

KIT SAFETY DATA SHEET



Kit Product Name AP Conjugate Substrate Kit

Kit Catalogue Number(s) 1706432, 1706432EDU

Revision date 09-Mar-2021

Kit Contents

| Catalogue Number(s) | Product Name |
|---------------------|---------------------------------|
| 9701068 | AP Color Reagent B |
| 9702818 | 25X AP Color Development Buffer |
| 9701067 | AP Color Reagent A |



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
The Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Revision date 23-Dec-2020

Revision Number 1

1. IDENTIFICATION

Product identifier

Product Name AP Color Reagent B

Other means of identification

Catalogue Number(s) 9701068

UN/ID no UN1993

Registration Number(s) No information available

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Supplier's details

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 Pvt. Ltd. Bio-Rad
House 86-87, Udyog Vihar Phase
IV Gurgaon 122005 Haryana India Bio-Rad
Laboratories (Pty) Ltd.
34 Bolton Road
Parkwood, Johannesburg 2193
South Africa

Technical Service

India: 91-124-4029300 or 1-800-180-1224
South Africa: 27-11-442-85-08
India: support.india@bio-rad.com
South Africa: cdg_techsupport_eemea@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC India: 000-800-100-7141
CHEMTREC South Africa: 0-800-983-611

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

| | |
|---|-------------|
| Acute toxicity - Oral | Category 5 |
| Acute toxicity - Dermal | Category 4 |
| Acute toxicity - Inhalation (Gases) | Category 4 |
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4 |
| Serious eye damage/eye irritation | Category 2 |
| Reproductive toxicity | Category 1B |
| Flammable liquids | Category 3 |

GHS Label elements, including precautionary statements

**Signal word****Danger****Hazard statements**

May be harmful if swallowed
Harmful in contact with skin
Harmful if inhaled
Causes serious eye irritation
May damage fertility or the unborn child
Flammable liquid and vapour

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

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance**

Not applicable

Mixture

| Chemical name | CAS No | Weight-% |
|----------------------------------|---------|----------|
| N,N-Dimethylformamide 68-12-2 | 68-12-2 | 70 |

4. FIRST AID MEASURES**Description of necessary first aid measures**

| | |
|-----------------------|---|
| General advice | Show this safety data sheet to the doctor in attendance. |
| Inhalation | Remove to fresh air. If symptoms persist, call a doctor. If breathing has stopped, give artificial respiration. Get medical attention immediately. |
| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a doctor. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. |
| Ingestion | Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention. |

For emergency responders

| | |
|---|--|
| Self-protection of the first aider | 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

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

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

| | |
|------------------------|------------------------|
| Note to doctors | Treat symptomatically. |
|------------------------|------------------------|

5. FIREFIGHTING MEASURES**Suitable Extinguishing Media**

| | |
|-------------------------------------|---|
| Suitable Extinguishing Media | Dry chemical. Carbon dioxide (CO ₂). Water spray. Alcohol resistant foam. |
|-------------------------------------|---|

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

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

Specific hazards arising from the chemical

| | |
|---|---|
| Specific hazards arising from the chemical | 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. |
|---|---|

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. |
|---|--|

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.

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.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

Other information

Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines

| Chemical name | ACGIH TLV | OSHA PEL | Ontario | European Union |
|----------------------------------|------------------|---|---------------------|---|
| N,N-Dimethylformamide 68-12-2 | TWA: 5 ppm S* | TWA: 10 ppm TWA: 30 mg/m ³ (vacated) TWA: 10 ppm | TWA: 10 ppm Skin | TWA: 5 ppm TWA: 15 mg/m ³ STEL: 10 ppm |

| | | (vacated) TWA: 30 mg/m ³ (vacated) S* S* | | | STEL: 30 mg/m ³ * |
|----------------------------------|--|---|----------------------|--------------------------------|---|
| Chemical name | China | Japan Society of Occupational Health | Korea | Australia | Taiwan |
| N,N-Dimethylformamide 68-12-2 | TWA: 20 mg/m ³ STEL: 40 mg/m ³ Skin* | TWA: 10 ppm TWA: 30 mg/m ³ S* | TWA: 10 ppm Skin* | 10 ppm 30 mg/m ³ | TWA: 10 ppm TWA: 30 mg/m ³ STEL: 15 ppm STEL: 45 mg/m ³ Skin* |

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.

