

# KIT SAFETY DATA SHEET



**Kit Product Name** Immun-Blot Goat Anti-Mouse AP Kit

**Kit Catalogue Number(s)** 1706461, 1706461EDU

**Revision date** 09-Mar-2021

## Kit Contents

Catalogue Number(s)	Product Name
9701068	AP Color Reagent B
1706435, 9702901, 1706435EDU	10x TBS
1706606, 1705017, 1706531, 1705017EDU, 1706531EDU, 1706531XTU, 9702906, 9701059, 25116	Tween 20
1706537, 9701117	Gelatin
1706520, 1706520EDU, 9701105, 9702902	Goat Anti-Mouse IgG (H+L) AP Conjugate
9702818	25X AP Color Development Buffer
9701067	AP Color Reagent A

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

### Product identifier

Product Name AP Color Reagent B

Catalogue Number(s) 9701068

### Other means of identification

Proper shipping name FLAMMABLE LIQUID, N.O.S. (N,N-Dimethylformamide)

UN number UN1993

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

Recommended use Laboratory chemicals

Uses advised against No information available

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

#### 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  
189 Bush Road  
Auckland  
New Zealand

#### Technical Service

+64 9 415 2280 or 0508 805 500  
sales.nz@bio-rad.com

### Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC New Zealand: 64-98010034

## SECTION 2: Hazards identification

### GHS Classification

Flammable liquids	Category 3 (HSNO - 3.1C)
Flammable liquids	Category 3 (HSNO - 3.1C)
Acute toxicity - Oral	Category 5 (HSNO - 6.1E)
Acute toxicity - Dermal	Category 4 (HSNO - 6.1D)
Acute toxicity - Inhalation (Gases)	Category 4 (HSNO - 6.1D)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 (HSNO - 6.1D)
Serious eye damage/eye irritation	Category 2A (HSNO - 6.4A)
Reproductive toxicity	Category 1B (HSNO - 6.8A)

### Label elements



**Signal word**

Warning

**Hazard statements**

H226 - Flammable liquid and vapour  
H226 - Flammable liquid and vapour  
H303 - May be harmful if swallowed  
H312 - Harmful in contact with skin  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H360 - May damage fertility or the unborn child

**Precautionary Statements - Prevention**

Do not handle until all safety precautions have been read and understood  
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  
Ground and bond container and receiving equipment  
Use non-sparking tools  
Take action to prevent static discharges  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Keep container tightly closed

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

**Eyes**

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

**Skin**

Call a POISON CENTRE or doctor if you feel unwell  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]  
Wash contaminated clothing before reuse

**Inhalation**

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

**Fire**

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

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep cool

**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**

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.
<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. 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.
<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. 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.

**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>	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
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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. See section 8 for more information. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Avoid breathing vapours or mists. Use personal
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protective equipment as required.

**Other information** Ventilate the area. 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 product from entering drains. 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. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers 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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Remove contaminated clothing and shoes. Avoid contact with skin, eyes or clothing. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapours or mists. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product.

**General hygiene considerations** 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. Do not eat, drink or smoke when using this product.

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

**Storage Conditions** 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. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up. 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.

**Incompatible materials** None known based on information supplied.

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

#### **Control parameters**

**Exposure Limits**

Chemical name	New Zealand	ACGIH TLV	United Kingdom	Australia
N,N-Dimethylformamide 68-12-2	TWA: 10 ppm TWA: 30 mg/m <sup>3</sup> Skin	TWA: 5 ppm S*	TWA: 5 ppm TWA: 15 mg/m <sup>3</sup> STEL: 10 ppm STEL: 30 mg/m <sup>3</sup> Sk*	10 ppm 30 mg/m <sup>3</sup>

**Biological occupational exposure limits**

Chemical name	New Zealand	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)cysteine) - end of shift at end of workweek

