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

1.1. Product identifier

Product name
ANTIBODY PREPARATION

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
Repr. 1B - H360FD
Environmental hazards
Not Classified

Human health
Contains a substance/a group of substances which may damage fertility and the unborn child.

2.2. Label elements

Pictogram

Signal word
Danger

Hazard statements
H360FD May damage fertility. May damage the unborn child.
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Precautionary statements
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with national regulations.

Contains
DISODIUM TETRABORATE DECAHYDRATE, BORIC ACID

2.3. Other hazards
No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISODIUM TETRABORATE DECAHYDRATE</td>
<td>0.8901%</td>
</tr>
<tr>
<td>CAS number: 1303-96-4</td>
<td></td>
</tr>
<tr>
<td>EC number: 215-540-4</td>
<td></td>
</tr>
<tr>
<td>Classification Repr. 1B - H360FD</td>
<td></td>
</tr>
<tr>
<td>Classification (67/548/EEC or 1999/45/EC)</td>
<td>Repr. Cat. 2;R60,R61</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BORIC ACID</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>CAS number: 10043-35-3</td>
<td></td>
</tr>
<tr>
<td>EC number: 233-139-2</td>
<td></td>
</tr>
<tr>
<td>Classification Repr. 1B - H360FD</td>
<td></td>
</tr>
<tr>
<td>Classification (67/548/EEC or 1999/45/EC)</td>
<td>Repr. Cat. 2;R60,R61</td>
</tr>
</tbody>
</table>

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments
No other ingredients, including those with occupational exposure limits, present above the level of disclosure

SECTION 4: First aid measures

4.1. Description of first aid measures
General information
Consult a physician for specific advice. Show this Safety Data Sheet to the medical personnel.

Inhalation
Remove person to fresh air and keep comfortable for breathing. If breathing stops, provide artificial respiration. Consult a physician for specific advice.

Ingestion
Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Get medical attention.

Skin contact
Remove contaminated clothing immediately and wash skin with soap and water.

Eye contact
Immediately flush with plenty of water or eyewash solution for up to 10 minutes.

4.2. Most important symptoms and effects, both acute and delayed
General information
To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated

Inhalation
May cause cause coughing or mild irritation.

Ingestion
Nausea, vomiting. Diarrhoea. Gastrointestinal symptoms, including upset stomach.

Skin contact
Prolonged skin contact may cause redness and irritation.

Eye contact
May cause temporary eye irritation.
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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. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

5.2. Special hazards arising from the substance or mixture
Specific hazards
No specific precautions due to the small quantities handled. No unusual fire or explosion hazards noted.

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.

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
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**Occupational exposure limits**

**DISODIUM TETRABORATE DECAHYDRATE**

Long-term exposure limit (8-hour TWA): WEL 5 mg/m³

**SODIUM AZIDE**

Long-term exposure limit (8-hour TWA): WEL 0,1 mg/m³
Short-term exposure limit (15-minute): WEL 0,3 mg/m³ as NaN₃

WEL = Workplace Exposure Limit
Sk = Can be absorbed through skin.

**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**

Liquid.

**Colour**

Various colours.

**Odour**

No characteristic odour.

**pH**

pH (concentrated solution): 8.2

**Melting point**

Not determined.

**Initial boiling point and range**

<100 °C @ 760 mm Hg

**Flash point**

Not applicable.

**Evaporation rate**

Not determined.

**Upper/lower flammability or explosive limits**

Not applicable.
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Vapour pressure Not determined.
Vapour density Not determined.
Relative density Not determined.
Solubility(ies) Soluble in water.
Partition coefficient Not determined.
Auto-ignition temperature Not determined.
Decomposition Temperature Not determined.
Viscosity Not determined.
Explosive properties No unusual fire or explosion hazards noted.
Oxidising properties Not determined.

9.2. Other information
Other information None.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity No information available

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 Strong oxidising agents. Strong reducing agents.

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
Acute toxicity - oral
ATE oral (mg/kg) 5,000.0

Skin corrosion/irritation
Human skin model test Not available.

Extreme pH
Serious eye damage/irritation
Serious eye damage/irritation Not available.

Respiratory sensitisation
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Respiratory sensitisation Not available.
Skin sensitisation Not available.

Germ cell mutagenicity
Genotoxicity - in vitro Not available.
Genotoxicity - in vivo Not available.

Carcinogenicity
Carcinogenicity Not available.

Reproductive toxicity
Reproductive toxicity - fertility Not available.

Specific target organ toxicity - single exposure
STOT - single exposure Not available.

Specific target organ toxicity - repeated exposure
STOT - repeated exposure Not available.

Aspiration hazard No data available.

General information Knowledge about health hazard is incomplete. Contains a substance/a group of substances which may damage fertility and the unborn child.
Inhalation May cause respiratory irritation.
Ingestion May cause discomfort if swallowed.
Skin contact May be harmful in contact with skin. May cause irritation.
Eye contact May cause temporary eye irritation. Avoid contact with eyes.

Acute and chronic health hazards
Contains a substance/a group of substances which may damage fertility and the unborn child.

Route of entry Ingestion. Skin and/or eye contact

SECTION 12: Ecological Information

Ecotoxicity The product is not expected to be hazardous to the environment.

12.1. Toxicity
Acute toxicity - fish LC50, 72 hours, 72 hours: 178 mg/l, Carassius auratus (Goldfish)
Acute toxicity - aquatic invertebrates ECso, 48 hours, 48 hours: 1.085 mg/l, Daphnia magna
Acute toxicity - aquatic plants ICso, 72 hours: 158 mg/l mg/l, Algae

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.
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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
The product contains a substance which is toxic to aquatic organisms. However, at the concentrations present this product does not need to be classified as hazardous for the environment and the effects are not expected to be significant.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information
Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

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 MARPOL73/78 and the IBC Code
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.
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SECTION 15: Regulatory information

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

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 data available.

SECTION 16: Other information

General information

Only trained personnel should use this material.

Revision date

06/04/2016

Revision

4

Supersedes date

30/03/2016

SDS number

10334

Risk phrases in full

R22 Harmful if swallowed.
R60 May impair fertility.
R61 May cause harm to the unborn child.

Hazard statements in full

H360FD May damage fertility. May damage the unborn child.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.