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

Hand protection Impervious gloves. Wear suitable gloves.

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

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|--|---------------------|--------------------------|--------------------------|
| Physical state | Liquid | Odour | Odourless |
| Appearance | clear liquid | Odour threshold | No information available |
| Colour | colourless | | |
| Property | Values | Remarks • Method | |
| pH | | No information available | |
| Melting point / freezing point | | No information available | |
| Boiling point / boiling range | 100 °C / 212 °F | No information available | |
| Flash point | 58 °C / 136.4 °F | No information available | |
| Evaporation rate | | No information available | |
| Flammability (solid, gas) | | No information available | |
| Upper/lower flammability or explosive limits | | | |
| Upper flammability or explosive limits | Not applicable | | |
| Lower flammability or explosive limits | Not applicable | | |
| Vapour pressure | | No information available | |
| Vapour density | | No information available | |
| Relative density | | No information available | |
| Solubility(ies) | | | |
| Water solubility | Immiscible in water | | |
| Solubility in other solvents | | No information available | |
| Partition coefficient | | No information available | |
| Autoignition temperature | | No information available | |
| Decomposition temperature | | No information available | |
| Viscosity | | | |
| Kinematic viscosity | | No information available | |

Dynamic viscosity

Other information

Oxidising properties Not applicable
Explosive properties Not applicable

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.

11. TOXICOLOGICAL INFORMATION

Information on the 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 ppm |
| 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 and also chronic effects from short and long term exposure

| | |
|-----------------------------------|--|
| Skin corrosion/irritation | May cause skin irritation. |
| Serious eye damage/irritation | Classification based on data available for ingredients. Causes serious eye irritation. |
| Respiratory or skin sensitisation | No information available. |
| Germ cell mutagenicity | No information available. |
| Carcinogenicity | No information available. |

| Chemical name | IARC |
|-----------------------|----------|
| N,N-Dimethylformamide | Group 2A |

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 No information available.

STOT - repeated exposure No information available.

Target organ effects Liver, Kidney, Respiratory system, Eyes, Skin, Central Vascular System (CVS).

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Toxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Ecotoxicity

| 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>) |

Persistence and degradability

No information available.

Bioaccumulative potential

There is no data for this product.

Mobility

Mobility in soil No information available.

Mobility No information available.

| Chemical name | Partition coefficient |
|-----------------------|-----------------------|
| N,N-Dimethylformamide | -1.028 |

Other adverse effects

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

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

14. TRANSPORT INFORMATION

IMDG

UN number UN1993
UN proper shipping name FLAMMABLE LIQUID, N.O.S.
Description UN1993, FLAMMABLE LIQUID, N.O.S. (N,N-Dimethylformamide), 3, III, (58°C C.C.)
Transport hazard class(es) 3
Packing group III
Marine pollutant NP
Special Provisions 223, 274, 955
EmS-No F-E, S-E
Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA

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

RID

UN number UN1993
UN proper shipping name FLAMMABLE LIQUID, N.O.S.
Description UN1993, FLAMMABLE LIQUID, N.O.S. (N,N-Dimethylformamide), 3, III
Transport hazard class(es) 3
Labels 3
Packing group III
Classification code F1
Special Provisions 274, 601

ADR

UN number 1993
UN proper shipping name FLAMMABLE LIQUID, N.O.S.
Description 1993, FLAMMABLE LIQUID, N.O.S. (N,N-Dimethylformamide), 3, III
Transport hazard class(es) 3
Labels 3

| | |
|---------------------|----------|
| Packing group | III |
| Classification code | F1 |
| Special Provisions | 274, 601 |

ADN

| | |
|----------------------------|--|
| UN number | UN1993 |
| UN proper shipping name | FLAMMABLE LIQUID, N.O.S. |
| Description | UN1993, FLAMMABLE LIQUID, N.O.S. (N,N-Dimethylformamide), 3, III |
| Transport hazard class(es) | 3 |
| Hazard label(s) | 3 |
| Packing group | III |
| Classification code | F1 |
| Special Provisions | 274, 601 |
| Limited quantity (LQ) | 5 L |
| Ventilation | VE01 |
| Equipment Requirements | PP, EX, A |

Special precautions for user Special provisions from the regulations relative to the specified mode of transport are noted by numeric code. Refer to the regulations for the full text of special provisions.