**Appropriate engineering controls**

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

<b>Eye/face protection</b>	Tight sealing safety goggles.
<b>Hand protection</b>	Impervious gloves. Wear suitable gloves.
<b>Skin and body protection</b>	Chemical resistant apron. Antistatic boots. Long sleeved clothing. Wear suitable protective clothing.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Environmental exposure controls</b>	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 liquid
<b>Colour</b>	colourless
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available

<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>
<b>pH</b>	No information available	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	100 °C	None known
<b>Flash point</b>	58 °C	None known
<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	

Vapour pressure	No data available	None known
Vapour density	No data available	None known
Relative density	No data available	None known
Water solubility	Immiscible 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	

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

#### Acute toxicity

#### Numerical measures of toxicity

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

ATEmix (oral) 4,000.0000 mg/kg  
 ATEmix (dermal) 1,571.40 mg/kg  
 ATEmix (inhalation-gas) 4,300.00 mg/l  
 ATEmix (inhalation-dust/mist) 2.14 mg/l

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
N,N-Dimethylformamide	= 2800 mg/kg ( Rat ) = 2000 mg/kg ( Rat )	= 1100 mg/kg ( Rat ) > 3.2 g/kg ( Rat )	-

#### 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.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** .

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

Chemical name	New Zealand	IARC
N,N-Dimethylformamide - 68-12-2	-	Group 2A

#### Legend

**IARC (International Agency for Research on Cancer)**  
 Group 2A - Probably Carcinogenic to Humans

**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.  
**Respiratory irritation** Based on available data, the classification criteria are not met.  
**Narcotic effects** 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** .

**Aquatic 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	Crustacea
N,N-Dimethylformamide	EC50: >500mg/L (96h, <i>Desmodesmus subspicatus</i> )	LC50: =10410mg/L (96h, <i>Pimephales promelas</i> ) LC50: =6300mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =9800mg/L (96h, <i>Oncorhynchus mykiss</i> )	EC50: 6800 - 13900mg/L (48h, <i>Daphnia magna</i> ) EC50: =7500mg/L (48h, <i>Daphnia magna</i> ) EC50: =8485mg/L (48h, <i>Daphnia magna</i> )

**Terrestrial ecotoxicity** There is no data for this product.

**Persistence and degradability** No information available.

#### Bioaccumulative potential

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

Chemical name	Partition coefficient
N,N-Dimethylformamide	-1.028

#### Mobility in soil

#### Other adverse effects

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

#### Waste treatment methods

**Contaminated packaging** For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from.

Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance).

### SECTION 14: Transport information

#### IATA

**UN number** UN1993  
**UN proper shipping name** Flammable liquid, n.o.s.  
**Transport hazard class(es)** 3  
**Packing group** III  
**ERG Code** 3L  
**Special Provisions** A3  
**Description** UN1993, Medicines, flammable, liquid, n.o.s. (N,N-Dimethylformamide), 3, III

#### IMDG

**UN number** UN1993

UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
Transport hazard class(es)	3
Packing group	III
EmS-No	F-E, S-E
Special Provisions	223, 274, 955
Marine pollutant	NP
Description	UN1993, FLAMMABLE LIQUID, N.O.S. (N,N-Dimethylformamide), 3, III, (58°C C.C.)

**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****New Zealand**

Chemical name	New Zealand HSNO Chemical Classification
N,N-Dimethylformamide - 68-12-2	3.1C,6.1D (All),6.1D (D),6.1D (O),6.3B,6.4A,6.8A,6.9A (All),6.9A (I),6.9A (O),9.3C

**National regulations**

See Section 8 for any applicable tolerable exposure limits and environmental exposure limits

**Certified handlers, tracking and controlled substance license requirements**

Certified handlers are required for some substances. This includes for substances requiring a controlled substance license, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

**EPA New Zealand HSNO approval code or group standard** Not applicable

**International Inventories**

Contact supplier for inventory compliance status

**Legend:****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** 23-Dec-2020

**Revision Note**

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

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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

