SAFETY DATA SHEET
TMB SUBSTRATE

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

1.1. Product identifier
Product name: TMB SUBSTRATE

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For research use only.

1.3. Details of the supplier of the safety data sheet
Supplier: Web: www.bio-rad-antibodies.com
Bio-Rad
Endeavour House
Langford Business Park
Kidlington
Oxford
OX5 1GE
Tel. +44 (0)1865 852700
antibody_safetydatasheets@bio-rad.com
Contact person: Technical Services Manager

1.4. Emergency telephone number
Emergency telephone: Tel. +44 (0)1865 852700 (9.00 a.m. - 5.00 p.m. Mon-Fri)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification:
Physical hazards: Not Classified
Health hazards: Not Classified
Environmental hazards: Not Classified

2.2. Label elements
Hazard statements: NC Not Classified

2.3. Other hazards
No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures
Composition comments: No classified ingredients, or those having occupational exposure limits, present above the levels of disclosure.

SECTION 4: First aid measures

4.1. Description of first aid measures
TMB SUBSTRATE

Inhalation
If spray/mist has been inhaled, proceed as follows. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.

Ingestion
Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.

Skin contact
Remove contaminated clothing and rinse skin thoroughly with water. Get medical attention if any discomfort continues.

Eye contact
Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation
May cause cause coughing or mild irritation.

Ingestion
May cause discomfort if swallowed.

Skin contact
Prolonged skin contact may cause redness and irritation.

Eye contact
May cause temporary eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor
No specific recommendations.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards
Not relevant.

Hazardous combustion products
Does not decompose when used and stored as recommended.

5.3. Advice for firefighters

Protective actions during firefighting
No specific firefighting precautions known.

Special protective equipment for firefighters
Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate.

6.2. Environmental precautions

Environmental precautions
Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up
Absorb spillage with non-combustible, absorbent material. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections
Wear protective clothing as described in Section 8 of this safety data sheet.
## TMB SUBSTRATE

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

**Usage precautions**
Avoid spilling. Avoid contact with skin and eyes. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

#### 7.2. Conditions for safe storage, including any incompatibilities

**Storage precautions**
Keep only in the original container. Store at specified temperature. Refer to product label.

**Storage class**
Refer to product datasheet.

#### 7.3. Specific end use(s)

**Specific end use(s)**
The identified uses for this product are detailed in Section 1.2.

### SECTION 8: Exposure Controls/personal protection

#### 8.1. Control parameters

**Occupational exposure limits**

**HYDROGEN PEROXIDE SOLUTION ... %**

- Long-term exposure limit (8-hour TWA): WEL 1 ppm  1.4 mg/m³
- Short-term exposure limit (15-minute):  WEL 2 ppm  2.8 mg/m³

WEL = Workplace Exposure Limit

#### 8.2. Exposure controls

**Protective equipment**

- **Appropriate engineering controls**: Provide adequate ventilation. Avoid inhalation of vapours and spray/mists. Observe any occupational exposure limits for the product or ingredients.

- **Eye/face protection**: Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

- **Hand protection**: Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

- **Other skin and body protection**: Wear appropriate clothing to prevent any possibility of skin contact. Wear apron or protective clothing in case of contact.

- **Hygiene measures**: Provide eyewash station. Do not smoke in work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

- **Respiratory protection**: No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

### SECTION 9: Physical and Chemical Properties

#### 9.1. Information on basic physical and chemical properties

**Appearance**
Solid or liquid (may vary).

**Odour**
No characteristic odour.

**Melting point**
Not determined.
### TMB SUBSTRATE

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<th>Property</th>
<th>Details</th>
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<td>Initial boiling point and range</td>
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<tr>
<td>Flash point</td>
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<tr>
<td>Evaporation rate</td>
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<td>Upper/lower flammability or explosive limits</td>
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<td>Vapour pressure</td>
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<td>Solubility(ies)</td>
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<td>Decomposition Temperature</td>
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<td>Oxidising properties</td>
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<td>9.2. Other information</td>
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#### SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity
There are no known reactivity hazards associated with this product.

10.2. Chemical stability
Stability
Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions
Will not polymerise.

10.4. Conditions to avoid
Conditions to avoid
Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials
Materials to avoid
No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products
Hazardous decomposition products
Does not decompose when used and stored as recommended.

#### SECTION 11: Toxicological information

11.1. Information on toxicological effects
Toxicological effects
No information available.

Other health effects
IARC Not Listed.
TMB SUBSTRATE

**Acute toxicity - oral**
Notes (oral LD₅₀) Not determined.

**Skin corrosion/irritation**
Human skin model test Not determined.

**Extreme pH**

**Serious eye damage/irritation**
Serious eye damage/irritation Not determined.

**Germ cell mutagenicity**
Genotoxicity - in vitro Not determined.

**Carcinogenicity**
Carcinogenicity Not determined.

**Reproductive toxicity**
Reproductive toxicity - fertility Not determined.

**Specific target organ toxicity - single exposure**
STOT - single exposure Not determined.

**Specific target organ toxicity - repeated exposure**
STOT - repeated exposure Not determined.

**Aspiration hazard**
Aspiration hazard Not determined.

**Inhalation**
Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.

**Ingestion**
May cause discomfort if swallowed.

**Skin contact**
Liquid may irritate skin.

**Eye contact**
Vapour or spray in the eyes may cause irritation and smarting.

**Acute and chronic health hazards**
Because of the product's quantity and composition, the health hazard is regarded as low.

**Route of entry**
Ingestion. Skin and/or eye contact

**SECTION 12: Ecological Information**

**Ecotoxicity**
There are no data on the ecotoxicity of this product.

**12.1. Toxicity**

**Acute toxicity - fish**
Not known.

**12.2. Persistence and degradability**

**Persistence and degradability**
There are no data on the degradability of this product.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential**
No data available on bioaccumulation.

**Partition coefficient**
Not determined.

**12.4. Mobility in soil**
Mobility

The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment
No information available

12.6. Other adverse effects

Other adverse effects
Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information
When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods
Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General
The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

Road transport notes
Not classified.

Rail transport notes
Not classified.

Sea transport notes
Not classified.

Air transport notes
Not classified.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
TMB SUBSTRATE

EU legislation

Guidance
Workplace Exposure Limits EH40.
Approved Classification and Labelling Guide (Sixth edition) L131.
Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

SECTION 16: Other information

| General information | Only trained personnel should use this material. |
| Revision date       | 04/05/2016                                      |
| Revision            | 5                                              |
| Supersedes date     | 24/03/2016                                     |
| SDS number          | 10111                                          |
| Risk phrases in full| Not classified.                                 |

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