15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture****International Regulations**

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

Contact supplier for inventory compliance status

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 | | |

Disclaimer

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

End of Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
The Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Revision date 23-Dec-2020

Revision Number 1

1. IDENTIFICATION

Product identifier

Product Name 25X AP Color Development Buffer

Other means of identification

Catalogue Number(s) 9702818

Registration Number(s) No information available

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Supplier's details

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 Pvt. Ltd. Bio-Rad
House 86-87, Udyog Vihar Phase
IV Gurgaon 122005 Haryana India Bio-Rad
Laboratories (Pty) Ltd.
34 Bolton Road
Parkwood, Johannesburg 2193
South Africa

Technical Service

India: 91-124-4029300 or 1-800-180-1224
South Africa: 27-11-442-85-08
India: support.india@bio-rad.com
South Africa: cdg_techsupport_eemea@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC India: 000-800-100-7141
CHEMTREC South Africa: 0-800-983-611

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

GHS Label elements, including precautionary statements

Other hazards which do not result in classification

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

4. FIRST AID MEASURES

Description of necessary first aid measures

| | |
|--------------|---|
| Inhalation | Remove to fresh air. |
| Skin contact | Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor. |
| Eye contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor. |
| Ingestion | Rinse mouth thoroughly with water. |

For emergency responders

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

Most important symptoms and effects, both acute and delayed

| | |
|----------|---------------------------|
| Symptoms | No information available. |
|----------|---------------------------|

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

| | |
|-----------------|------------------------|
| Note to doctors | Treat symptomatically. |
|-----------------|------------------------|

5. FIREFIGHTING MEASURES**Suitable Extinguishing Media**

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

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

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

Specific hazards arising from the chemical

| | |
|--|---------------------------|
| Specific hazards arising from the chemical | No information available. |
|--|---------------------------|

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. |
|--|--|

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

| | |
|----------------------|------------------------------|
| Personal precautions | Ensure adequate ventilation. |
|----------------------|------------------------------|

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

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

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

Skin and body protection Wear suitable protective clothing.

Hand protection Wear suitable gloves.

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

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|--|-------------------|--------------------------|--------------------------|
| Physical state | Liquid | Odour | Odourless |
| Appearance | aqueous solution | Odour threshold | No information available |
| Colour | colourless | | |
| Property | Values | Remarks | • Method |
| pH | 9.5 | | |
| Melting point / freezing point | | No information available | |
| Boiling point / boiling range | | No information available | |
| Flash point | | No information available | |
| Evaporation rate | | No information available | |
| Flammability (solid, gas) | | No information available | |
| Upper/lower flammability or explosive limits | | | |
| Upper flammability or explosive limits | Not applicable | | |
| Lower flammability or explosive limits | Not applicable | | |
| Vapour pressure | | No information available | |
| Vapour density | | No information available | |
| Relative density | | No information available | |
| Solubility(ies) | | | |
| Water solubility | Miscible in water | | |
| Solubility in other solvents | | No information available | |
| Partition coefficient | | No information available | |

| | |
|---------------------------|--------------------------|
| Autoignition temperature | No information available |
| Decomposition temperature | No information available |
| Viscosity | |
| Kinematic viscosity | No information available |
| Dynamic viscosity | |

Other information

| | |
|----------------------|----------------|
| Oxidising properties | Not applicable |
| Explosive properties | Not applicable |

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. |
|----------------------------------|---|

11. TOXICOLOGICAL INFORMATION**Information on the 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**

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 and also chronic effects from short and long term exposure

| | |
|--|---------------------------|
| Skin corrosion/irritation | No information available. |
| Serious eye damage/irritation | No information available. |
| Respiratory or skin sensitisation | No information available. |
| Germ cell mutagenicity | No information available. |
| Carcinogenicity | No information available. |
| Reproductive toxicity | No information available. |
| STOT - single exposure | No information available. |
| STOT - repeated exposure | No information available. |
| Aspiration hazard | No information available. |

12. ECOLOGICAL INFORMATION

Toxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Ecotoxicity The environmental impact of this product has not been fully investigated.

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Mobility

Mobility in soil No information available.