**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

Revision date 09-Jan-2021

Revision Number 1

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

### Product identifier

**Product Name** 10x TBS  
**Catalogue Number(s)** 1706435, 9702901, 1706435EDU

### Other means of identification

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

**Recommended use** Laboratory chemicals  
**Uses advised against** No information available

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

#### 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  
189 Bush Road  
Albany Auckland  
New Zealand

**Technical Service** +64 9 415 2280 or 0508 805 500  
sales.nz@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC New Zealand: 64-98010034

## SECTION 2: Hazards identification

### GHS Classification

Not classified

### Label elements

### Hazard statements

### Other hazards which do not result in classification

## SECTION 3: Composition/information on ingredients

Chemical name	CAS No	Weight-%
Non-hazardous ingredients	Proprietary	Balance

## SECTION 4: First aid measures

### Description of first aid measures

<b>General advice</b>	No hazards which require special first aid measures.
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Rinse mouth thoroughly with water.

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

**Symptoms** No information available.

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

**Note to doctors** Treat symptomatically.

**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** See section 8 for more information.

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

**Methods for cleaning up** 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** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

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

**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).

**Hand protection** Wear suitable gloves.

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

**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** Odourless.  
**Odour threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	7-8	
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
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>		
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	
Liquid Density	1.18	

## 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 None.

### Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

### Conditions to avoid

Conditions to avoid None known based on information supplied.

### Incompatible materials

Incompatible materials None known based on information supplied.

### Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

## SECTION 11: Toxicological information

**Acute toxicity****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>	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.
<b>Symptoms</b>	No information available.

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

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

<b>ATEmix (oral)</b>	10,274.00 mg/kg
<b>ATEmix (dermal)</b>	34,280.80 mg/kg

**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>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>Respiratory irritation</b>	Based on available data, the classification criteria are not met.
<b>Narcotic effects</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****Aquatic ecotoxicity**

<b>Unknown aquatic toxicity</b>	2.34192 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.
<b>Terrestrial ecotoxicity</b>	There is no data for this product.



**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation** No information available.

**Mobility in soil**

**Other adverse effects**

No information available.

## **SECTION 13: Disposal considerations**

**Waste treatment methods**

**Contaminated packaging**

For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from

Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance)

## **SECTION 14: Transport information**

**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**

**New Zealand**

**National regulations**

See Section 8 for any applicable tolerable exposure limits and environmental exposure limits

**Certified handlers, tracking and controlled substance license requirements**

Certified handlers are required for some substances. This includes for substances requiring a controlled substance license, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

**EPA New Zealand HSNO approval code or group standard** Not applicable

#### **International Inventories**

Contact supplier for inventory compliance status

#### **Legend:**

#### **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** 09-Jan-2021

#### **Revision Note**

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

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

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	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)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AELG(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

#### **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

Revision date 23-Dec-2020

Revision Number 1

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

### Product identifier

**Product Name** Tween 20

**Catalogue Number(s)** 1706606, 1705017, 1706531, 1705017EDU, 1706531EDU, 1706531XTU, 9702906, 9701059, 25116

### Other means of identification

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

**Recommended use** Laboratory chemicals

**Uses advised against** No information available

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

#### 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  
189 Bush Road  
Albany Auckland  
New Zealand

**Technical Service** +64 9 415 2280 or 0508 805 500  
sales.nz@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC New Zealand: 64-98010034

## SECTION 2: Hazards identification

### GHS Classification

Not classified

### Label elements

**Hazard statements**

### Other hazards which do not result in classification

## SECTION 3: Composition/information on ingredients

Chemical name	CAS No	Weight-%
Polyoxyethylene sorbitan monolaurate	9005-64-5	50 - 100

## SECTION 4: First aid measures

### Description of first aid measures

General advice	No hazards which require special first aid measures.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash skin with soap and water.
Ingestion	Rinse mouth thoroughly with water.

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

Symptoms	No information available.
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### Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
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## SECTION 5: Firefighting measures

### Suitable Extinguishing Media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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Unsuitable extinguishing media	No information available.
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### 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	See section 8 for more information.
For emergency responders	Use personal protection recommended in Section 8.

### Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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### 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 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** Handle in accordance with good industrial hygiene and safety practice.

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

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

**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).

**Hand protection** Wear suitable gloves.

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

**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** Liquid  
**Colour** light yellow  
**Odour** Odourless.

**Odour threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	110 °C	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>		
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	

## 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** None.

### Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

### Conditions to avoid

**Conditions to avoid** None known based on information supplied.

### Incompatible materials

**Incompatible materials** None known based on information supplied.

### Hazardous decomposition products

**Hazardous decomposition products** None known based on information supplied.

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

Symptoms No information available.

### Acute toxicity

#### Numerical measures of toxicity

##### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Polyoxyethylene sorbitan monolaurate	= 37000 mg/kg ( Rat ) = 36700 µL/kg ( Rat )	-	-

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

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.
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.
Respiratory irritation	Based on available data, the classification criteria are not met.
Narcotic effects	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 The environmental impact of this product has not been fully investigated.

#### Aquatic ecotoxicity

Terrestrial ecotoxicity There is no data for this product.



**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation** No information available.

**Mobility in soil**

**Other adverse effects**

No information available.

## **SECTION 13: Disposal considerations**

**Waste treatment methods**

**Contaminated packaging** For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from  
Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance)

## **SECTION 14: Transport information**

**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**

**New Zealand**

**National regulations** See Section 8 for any applicable tolerable exposure limits and environmental exposure limits

**Certified handlers, tracking and controlled substance license requirements** Certified handlers are required for some substances. This includes for substances requiring a controlled substance license, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information  
Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information  
Controlled substance licenses are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at

Work Regulation 2017 for more information

**EPA New Zealand HSNO approval code or group standard** Not applicable

#### **International Inventories**

Contact supplier for inventory compliance status

#### **Legend:**

#### **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** 23-Dec-2020

#### **Revision Note**

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

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

##### **Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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

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**End of Safety Data Sheet**



# SAFETY DATA SHEET

Revision date 23-Dec-2020

Revision Number 1

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

### Product identifier

**Product Name** Gelatin  
**Catalogue Number(s)** 1706537, 9701117

### Other means of identification

**CAS No** 9000-70-8

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

**Recommended use** Laboratory chemicals  
**Uses advised against** No information available

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

#### 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  
189 Bush Road  
Albany Auckland  
New Zealand

**Technical Service** +64 9 415 2280 or 0508 805 500  
sales.nz@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC New Zealand: 64-98010034

## SECTION 2: Hazards identification

### GHS Classification

Not classified

### Label elements

**Hazard statements**

### Other hazards which do not result in classification

## SECTION 3: Composition/information on ingredients

Chemical name	CAS No	Weight-%
Gelatin	9000-70-8	50 - 100

## SECTION 4: First aid measures

### Description of first aid measures

General advice	No hazards which require special first aid measures.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash skin with soap and water.
Ingestion	Rinse mouth thoroughly with water.

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

Symptoms	No information available.
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### Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.
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## 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	See section 8 for more information.
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	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	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** Handle in accordance with good industrial hygiene and safety practice.

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

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

**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).

**Hand protection** Wear suitable gloves.

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

**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** Solid  
**Appearance** Powder  
**Colour** yellow  
**Odour** Sulphurous.

**Odour threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
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	Soluble 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>		
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	

## 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** None.

### Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

### Conditions to avoid

**Conditions to avoid** None known based on information supplied.

### Incompatible materials

**Incompatible materials** None known based on information supplied.

### Hazardous decomposition products

**Hazardous decomposition products** None known based on information supplied.

**SECTION 11: Toxicological information****Acute toxicity****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>	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.

**Symptoms** No information available.

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

No information available

**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>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>Respiratory irritation</b>	Based on available data, the classification criteria are not met.
<b>Narcotic effects</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** The environmental impact of this product has not been fully investigated.

