



# SAFETY DATA SHEET

According to WHS Regulations

Revision date 05-Jun-2024

Revision Number 2

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

### Product identifier

**Product Name** ddSEQ 3 Prime Tagmentation Buffer

**Catalogue Number(s)** 12019996

### Other means of identification

**Pure substance/mixture** Mixture

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

**Recommended use** Laboratory chemicals

**Uses advised against** No information available

### Details of manufacturer or importer

#### Corporate Headquarters

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

#### Manufacturer

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

#### Legal Entity / Contact Address

Bio-Rad Laboratories Pty Ltd  
u1A, 62 Ferndell Street,  
South Granville NSW 2142  
Australia

For further information, please contact

**Technical Service** +61 2 9914 2800 or 1800 224 354  
sales.australia@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC Australia: 61-290372994

**Emergency telephone number** No information available

## SECTION 2: Hazards identification

### GHS Classification

<b>Flammable liquids</b>	Category 4 - (H227)
<b>Acute toxicity - Dermal</b>	Category 4 - (H312)
<b>Acute toxicity - Inhalation (Gases)</b>	Category 4 - (H332)
<b>Acute toxicity - Inhalation (Dusts/Mists)</b>	Category 4 - (H332)
<b>Serious eye damage/eye irritation</b>	Category 2 - (H319)
<b>Carcinogenicity</b>	Category 1B - (H350)
<b>Reproductive toxicity</b>	Category 1B - (H360)

### Label elements

Exclamation mark  
Health hazard

**Signal word**

Danger

**Hazard statements**

H227 - Combustible liquid

H312 - Harmful in contact with skin

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H350 - May cause cancer

H360 - May damage fertility or the unborn child

**Precautionary Statements - Prevention**

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

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

Use only outdoors or in a well-ventilated area

Wash face, hands and any exposed skin thoroughly after handling

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

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

IF ON SKIN: Wash with plenty of water and soap

Call a POISON CENTRE or doctor if you feel unwell

Take off all contaminated clothing and wash it before reuse

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

Call a POISON CENTRE or doctor if you feel unwell

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**Other hazards which do not result in classification**

May be harmful if swallowed

**SECTION 3: Composition/information on ingredients****Substance**

Not applicable

**Mixture**

Chemical name	CAS No.	Weight-%
N,N-Dimethylformamide	68-12-2	50 - 100
Non-hazardous ingredients	Proprietary	Balance

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

<b>General advice</b>	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
<b>Emergency telephone number</b>	Poisons Information Centre, Australia: 13 11 26 Poisons Information Centre, New Zealand: 0800 764 766
<b>Inhalation</b>	Remove to fresh air. If symptoms persist, call a doctor. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a doctor.
<b>Ingestion</b>	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.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid breathing vapours or mists. Use personal protective equipment as required. See section 8 for more information.

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

<b>Symptoms</b>	May cause redness and tearing of the eyes. Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.
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**Indication of any immediate medical attention and special treatment needed**

<b>Note to doctors</b>	Treat symptomatically.
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**SECTION 5: Firefighting measures****Suitable Extinguishing Media**

<b>Suitable Extinguishing Media</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Water spray. Alcohol resistant foam.
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<b>Unsuitable extinguishing media</b>	No information available.
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**Specific hazards arising from the chemical**

<b>Specific hazards arising from the chemical</b>	Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray.
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**Special protective actions for fire-fighters**

<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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**SECTION 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Take precautionary measures against static discharges. Do
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not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Avoid breathing vapours or mists.

**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**

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so.

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

**Methods for containment**

Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dyke far ahead of liquid spill for later disposal.

**Methods for cleaning up**

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

**Precautions to prevent secondary hazards**

**Prevention of secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations.

## SECTION 7: Handling and storage

**Precautions for safe handling**

**Advice on safe handling**

Use personal protection equipment. Do not breathe vapour or mist. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation. 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. Remove contaminated clothing and shoes. In case of insufficient ventilation, wear suitable respiratory equipment.

**General hygiene considerations**

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

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

**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up. Keep out of the reach of children. Store according to product and label instructions.

**Incompatible materials**

None known based on information supplied.