Mobility No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods

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

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

IMDG Not regulated

Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

Special precautions for user Special provisions from the regulations relative to the specified mode of transport are noted by numeric code. Refer to the regulations for the full text of special provisions.

15. REGULATORY INFORMATION

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

International Regulations

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

Contact supplier for inventory compliance status

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 | | |

Disclaimer

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

End of Safety Data Sheet



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
The Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Revision date 23-Dec-2020

Revision Number 1

1. IDENTIFICATION

Product identifier

Product Name AP Color Reagent A

Other means of identification

Catalogue Number(s) 9701067

UN/ID no UN2265

Registration Number(s) No information available

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals

Supplier's details

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 Pvt. Ltd. Bio-Rad
House 86-87, Udyog Vihar Phase
IV Gurgaon 122005 Haryana India Bio-Rad
Laboratories (Pty) Ltd.
34 Bolton Road
Parkwood, Johannesburg 2193
South Africa

Technical Service

India: 91-124-4029300 or 1-800-180-1224
South Africa: 27-11-442-85-08
India: support.india@bio-rad.com
South Africa: cdg_techsupport_eemea@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC India: 000-800-100-7141
CHEMTREC South Africa: 0-800-983-611

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

| | |
|---|-------------|
| Acute toxicity - Oral | Category 5 |
| Acute toxicity - Dermal | Category 4 |
| Acute toxicity - Inhalation (Gases) | Category 4 |
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4 |
| Serious eye damage/eye irritation | Category 2 |
| Reproductive toxicity | Category 1B |
| Flammable liquids | Category 3 |

GHS Label elements, including precautionary statements

**Signal word****Danger****Hazard statements**

May be harmful if swallowed
Harmful in contact with skin
Harmful if inhaled
Causes serious eye irritation
May damage fertility or the unborn child
Flammable liquid and vapour

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

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance**

Not applicable

Mixture

| Chemical name | CAS No | Weight-% |
|----------------------------------|---------|----------|
| N,N-Dimethylformamide 68-12-2 | 68-12-2 | 97 |

4. FIRST AID MEASURES**Description of necessary first aid measures**

| | |
|-----------------------|---|
| General advice | Show this safety data sheet to the doctor in attendance. |
| Inhalation | Remove to fresh air. If symptoms persist, call a doctor. If breathing has stopped, give artificial respiration. Get medical attention immediately. |
| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a doctor. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. |
| Ingestion | Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention. |

For emergency responders

| | |
|---|--|
| Self-protection of the first aider | 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

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

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

| | |
|------------------------|------------------------|
| Note to doctors | Treat symptomatically. |
|------------------------|------------------------|

5. FIREFIGHTING MEASURES**Suitable Extinguishing Media**

| | |
|-------------------------------------|---|
| Suitable Extinguishing Media | Dry chemical. Carbon dioxide (CO ₂). Water spray. Alcohol resistant foam. |
|-------------------------------------|---|

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

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

Specific hazards arising from the chemical

| | |
|---|---|
| Specific hazards arising from the chemical | 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. |
|---|---|

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. |
|---|--|

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.

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.

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

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines

| Chemical name | ACGIH TLV | OSHA PEL | Ontario | European Union |
|----------------------------------|------------------|---|---------------------|---|
| N,N-Dimethylformamide 68-12-2 | TWA: 5 ppm S* | TWA: 10 ppm TWA: 30 mg/m ³ (vacated) TWA: 10 ppm | TWA: 10 ppm Skin | TWA: 5 ppm TWA: 15 mg/m ³ STEL: 10 ppm |

| | | (vacated) TWA: 30 mg/m ³ (vacated) S* S* | | | STEL: 30 mg/m ³ * |
|----------------------------------|--|---|----------------------|--------------------------------|---|
| Chemical name | China | Japan Society of Occupational Health | Korea | Australia | Taiwan |
| N,N-Dimethylformamide 68-12-2 | TWA: 20 mg/m ³ STEL: 40 mg/m ³ Skin* | TWA: 10 ppm TWA: 30 mg/m ³ S* | TWA: 10 ppm Skin* | 10 ppm 30 mg/m ³ | TWA: 10 ppm TWA: 30 mg/m ³ STEL: 15 ppm STEL: 45 mg/m ³ Skin* |

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.

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

Hand protection Impervious gloves. Wear suitable gloves.