**Aquatic ecotoxicity**

**Terrestrial ecotoxicity** There is no data for this product.

**Persistence and degradability** No information available.

**Bioaccumulative potential**



**Bioaccumulation** No information available.

**Mobility in soil**

**Other adverse effects**

No information available.

## **SECTION 13: Disposal considerations**

**Waste treatment methods**

**Contaminated packaging**

For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from

Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance)

## **SECTION 14: Transport information**

**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**

**New Zealand**

**National regulations**

See Section 8 for any applicable tolerable exposure limits and environmental exposure limits

**Certified handlers, tracking and controlled substance license requirements**

Certified handlers are required for some substances. This includes for substances requiring a controlled substance license, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

**EPA New Zealand HSNO approval code or group standard**

Not applicable

**International Inventories**

Contact supplier for inventory compliance status

**Legend:****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** 23-Dec-2020**Revision Note**

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

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	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)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AELG(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

**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

Revision date 09-Jan-2021

Revision Number 1

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

### Product identifier

**Product Name** Goat Anti-Mouse IgG (H+L) AP Conjugate  
**Catalogue Number(s)** 1706520, 1706520EDU, 9701105, 9702902

### Other means of identification

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

**Recommended use** Laboratory chemicals  
**Uses advised against** No information available

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

#### 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  
189 Bush Road  
Albany Auckland  
New Zealand

**Technical Service** +64 9 415 2280 or 0508 805 500  
sales.nz@bio-rad.com

### Emergency telephone number

**24 Hour Emergency Phone Number** CHEMTREC New Zealand: 64-98010034

## SECTION 2: Hazards identification

### GHS Classification

Not classified

### Label elements

### **Hazard statements**

### Other hazards which do not result in classification

## SECTION 3: Composition/information on ingredients

Chemical name	CAS No	Weight-%
Sodium azide	26628-22-8	0.1 - 0.299
Non-hazardous ingredients	Proprietary	Balance

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

<b>General advice</b>	No hazards which require special first aid measures.
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Rinse mouth thoroughly with water.

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

<b>Symptoms</b>	No information available.
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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>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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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>	None known.
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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>	See section 8 for more information.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.

**Environmental precautions**

<b>Environmental precautions</b>	See Section 12 for additional Ecological Information.
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**Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	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** Handle in accordance with good industrial hygiene and safety practice.

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

**Storage Conditions** Store according to product and label instructions.

**Incompatible materials** Metals.

**SECTION 8: Exposure controls/personal protection****Control parameters****Exposure Limits**

Chemical name	New Zealand	ACGIH TLV	United Kingdom	Australia
Sodium azide 26628-22-8	Ceiling: 0.11 ppm Ceiling: 0.29 mg/m <sup>3</sup>	Ceiling: 0.29 mg/m <sup>3</sup> Sodium azide Ceiling: 0.11 ppm Hydrazoic acid vapor	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup> Sk*	0.11 ppm Peak 0.3 mg/m <sup>3</sup> Peak

**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).

**Hand protection** Wear suitable gloves.

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

**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>	aqueous solution
<b>Colour</b>	colourless
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	No information available	None known
<b>Melting point / freezing point</b>	0 °C	
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash point</b>	No data available	None known
<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>		
<b>Molecular weight</b>	Not applicable	
<b>VOC Content (%)</b>	Not applicable	

## 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.
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<b>Sensitivity to static discharge</b>	None.
----------------------------------------	-------

### Possibility of hazardous reactions

<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>	None known based on information supplied.
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### Incompatible materials

**Incompatible materials** Metals.

#### 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.

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

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

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

**Symptoms** No information available.

#### Acute toxicity

#### Numerical measures of toxicity

#### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium azide	= 27 mg/kg ( Rat )	= 20 mg/kg ( Rabbit ) = 50 mg/kg ( Rat )	-

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

**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.

**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.  
**Respiratory irritation** Based on available data, the classification criteria are not met.  
**Narcotic effects** 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** .

