



Revision Date 2022-09-12

Revision Number 4

1. Identification

A. Product identifier

Product Name 5X PrimeScript™ Buffer 2 (for Real Time)

Product Code SD2231

CAS No 7732-18-5

B. Relevant identified uses of the substance or mixture and uses advised against

Identified uses For research use only. Not for use in diagnostic procedures

Uses advised against No information available

C. Supplier's details

Supplier

Japan:

Takara Bio Inc.

Nojihigashi 7-4-38

Kusatsu, Shiga 525-0058, Japan

Phone: +81.77.565.6972

Web: www.takara-bio.com

Korea:

Takara Korea Biomedical Inc.

601, New T Castle, 108, Gasan Digital 2-ro, Geumcheon-gu

Seoul 08506, Korea

Phone: +82.2.2081.2525

Web: www.takara.co.kr

For further information, please contact: _____

Emergency telephone number In case of emergency, call PERS (Professional Emergency Resource Services) 1-800-633-8253 (US) or 801-629-0667 (international).

2. Hazard(s) identification

A. Classification of the substance or mixture

Not classified

B. GHS Label elements, including precautionary statements

Hazard symbols

Hazard Statements

Not classified

C. Other hazards which do not result in classification

Causes mild skin irritation.

3. Composition/information on ingredients

Substance

Not applicable

Mixture

Chemical name	Common name and synonyms	CAS No	Other identifier number	Weight-%	Approval number	Expiration date
Water	No information available	7732-18-5	KE-35400	90 - 100	-	-
TRADE SECRET	No information available	-	-	1 - 5	-	-
TRADE SECRET	No information available	-	-	0.1 - 1	-	-
TRADE SECRET	No information available	-	-	0.1 - 1	-	-
TRADE SECRET	No information available	-	-	0.1 - 1	-	-
dGTP	No information available	18423-40-0	-	0.1 - 1	-	-
dATP	No information available	1927-31-7	-	0.1 - 1	-	-
dTTP	No information available	18423-43-3	-	0.1 - 1	-	-
dCTP	No information available	102783-51-7	-	0.1 - 1	-	-

4. First-aid measures

A. In case of eye contact

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

B. In case of skin contact

Wash skin with soap and water.

C. In case of inhalation

Remove to fresh air.

D. In case of ingestion

Clean mouth with water and drink afterwards plenty of water.

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

Note to physicians Treat symptomatically.

Symptoms Prolonged contact may cause redness and irritation.

5. Fire-fighting measures

A. Suitable (and unsuitable) extinguishing media

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

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

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

B. Specific hazards arising from the chemical

No information available.

C. Special Protective Equipment for Firefighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

B. Environmental precautions

See Section 12 for additional Ecological Information.

C. Methods and material for containment and cleaning up

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

Methods for cleaning up Pick up and transfer to properly labeled containers.

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

7. Handling and storage

A. Precautions for safe handling

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

B. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

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

8. Exposure controls/personal protection

A. Control Parameters

Occupational exposure limits

Chemical name	OEL	PEL
TRADE SECRET	STEL 20 mg/m ³ TWA 10 mg/m ³	-

B. Appropriate engineering controls

Engineering controls Showers
Eyewash stations

Ventilation systems.

Environmental exposure controls No information available.

C. Personal Protective Equipment

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.

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

Hand protection Wear suitable gloves.

Body protection Wear suitable protective clothing.

9. Physical and chemical properties

Information on basic physical and chemical properties

A. Appearance Clear, colorless
Physical State Liquid
Color Clear
B. Odor Mild amine
C. Odor Threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
D. pH	No data available	None known
E. Melting point / freezing point	No information available	None known
F. Initial boiling point and boiling range	No information available	None known
G. Flash point	No information available	Open cup
H. Evaporation Rate	No information available	None known
I. Flammability (solid, gas)	No information available	None known
J. Upper/lower flammability or explosive limits		
Upper flammability limit:		No information available
Lower flammability limit:		No information available
K. Vapor pressure	No information available	None known
L. Solubility(ies)		
Water solubility	No information available	None known
Solubility in other solvents	No information available	None known
M. Vapor density	No information available	None known
N. Specific Gravity	No information available	None known
O. Partition coefficient: n-octanol/water	No information available	None known
P. Autoignition Point	No information available	None known
Q. Decomposition temperature		None known
R. Viscosity		
Kinematic viscosity	No information available	None known
Dynamic Viscosity	No information available	None known
S. Molecular weight	No information available	

Other information

Explosive properties No information available
Oxidizing properties No information available
Softening point No information available
VOC content No information available
Liquid Density No information available

10. Stability and reactivity

A. Chemical stability and possibility of hazardous reactions

Stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

B. Conditions to avoid

None known based on information supplied.