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

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|--|---------------------|--------------------------|--------------------------|
| Physical state | Liquid | Odour | Amine |
| Appearance | Liquid | Odour threshold | No information available |
| Colour | colourless | | |
| Property | Values | Remarks • Method | |
| pH | 7 | | |
| Melting point / freezing point | -61 °C / -77.8 °F | No information available | |
| Boiling point / boiling range | 152.5-153.5 °C / °F | No information available | |
| Flash point | 58 °C / 136.4 °F | No information available | |
| Evaporation rate | | No information available | |
| Flammability (solid, gas) | | No information available | |
| Upper/lower flammability or explosive limits | | | |
| Upper flammability or explosive limits | Not applicable | | |
| Lower flammability or explosive limits | Not applicable | | |
| Vapour pressure | | No information available | |
| Vapour density | | No information available | |
| Relative density | | No information available | |
| Solubility(ies) | | | |
| Water solubility | Miscible in water | | |
| Solubility in other solvents | | No information available | |
| Partition coefficient | | No information available | |
| Autoignition temperature | | No information available | |
| Decomposition temperature | | No information available | |
| Viscosity | | | |
| Kinematic viscosity | | No information available | |

Dynamic viscosity

Other information

Oxidising properties Not applicable
Explosive properties Not applicable

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.

11. TOXICOLOGICAL INFORMATION

Information on the 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

3 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

3 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
 3 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapour)
 3 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

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

ATEmix (oral) 2,886.60 mg/kg
 ATEmix (dermal) 1,134.00 mg/kg
 ATEmix (inhalation-gas) 3,103.10 ppm
 ATEmix (inhalation-dust/mist) 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 and also chronic effects from short and long term exposure

Skin corrosion/irritation May cause skin irritation.

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

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

| Chemical name | IARC |
|-----------------------|----------|
| N,N-Dimethylformamide | Group 2A |

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 No information available.

STOT - repeated exposure No information available.

Target organ effects Liver, Kidney, Respiratory system, Eyes, Skin, Central Vascular System (CVS).

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Toxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Ecotoxicity

| 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>) |

Persistence and degradability

No information available.

Bioaccumulative potential

There is no data for this product.

Mobility

Mobility in soil No information available.

Mobility No information available.

| Chemical name | Partition coefficient |
|-----------------------|-----------------------|
| N,N-Dimethylformamide | -1.028 |

Other adverse effects

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

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

14. TRANSPORT INFORMATION

IMDG

UN number UN2265
UN proper shipping name N,N-DIMETHYLFORMAMIDE
Description UN2265, N,N-DIMETHYLFORMAMIDE, 3, III, (58°C C.C.)
Transport hazard class(es) 3
Packing group III
Marine pollutant NP
EmS-No F-E, S-D
Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

IATA

UN number UN2265
UN proper shipping name N,N-Dimethylformamide
Description UN2265, N,N-Dimethylformamide, 3, III
Transport hazard class(es) 3
Packing group III
ERG Code 3L

RID

UN number UN2265
UN proper shipping name N,N-DIMETHYLFORMAMIDE
Description UN2265, N,N-DIMETHYLFORMAMIDE, 3, III
Transport hazard class(es) 3
Labels 3
Packing group III
Classification code F1

ADR

UN number 2265
UN proper shipping name N,N-DIMETHYL-FORMAMIDE
Description 2265, N,N-DIMETHYL-FORMAMIDE, 3, III

| | |
|----------------------------|-----|
| Transport hazard class(es) | 3 |
| Labels | 3 |
| Packing group | III |
| Classification code | F1 |

ADN

| | |
|----------------------------|---------------------------------------|
| UN number | UN2265 |
| UN proper shipping name | N,N-DIMETHYLFORMAMIDE |
| Description | UN2265, N,N-DIMETHYLFORMAMIDE, 3, III |
| Transport hazard class(es) | 3 |
| Hazard label(s) | 3 |
| Packing group | III |
| Classification code | F1 |
| Limited quantity (LQ) | 5 L |
| Ventilation | VE01 |
| Equipment Requirements | PP, EX, A |

Special precautions for user Special provisions from the regulations relative to the specified mode of transport are noted by numeric code. Refer to the regulations for the full text of special provisions.

15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture****International Regulations**

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

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

Contact supplier for inventory compliance status

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 | | |

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End of Safety Data Sheet