroxide 1310-73-2	STEL: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>

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

Chemical name	Singapore	ACGIH
Acetone 67-64-1	No data available	25 mg/L - urine (Acetone) - end of shift

### **Appropriate engineering controls**

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

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

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear suitable protective clothing.

**Hand protection** Wear suitable gloves.

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

**Environmental exposure controls** No information available.

## **SECTION 9: Physical and chemical properties**

### **Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid
<b>Appearance</b>	Clear to slightly cloudy
<b>Colour</b>	yellow amber
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7.0-9.0	
Melting point / freezing point	No data available	Not applicable
Boiling point / boiling range	No data available	Not applicable
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	No data available	None known
Vapour density	No data available	None known
Relative density	No data available	None known
Water solubility	Miscible in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	Not applicable	
Oxidising properties	Not applicable	
<u>Other information</u>	No information available	

## SECTION 10: Stability and reactivity

### Reactivity

<b>Reactivity</b>	No information available.
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### Chemical stability

<b>Stability</b>	Stable under normal conditions.
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### Explosion data

<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.

<b>Possibility of hazardous reactions</b>	None under normal processing.
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### Conditions to avoid

<b>Conditions to avoid</b>	None known based on information supplied.
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### Incompatible materials

<b>Incompatible materials</b>	None known based on information supplied.
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### Hazardous decomposition products

<b>Hazardous decomposition products</b>	None known based on information supplied.
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## SECTION 11: Toxicological information



**Information on likely routes of exposure****Product Information**

<b>Inhalation</b>	Specific test data for the substance or mixture is not available.
<b>Eye contact</b>	Specific test data for the substance or mixture is not available.
<b>Skin contact</b>	May cause sensitisation by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
<b>Ingestion</b>	Specific test data for the substance or mixture is not available.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Itching. Rashes. Hives.

**Acute toxicity****Numerical measures of toxicity**

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

ATEmix (inhalation-dust/mist) 125.20 mg/l

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )		
Trade secret	= 2660 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 2 mg/m <sup>3</sup> ( Rat ) 4 h
Glucose	= 25800 mg/kg ( Rat )		
Acetone	= 5800 mg/kg ( Rat )	> 15700 mg/kg ( Rabbit )	= 50100 mg/m <sup>3</sup> ( Rat ) 8 h
Hydrochloric acid	238 - 277 mg/kg ( Rat )	> 5010 mg/kg ( Rabbit )	= 1.68 mg/L ( Rat ) 1 h
Urea	= 8471 mg/kg ( Rat )		
Benzyl alcohol	= 1230 mg/kg ( Rat )	= 2 g/kg ( Rabbit )	= 8.8 mg/L ( Rat ) 4 h
Sodium hydroxide	= 325 mg/kg ( Rat )	= 1350 mg/kg ( Rabbit )	
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	= 53 mg/kg ( Rat )		
Gentamicin, sulfate (salt)	> 5 g/kg ( Rat )		
Sodium nitrite	= 85 mg/kg ( Rat )		= 5.5 mg/L ( Rat ) 4 h

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

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

Chemical name	European Union
Trade secret	Repr. 1B

**STOT - single exposure** Based on available data, the classification criteria are not met.

**STOT - repeated exposure** Based on available data, the classification criteria are not met.

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

## SECTION 12: Ecological information

### Ecotoxicity

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

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

Chemical name	Algae/aquatic plants	Fish	Crustacea
Trade secret	EC50: 2.6 - 21.8mg/L (96h, Pseudokirchneriella subcapitata) EC50: =158mg/L (96h, Desmodesmus subspicatus)	LC50: =340mg/L (96h, Limanda limanda)	LC50: 1085 - 1402mg/L (48h, Daphnia magna)
Acetone	-	LC50: 4.74 - 6.33mL/L (96h, Oncorhynchus mykiss) LC50: 6210 - 8120mg/L (96h, Pimephales promelas) LC50: =8300mg/L (96h, Lepomis macrochirus)	EC50: 10294 - 17704mg/L (48h, Daphnia magna) EC50: 12600 - 12700mg/L (48h, Daphnia magna)
Hydrochloric acid	-	LC50: =282mg/L (96h, Gambusia affinis)	-
Benzyl alcohol	EC50: =35mg/L (3h, Anabaena variabilis)	LC50: =10mg/L (96h, Lepomis macrochirus) LC50: =460mg/L (96h, Pimephales promelas)	EC50: =23mg/L (48h, water flea)
Sodium hydroxide	-	LC50: =45.4mg/L (96h, Oncorhynchus mykiss)	-