## SECTION 8: Exposure controls/personal protection

**Control parameters**

**Exposure Limits**

Chemical name	Australia	ACGIH TLV
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N,N-Dimethylformamide 68-12-2	TWA: 10 ppm TWA: 30 mg/m <sup>3</sup>	TWA: 5 ppm S*
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**Biological occupational exposure limits**

Chemical name	Australia	ACGIH
N,N-Dimethylformamide 68-12-2	-	30 mg/L - urine (total N-Methylformamide) - end of shift 30 mg/L - urine (N-Acetyl-S-(N-methylcarbamoyl)cyste ine) - end of shift at end of workweek

**Appropriate engineering controls**

Engineering controls	Showers Eyewash stations Ventilation systems.
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**Individual protection measures, such as personal protective equipment**

Eye/face protection	Tight sealing safety goggles.
Skin and body protection	Wear suitable protective clothing. Long sleeved 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**

Physical state	Liquid
Appearance	aqueous solution
Colour	colourless
Odour	Amine.
Odour threshold	No information available

Property	Values	Remarks • Method
pH	6.5-7.5	
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	153 °C	
Flash point	61 °C	
Evaporation rate	No data available	None known
Flammability	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
Relative 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	
<b>Other information</b>		
Molecular weight	Not applicable	
VOC content	Not applicable	
Liquid Density	0.95	

## SECTION 10: Stability and reactivity

### Reactivity

Reactivity No information available.

### Chemical stability

Stability Stable under normal conditions.

### Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

### Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

### Conditions to avoid

Conditions to avoid Heat, flames and sparks. Excessive heat.

### Incompatible materials

Incompatible materials None known based on information supplied.

### Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

## SECTION 11: Toxicological information

### Acute toxicity

### Information on likely routes of exposure

#### Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract Harmful by inhalation (based on components).
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.
Skin contact	Specific test data for the substance or mixture is not available. May cause irritation.

Prolonged contact may cause redness and irritation. May be absorbed through the skin in harmful amounts Harmful in contact with skin (based on components).

**Ingestion**

Specific test data for the substance or mixture is not available Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea May be harmful if swallowed

**Symptoms**

May cause redness and tearing of the eyes. Coughing and/ or wheezing.

**Numerical measures of toxicity - Product Information**

No information available

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

ATEmix (oral)	4,666.70 mg/kg
ATEmix (dermal)	1,833.30 mg/kg
ATEmix (inhalation-gas)	5,016.70 mg/l
ATEmix (inhalation-dust/mist)	2.50 mg/l

**Unknown acute toxicity**

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

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

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
N,N-Dimethylformamide	= 2800 mg/kg ( Rat )	= 1100 mg/kg ( Rat )	> 5.85 mg/L ( Rat ) 4 h

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Skin corrosion/irritation**

May cause skin irritation.

**Serious eye damage/eye irritation**

Classification based on data available for ingredients. Causes serious eye irritation.

**Respiratory or skin sensitisation**

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

**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. May cause cancer.

**Reproductive toxicity**

Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.

**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**

**Unknown aquatic toxicity** 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
N,N-Dimethylformamide	EC50: >500mg/L (96h, <i>Desmodesmus subspicatus</i> )	LC50: =6300mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =9800mg/L (96h, <i>Oncorhynchus mykiss</i> ) LC50: =10410mg/L (96h, <i>Pimephales promelas</i> )	-	EC50: =7500mg/L (48h, <i>Daphnia magna</i> ) EC50: =8485mg/L (48h, <i>Daphnia magna</i> ) EC50: 6800 - 13900mg/L (48h, <i>Daphnia magna</i> )

#### Persistence and degradability

**Persistence and degradability** No information available.

#### Bioaccumulative potential

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

#### Component Information

Chemical name	Partition coefficient
N,N-Dimethylformamide	-1.028

#### Mobility

**Mobility in soil** No information available.

**Mobility** No information available.

#### Other adverse effects

**Other adverse effects**

#### Endocrine Disruptor Information

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
N,N-Dimethylformamide	Group III Chemical	-	-

### SECTION 13: Disposal considerations

#### Disposal methods

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

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

### SECTION 14: Transport information

**ADG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated



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

No information available

**SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**

See section 8 for national exposure control parameters

**Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)**

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poison Schedule Number** 6**National pollutant inventory**

Subject to reporting requirement

Chemical name	National pollutant inventory
N,N-Dimethylformamide - 68-12-2	20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total 400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total

**International Inventories**

Contact supplier for inventory compliance status

**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**SECTION 16: Other information****Prepared By** Bio-Rad Laboratories, Environmental Health and Safety**Revision date** 05-Jun-2024**Revision Note** Reformatted and updated existing 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	Sk*	Skin designation
C	Carcinogen		

**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)  
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)  
U.S. 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

**Disclaimer**

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**End of Safety Data Sheet**