**Aquatic 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	Crustacea
Sodium azide	-	LC50: =0.7mg/L (96h, Lepomis macrochirus) LC50: =0.8mg/L (96h, Oncorhynchus mykiss) LC50: =5.46mg/L (96h, Pimephales promelas)	-

**Terrestrial ecotoxicity** There is no data for this product.

**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation** No information available.

**Mobility in soil****Other adverse effects**

No information available.

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

**Contaminated packaging** For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from  
Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance)

**SECTION 14: Transport information**

**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**

**New Zealand**



Chemical name	New Zealand HSNO Chemical Classification
Sodium azide - 26628-22-8	6.1B (All),6.1B (O),9.1A (All),9.1A (A),9.1A (C),9.1A (F),9.3A 6.1B (All),6.1B (O),9.1B (All),9.1B (A),9.1B (C),9.1B (F),9.3B 6.1B (All),6.1B (O),9.1C (All),9.1C (A),9.1C (C),9.1C (F),9.3C

**National regulations** See Section 8 for any applicable tolerable exposure limits and environmental exposure limits

**Certified handlers, tracking and controlled substance license requirements** Certified handlers are required for some substances. This includes for substances requiring a controlled substance license, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information  
Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information  
Controlled substance licenses are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

**EPA New Zealand HSNO approval code or group standard** Not applicable

#### International Inventories

Contact supplier for inventory compliance status

#### **Legend:**

#### 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** 09-Jan-2021

#### **Revision Note**

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

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

##### Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	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)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AELG(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

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**End of Safety Data Sheet**



# SAFETY DATA SHEET

Revision date 23-Dec-2020

Revision Number 1

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

### Product identifier

Product Name 25X AP Color Development Buffer

Catalogue Number(s) 9702818

### Other means of identification

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

Recommended use Laboratory chemicals

Uses advised against No information available

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

#### 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  
189 Bush Road  
Albany Auckland  
New Zealand

Technical Service +64 9 415 2280 or 0508 805 500  
sales.nz@bio-rad.com

### Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC New Zealand: 64-98010034

## SECTION 2: Hazards identification

### GHS Classification

Not classified

### Label elements

### Hazard statements

### Other hazards which do not result in classification

## SECTION 3: Composition/information on ingredients

Chemical name	CAS No	Weight-%
Non-hazardous ingredients	Proprietary	Balance

## SECTION 4: First aid measures

### Description of first aid measures

<b>General advice</b>	No hazards which require special first aid measures.
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
<b>Skin contact</b>	Wash skin with soap and water.
<b>Ingestion</b>	Rinse mouth thoroughly with water.

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

**Symptoms** No information available.

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

**Note to doctors** Treat symptomatically.

**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** See section 8 for more information.

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

**Methods for cleaning up** 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** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

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

**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).

**Hand protection** Wear suitable gloves.

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

**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** Odourless.  
**Odour threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	9-10	
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
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>		
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	

## 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 None.

### Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

### Conditions to avoid

Conditions to avoid None known based on information supplied.

### Incompatible materials

Incompatible materials None known based on information supplied.

### Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

## SECTION 11: Toxicological information

**Acute toxicity****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>	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.
<b>Symptoms</b>	No information available.

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

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

ATEmix (oral) 19,471.90 mg/kg

**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>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>Respiratory irritation</b>	Based on available data, the classification criteria are not met.
<b>Narcotic effects</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** The environmental impact of this product has not been fully investigated.

**Aquatic ecotoxicity**

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

**Terrestrial ecotoxicity** There is no data for this product.

**Persistence and degradability** No information available.

**Bioaccumulative potential**

**Bioaccumulation** No information available.

**Mobility in soil****Other adverse effects**

No information available.