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

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

Chemical name	Partition coefficient
Acetone	-0.24
Benzyl alcohol	1.1

### Mobility

**Mobility in soil** No information available.

**PBT and vPvB assessment** . The product contains substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
Trade secret	PBT assessment does not apply

Acetone	The substance is not PBT / vPvB
Hydrochloric acid	The substance is not PBT / vPvB PBT assessment does not apply
Benzyl alcohol	The substance is not PBT / vPvB
Sodium hydroxide	The substance is not PBT / vPvB PBT assessment does not apply
5-Chloro-2-methyl-3(2H)-isothiazolone, mixture with 2-methyl-3(2H)-isothiazolone	The substance is not PBT / vPvB

**Other adverse effects**

Other adverse effects No information available

**SECTION 13: Disposal considerations****Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

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

**SECTION 14: Transport information**

**ADR** Not regulated

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

**IATA** Not regulated

**SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****Singapore****Environmental Protection and Management (Hazardous Substances) Regulations**

Verify that licence requirements are met.

Chemical name	Hazardous Substances	transport
Trade secret	Exclusions: 1. Boric acid or Sodium borate in medicinal preparations, cosmetics, toilet preparations and substances being preparations intended for human consumption. 2. Preparations containing Boric acid or Sodium borate or a combination of both where water or solvent is not the only other part of the composition	5000kg Boric acid and Sodium borate, total
Hydrochloric acid	Present Exclusions: Substances containing <=9%, weight in weight, of Hydrochloric acid	1000kg all forms 500kg regulated under Hydrogen chloride
Sodium hydroxide	Exclusions: 1. Substances containing <=17%, weight in weight, of Sodium hydroxide. 2. Made-up formulated	1000kg

	preparations either liquid or solid for biochemical tests	
Chemical name	Tracking controls are required unless an exemption or exception applies	
Hydrochloric acid	X anhydrous;except <1 MT per trip	

**Environmental Public Health Act**

Dispose of waste product or used containers according to local regulations.

**Fire Safety (Petroleum and Flammable Materials) Regulations**

Verify that licence requirements are met.

Chemical name	Regulated	Hazard class
Acetone	SCDACE1090L2	3

**Hazardous Waste (Control of Export, Import and Transit) Act**

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Take note that wastes may be subject to export, import, or transit controls pursuant to the Basel convention and/or local regulations implementing the Basel convention.

**Misuse of Drugs Act**

Verify that requirements related to using, handling, and storing substances subject to prohibition, authorisation or restriction are met.

Chemical name	Misuse of Drugs Act
Acetone	Third schedule - Part II
Hydrochloric acid	Third schedule - Part II

**Poison**

Verify that licence requirements are met. Verify that requirements related to using, handling, and storing substances subject to prohibition, authorisation or restriction are met.

Chemical name	Poison	Poison Schedule Number
Trade secret	X	First schedule Second schedule Third schedule
Hydrochloric acid		First schedule

**Strategic Goods (Control) Act**

Verify that requirements related to using, handling, and storing substances subject to prohibition, authorisation or restriction are met.

Chemical name	Strategic Goods (Control) Act
Trade secret	1C225

**Workplace Safety and Health Act**

See section 8 for national exposure control parameters. Comply with the health and safety at work laws.

**International Regulations**

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

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**International Inventories**

Contact supplier for inventory compliance status

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet**

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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TWA Ceiling	TWA (time-weighted average) Maximum limit value	STEL *	STEL (Short Term Exposure Limit) Skin designation
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**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
Organisation for Economic Co-operation and Development Screening Information Data Set  
RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

**Label elements**

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray  
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention  
P362 + P364 - Take off contaminated clothing and wash it before reuse  
P501 - Dispose of contents/ container to an approved waste disposal plant

**Issuing Date** Bio-Rad Laboratories, Environmental Health and Safety

**Revision date** 06-Jan-2021

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

**This safety data sheet complies with the requirements of: SS586: 2008 (2014)**

**Disclaimer**

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**End of Safety Data Sheet**