SAFETY DATA SHEET
ANTIBODY PREPARATION

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 (EC 1272/2008)

Physical hazards
Not Classified

Health hazards
Skin Sens. 1 - H317

Environmental hazards
Aquatic Chronic 3 - H412

Human health
The product contains a sensitising substance. May cause sensitisation or allergic reactions in sensitive individuals.

2.2. Label elements

Pictogram

Signal word
Warning

Hazard statements
H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.
ANTIBODY PREPARATION

Precautionary statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P273 Avoid release to the environment.
P302+P352 IF ON SKIN: Wash with plenty of water.
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
P501 Dispose of contents/ container in accordance with national regulations.

Supplemental label information

Contains METHYL-2H or METHYL-4 (3:1) Mixture (0.0035%). May produce an allergic reaction.

Supplementary precautionary statements

P261 Avoid breathing vapour/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P321 Specific treatment (see medical advice on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>METHYL-2H or METHYL-4 (3:1) Mixture of EC NO 220-239-6</th>
<th>0.0035%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 55965-84-9</td>
<td></td>
</tr>
<tr>
<td>M factor (Acute) = 100</td>
<td>M factor (Chronic) = 100</td>
</tr>
</tbody>
</table>

Classification

Acute Tox. 3 - H301
Acute Tox. 3 - H311
Acute Tox. 3 - H331
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Skin Sens. 1 - H317
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

Classification (67/548/EEC or 1999/45/EC)

T;R23/24/25 C;R34 R43 N;R50/53

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

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. Rinse nose and mouth with water. 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 promptly if symptoms occur after washing.

Eye contact

Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

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

Inhalation
Irritation of nose, throat and airway.

Ingestion
May cause discomfort if swallowed.

Skin contact
Skin irritation. May cause sensitisation or allergic reactions in sensitive individuals.

Eye contact
May cause severe eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed
Notes for the doctor
No specific recommendations. If in doubt, get medical attention promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
Water spray, foam, dry powder or carbon dioxide.

5.2. Special hazards arising from the substance or mixture
Specific hazards
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
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

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
Wear protective clothing as described in Section 8 of this safety data sheet. 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 inhalation of vapours/spray and 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)
ANTIBODY PREPARATION

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

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

Colourless to pale yellow.

Odour

No characteristic odour.

pH

pH (concentrated solution): 7.4

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.

Vapour pressure

Not determined.

Vapour density

Not determined.

Relative density

Not determined.

Solubility(ies)

Soluble in water.

Partition coefficient

Not determined.
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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  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

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 - inhalation
Notes (inhalation LC₅₀)  Not determined.
Skin corrosion/irritation
Human skin model test  Not determined.
Serious eye damage/irritation
Serious eye damage/irritation  Not determined.
Germ cell mutagenicity
Genotoxicity - in vitro  Not determined.
Genotoxicity - in vivo  Not determined.
Carcinogenicity
Carcinogenicity  Not determined.
Reproductive toxicity
Reproductive toxicity - fertility  Not determined.
Specific target organ toxicity - single exposure
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STOT - single exposure  Not determined.
Specific target organ toxicity - repeated exposure
STOT - repeated exposure  Not determined.
Aspiration hazard  Not determined.

General information  Knowledge about health hazard is incomplete.
Inhalation  Moderately irritating.
Ingestion  May cause discomfort if swallowed.
Skin contact  Liquid may irritate skin. May cause sensitisation or allergic reactions in sensitive individuals.
Eye contact  Irritation of eyes and mucous membranes.
Acute and chronic health hazards  May cause sensitisation by skin contact.
Route of entry  Ingestion. Skin and/or eye contact

Toxicological information on ingredients.

**METHYL-2H or METHYL-4 (3:1) Mixture of EC NO 220-239-6**

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - oral</td>
<td>100.0</td>
</tr>
<tr>
<td>ATE oral (mg/kg)</td>
<td>100.0</td>
</tr>
<tr>
<td>Acute toxicity - dermal</td>
<td>300.0</td>
</tr>
<tr>
<td>ATE dermal (mg/kg)</td>
<td>300.0</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological Information

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

12.1. Toxicity

Acute toxicity - fish  Not determined.

Ecological information on ingredients.

**METHYL-2H or METHYL-4 (3:1) Mixture of EC NO 220-239-6**

<table>
<thead>
<tr>
<th>Aquatic toxicity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute aquatic toxicity</td>
<td>0.001 &lt; L(E)C50 ≤ 0.01</td>
</tr>
<tr>
<td>M factor (Acute)</td>
<td>100</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td></td>
</tr>
<tr>
<td>M factor (Chronic)</td>
<td>100</td>
</tr>
</tbody>
</table>

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.
ANTIBODY PREPARATION

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 may cause long-term adverse effects in the aquatic environment. 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 known.

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

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 chemical safety assessment has been carried out.

SECTION 16: Other information

General information
Only trained personnel should use this material.

Revision information
Revision date 08/08/2017
Revision 5
Supersedes date 08/08/2017
SDS number 10198

Hazard statements in full
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H331 Toxic if inhaled.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

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.