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

For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from

Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance)

**SECTION 14: Transport information**

**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****New Zealand****National regulations**

See Section 8 for any applicable tolerable exposure limits and environmental exposure limits

**Certified handlers, tracking and controlled substance license requirements**

Certified handlers are required for some substances. This includes for substances requiring a controlled substance license, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

**EPA New Zealand HSNO approval** Not applicable



code or group standard

**International Inventories**

Contact supplier for inventory compliance status

**Legend:**

**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** 23-Dec-2020

**Revision Note**

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

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

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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

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**End of Safety Data Sheet**



# SAFETY DATA SHEET

Revision date 23-Dec-2020

Revision Number 1

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

### Product identifier

Product Name AP Color Reagent A

Catalogue Number(s) 9701067

### Other means of identification

Proper shipping name N,N-DIMETHYLFORMAMIDE

UN number UN2265

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

Recommended use Laboratory chemicals

Uses advised against No information available

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

#### 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  
189 Bush Road  
Auckland  
New Zealand

Technical Service +64 9 415 2280 or 0508 805 500  
sales.nz@bio-rad.com

### Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC New Zealand: 64-98010034

## SECTION 2: Hazards identification

### GHS Classification

Flammable liquids	Category 3 (HSNO - 3.1C)
Flammable liquids	Category 3 (HSNO - 3.1C)
Acute toxicity - Oral	Category 5 (HSNO - 6.1E)
Acute toxicity - Dermal	Category 4 (HSNO - 6.1D)
Acute toxicity - Inhalation (Gases)	Category 4 (HSNO - 6.1D)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 (HSNO - 6.1D)
Serious eye damage/eye irritation	Category 2A (HSNO - 6.4A)
Reproductive toxicity	Category 1B (HSNO - 6.8A)

### Label elements

**Signal word**

Warning

**Hazard statements**

H226 - Flammable liquid and vapour

H226 - Flammable liquid and vapour

H303 - May be harmful if swallowed

H312 - Harmful in contact with skin

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H360 - May damage fertility or the unborn child

**Precautionary Statements - Prevention**

Do not handle until all safety precautions have been read and understood

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

Ground and bond container and receiving equipment

Use non-sparking tools

Take action to prevent static discharges

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

Keep container tightly closed

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

**Eyes**

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

**Skin**

Call a POISON CENTRE or doctor if you feel unwell

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]

Wash contaminated clothing before reuse

**Inhalation**

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

**Fire**

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

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep cool

**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**

Chemical name	CAS No	Weight-%
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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.
<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. 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.
<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. 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.

### 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>	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
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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**

**Personal precautions** Evacuate personnel to safe areas. See section 8 for more information. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Avoid breathing vapours or mists. Use personal protective equipment as required.

**Other information** Ventilate the area. 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 product from entering drains. 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. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers 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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Remove contaminated clothing and shoes. Avoid contact with skin, eyes or clothing. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapours or mists. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product.

**General hygiene considerations** 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. Do not eat, drink or smoke when using this product.

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

**Storage Conditions** 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. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up. 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.

**Incompatible materials** None known based on information supplied.

## SECTION 8: Exposure controls/personal protection

### Control parameters

#### **Exposure Limits**

Chemical name	New Zealand	ACGIH TLV	United Kingdom	Australia
N,N-Dimethylformamide 68-12-2	TWA: 10 ppm TWA: 30 mg/m <sup>3</sup> Skin	TWA: 5 ppm S*	TWA: 5 ppm TWA: 15 mg/m <sup>3</sup> STEL: 10 ppm STEL: 30 mg/m <sup>3</sup> Sk*	10 ppm 30 mg/m <sup>3</sup>

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

Chemical name	New Zealand	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)cysteine) - end of shift at end of workweek

### Appropriate engineering controls

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

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

**Eye/face protection** Tight sealing safety goggles.

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

**Skin and body protection** Chemical resistant apron. Antistatic boots. Long sleeved clothing. Wear suitable protective clothing.

**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** Liquid  
**Colour** colourless  
**Odour** Amine.  
**Odour threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	7	
<b>Melting point / freezing point</b>	-61 °C	
<b>Boiling point / boiling range</b>	152.5-153.5 °C	None known

Flash point	58 °C	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>		
Molecular weight	Not applicable	
VOC Content (%)	Not applicable	

## 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**

<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>	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
<b>Skin contact</b>	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).
<b>Ingestion</b>	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.
<b>Symptoms</b>	May cause redness and tearing of the eyes. Coughing and/ or wheezing.

