SAFETY DATA SHEET
NORMAL SERUM

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

1.1. Product identifier
Product name NORMAL SERUM
Product number OBT0009 COMPONENT 1

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses Animal serum.

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

Human health This product is harmful if swallowed.

2.2. Label elements
Hazard statements NC Not Classified

2.3. Other hazards
No information available.

SECTION 3: Composition/information on ingredients

SECTION 4: First aid measures

4.1. Description of first aid measures
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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.

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. Get medical attention. Show this Safety Data Sheet to the medical personnel.

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
There are no known reactivity hazards associated with this product. 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
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.
NORMAL SERUM

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
Occupational exposure limits
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
Sk
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

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NORMAL SERUM

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Various colours</td>
</tr>
<tr>
<td>Odour</td>
<td>No characteristic odour</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>&lt;100 @°C @ 760 mm Hg</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined</td>
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<tr>
<td>Solubility(ies)</td>
<td>Soluble in water</td>
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<tr>
<td>Partition coefficient</td>
<td>Not determined</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
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<tr>
<td>Viscosity</td>
<td>Not determined</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not determined</td>
</tr>
<tr>
<td>Oxidising properties</td>
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</tbody>
</table>

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

Materials to avoid: Strong acids.

10.6. Hazardous decomposition products

Hazardous decomposition products: Does not decompose when used and stored as recommended.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Toxicological effects</th>
<th>No information available.</th>
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<tbody>
<tr>
<td>Other health effects</td>
<td>IARC Not Listed.</td>
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<tr>
<td>Acute toxicity - oral</td>
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<td>Notes (oral LD₅₀)</td>
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<tr>
<td>ATE oral (mg/kg)</td>
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<tr>
<td>Skin corrosion/irritation</td>
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<tr>
<td>Human skin model test</td>
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<td>Extreme pH</td>
<td></td>
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<tr>
<td>Serious eye damage/irritation</td>
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<tr>
<td>Serious eye damage/irritation</td>
<td>Not determined.</td>
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<tr>
<td>Germ cell mutagenicity</td>
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<td>Genotoxicity - in vitro</td>
<td>Not determined.</td>
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<tr>
<td>Carcinogenicity</td>
<td>Not determined.</td>
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<tr>
<td>Reproductive toxicity</td>
<td>Not determined.</td>
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<tr>
<td>Reproductive toxicity - fertility</td>
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<tr>
<td>Specific target organ toxicity - single exposure</td>
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<tr>
<td>STOT - single exposure</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Specific target organ toxicity - repeated exposure</td>
<td></td>
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<tr>
<td>STOT - repeated exposure</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not determined.</td>
</tr>
</tbody>
</table>

General information

Knowledge about health hazard is incomplete.

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

12.1. Toxicity

Acute toxicity - fish

Not determined.
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Acute toxicity - aquatic invertebrates
EC₅₀, 48 hours: Daphnia pulex (Water flea) - 4.2 mg/l, Daphnia magna

Ecological information on ingredients.

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Acute aquatic toxicity
LE(C)₅₀ 0.1 < L(E)C50 ≤ 1
M factor (Acute) 1

Chronic aquatic toxicity
M factor (Chronic) 1

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
NORMAL SERUM

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

EU legislation

Guidance

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
17/03/2016

Revision
2

Supersedes date
22/12/2015

SDS number
10504

Risk phrases in full
R22 Harmful if swallowed.

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.