C. Incompatible materials

None known based on information supplied.

D. Hazardous Decomposition Products None known based on information supplied

11. Toxicological information

A. Information on the likely routes of exposure**Product Information**

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

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

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

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

Symptoms Prolonged contact may cause redness and irritation.

B. Health hazards information**Acute toxicity****Numerical measures of toxicity****Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)	-	-
TRADE SECRET	= 5900 mg/kg (Rat)	> 5000 mg/kg (Rat)	-
TRADE SECRET	= 2840 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
TRADE SECRET	= 2600 mg/kg (Rat)	-	-

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

Serious eye damage/irritation No information available.

Respiratory or skin sensitization No information available.

Carcinogenicity No information available.

Germ cell mutagenicity No information available.

Reproductive toxicity No information available.

Specific target organ toxicity (STOT) No information available.
– single exposure

Specific target organ toxicity (STOT) No information available.
– repeated exposure

Target organ effects No information available.

Aspiration hazard No information available.

12. Ecological information

A. Ecotoxicity

Percentage for unknown hazards 0.37163 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
TRADE SECRET	-	LC50: =250mg/L (96h, Brachydanio rerio) LC50: =480mg/L (96h, Brachydanio rerio) LC50: =420mg/L (96h, Brachydanio rerio) LC50: =18mg/L (96h, Cyprinus carpio) LC50: 32.2 - 41.9mg/L (96h, Oncorhynchus mykiss) LC50: 5.2 - 8.2mg/L (96h, Oncorhynchus mykiss) LC50: >100mg/L (96h, Pimephales promelas) LC50: 123 - 128mg/L (96h, Poecilia reticulata) LC50: =126mg/L (96h, Poecilia reticulata)	-	LC50: =14mg/L (48h, Daphnia magna)
TRADE SECRET	EC50: =2500mg/L (72h, Desmodesmus subspicatus)	LC50: =1060mg/L (96h, Lepomis macrochirus) LC50: 750 - 1020mg/L (96h, Pimephales promelas)	-	EC50: =825mg/L (48h, Daphnia magna) EC50: =83mg/L (48h, Daphnia magna)

B. Persistence and degradability No information available.

C. Bioaccumulative potential There is no data for this product.

Component Information

Chemical name	Partition coefficient
TRADE SECRET	-5.1

D. Mobility in soil No information available.

Mobility No information available.

E. Other adverse effects No information available.

13. Disposal considerations

A. Waste treatment methods

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

B. Disposal considerations

Contaminated packaging Do not reuse empty containers.

14. Transport information

A. UN number or ID number Not regulated
B. UN proper shipping name Not regulated
C. Transport hazard class(es) Not regulated
D. Packing group Not regulated
E. Marine pollutant Not applicable
F. Special precautions for user Not regulated

15. Regulatory information

A. Industrial Safety and Health Law Not applicable

Prohibited substance Not applicable

Substances Requiring Permission Not applicable

Harmful substances subject to control Not applicable

Harmful agents subject to work environment monitoring Not applicable

Harmful agents subject to workers requiring health examination Not applicable

Harmful or dangerous substances subject to submission of process safety reports Not applicable

Control parameters

See section 8 for national exposure control parameters

Chemical name	OEL	PEL
TRADE SECRET	Applicable	Not applicable

B. Chemicals Control Act Not applicable
Chemicals Control Act (CCA) - Accident Precaution Chemicals Not applicable

Act on Registration, Evaluation, etc. of Chemicals (K-REACH) Applicable

Chemical name	Existing substances subject to registration	Existing substances not likely to be subject to registration	Existing substances known to be of very low risk
Water	Not applicable	Not applicable	Applicable

C. Safety Control of Dangerous Substances Act Not applicable

D. Wastes Management Dispose of waste in accordance with environmental legislation.

E. Other Regulations No information available

International Inventories

IECSC

Legend:

TSCA - *United States Toxic Substances Control Act Section 8(b) Inventory*

DSL/NDSL - *Canadian Domestic Substances List/Non-Domestic Substances List*

EINECS/ELINCS - *European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

ENCS - *Japan Existing and New Chemical Substances*

IECSC - *China Inventory of Existing Chemical Substances*

KECL - *Korean Existing and Evaluated Chemical Substances*

PICCS - *Philippines Inventory of Chemicals and Chemical Substances*

AICS - *Australian Inventory of Chemical Substances*

16. Other information

A. Information source and references

Prepared By No information available.

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

ACGIH ACGIH (American Conference of Governmental Industrial Hygienists)

IMDG International Maritime Dangerous Goods (IMDG)

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	Time weighted average	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

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

B Revision number and date

Revision Number	4
Revision Date	2022-09-12

C. Other**Disclaimer**

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End of Safety Data Sheet