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

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

<b>ATEmix (oral)</b>	2,886.60 mg/kg
<b>ATEmix (dermal)</b>	1,134.00 mg/kg
<b>ATEmix (inhalation-gas)</b>	3,103.10 mg/l
<b>ATEmix (inhalation-dust/mist)</b>	1.55 mg/l

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
N,N-Dimethylformamide	= 2800 mg/kg ( Rat ) = 2000 mg/kg ( Rat )	= 1100 mg/kg ( Rat ) > 3.2 g/kg ( Rat )	-

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

<b>Skin corrosion/irritation</b>	May cause skin irritation.
<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes serious eye irritation.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	.

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

Chemical name	New Zealand	IARC
N,N-Dimethylformamide - 68-12-2	-	Group 2A

**Legend**

**IARC (International Agency for Research on Cancer)**  
Group 2A - Probably Carcinogenic to Humans

<b>Reproductive toxicity</b>	Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.
<b>STOT - single exposure</b>	Based on available data, the classification criteria are not met.
<b>Respiratory irritation</b>	Based on available data, the classification criteria are not met.
<b>Narcotic effects</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****Aquatic 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	Crustacea
N,N-Dimethylformamide	EC50: >500mg/L (96h, <i>Desmodesmus subspicatus</i> )	LC50: =10410mg/L (96h, <i>Pimephales promelas</i> ) LC50: =6300mg/L (96h, <i>Lepomis macrochirus</i> ) LC50: =9800mg/L (96h, <i>Oncorhynchus mykiss</i> )	EC50: 6800 - 13900mg/L (48h, <i>Daphnia magna</i> ) EC50: =7500mg/L (48h, <i>Daphnia magna</i> ) EC50: =8485mg/L (48h, <i>Daphnia magna</i> )

**Terrestrial ecotoxicity** There is no data for this product.

**Persistence and degradability** No information available.

**Bioaccumulative potential**

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

Chemical name	Partition coefficient
N,N-Dimethylformamide	-1.028

**Mobility in soil****Other adverse effects**

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****Waste treatment methods**

**Contaminated packaging** For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from.

Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous substance (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the substance to be classified as hazardous (class 6, 8, or 9 substance).

**SECTION 14: Transport information****IATA**

**UN number** UN2265  
**UN proper shipping name** N,N-Dimethylformamide  
**Transport hazard class(es)** 3

Packing group III  
 ERG Code 3L  
 Description UN2265, N,N-Dimethylformamide, 3, III

**IMDG**

UN number UN2265  
 UN proper shipping name N,N-DIMETHYLFORMAMIDE  
 Transport hazard class(es) 3  
 Packing group III  
 EmS-No F-E, S-D  
 Marine pollutant NP  
 Description UN2265, N,N-DIMETHYLFORMAMIDE, 3, III, (58°C C.C.)

**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****New Zealand**

Chemical name	New Zealand HSNO Chemical Classification
N,N-Dimethylformamide - 68-12-2	3.1C,6.1D (All),6.1D (D),6.1D (O),6.3B,6.4A,6.8A,6.9A (All),6.9A (I),6.9A (O),9.3C

**National regulations**

See Section 8 for any applicable tolerable exposure limits and environmental exposure limits

**Certified handlers, tracking and controlled substance license requirements**

Certified handlers are required for some substances. This includes for substances requiring a controlled substance license, including Class 1 explosives, vertebrate toxic agents (9.3A, B, C), and certain fumigants. Class 6.1A and 6.1B substances such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain class 1 (explosive) and class 6 (vertebrate toxic agents or fumigants) substances. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

**EPA New Zealand HSNO approval code or group standard** Not applicable

**International Inventories**

Contact supplier for inventory compliance status

**Legend:****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** 23-Dec-2020

**Revision Note**

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

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	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)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AELG(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

**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**