SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company/undertaking

Identification of the substance/preparation

Product code: 10439001
Product name: ES Cell FBS
Fetal Bovine Serum, Qualified

Company/Undertaking Identification

Life Technologies
5791 VAN ALLEN WAY
PO BOX 6482
CARLSBAD, CA 92008
+1 760 603 7200

INVITROGEN CORPORATION NEW ZEALAND LIMITED
18 - 24 BOTHA ROAD
PENROSE
AUCKLAND 1006 PAR NEW ZEALAND
+011 64 9 579 3024
0800 636 327

INVITROGEN AUSTRALIA PTY LIMITED
30-32 COMPARK CIRCUIT
MULGRAVE VIC 3170
Silver Tower-Beijing Office
Room 1711 Beijing Silver Tower
#2 DongSanHuan North Rd, Beijing 100027
P.R.China
Tel: +86-010-8446 1800 Fax: +86-010-6410 6617
Guangzhou Office
Room1010-1013 South Tower
Guangzhou World Trade Center Complex
371-376 HuanShi Dong Rd
Guangzhou 510095, China
Tel: +86-020-8760 9229 Hotline: 800 830 2001 Fax:
+86-020-8775 0687

24 hour Emergency Response (Transport):
866-536-0631
301-431-8585
Outside of the U.S. ++1-301-431-8585

For in vitro diagnostic use. CAUTION: Not for human or animal therapeutic use.

2. Hazards identification

Australian MSDS Statement
Classified as non-hazardous according to the criteria of Worksafe Australia.

GHS - Classification

Revision Date: 21-Mar-2012
Product code: 10439001

www.lifetechnologies.com
Health hazard
not hazardous

Physical hazards
not hazardous

European Union
Not hazardous

EU Specific Hazard Statements

R-phrase(s)
None

S-phrase(s)
None

Principle Routes of Exposure/
Potential Health effects

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>May cause eye irritation with susceptible persons.</td>
</tr>
<tr>
<td>Skin</td>
<td>May cause skin irritation in susceptible persons.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>May be harmful by inhalation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May be harmful if swallowed.</td>
</tr>
</tbody>
</table>

Specific effects

<table>
<thead>
<tr>
<th>Category</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenic effects</td>
<td>none</td>
</tr>
<tr>
<td>Mutagenic effects</td>
<td>none</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>none</td>
</tr>
<tr>
<td>Sensitisation</td>
<td>none</td>
</tr>
</tbody>
</table>

Target Organ Effects
None under normal use conditions

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains no substances which at their given concentration, are considered to be hazardous to health. We recommend handling all chemicals with caution.
4. FIRST AID MEASURES

Skin contact  
Rinse with plenty of water. If symptoms arise, call a physician.

Eye contact  
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Ingestion  
Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Do not induce vomiting without medical advice.

Inhalation  
Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Notes to physician  
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media  

Special protective equipment for firefighters  
Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions  
Use personal protective equipment.

Methods for cleaning up  
Soak up with inert absorbent material.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

See Section 12 for additional information.

7. HANDLING AND STORAGE

Handling  
Avoid contact with skin, eyes and clothing. Wear personal protective equipment.

Storage  
Keep in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Exposure limits

We are not aware of any national exposure limit.

Engineering measures  
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Respiratory protection  
In case of insufficient ventilation wear suitable respiratory equipment.

Hand protection  
Impervious gloves.

Eye protection  
Safety glasses with side-shields.

Skin and body protection  
Lightweight protective clothing.

Hygiene measures  
Handle in accordance with good industrial hygiene and safety practice.
Prevent product from entering drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>No information available</td>
</tr>
<tr>
<td>Odour</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>°C No data available</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>°C No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>°C No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>°C No data available</td>
</tr>
<tr>
<td>oxidising properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>soluble</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability                               Stable under normal conditions.
Materials to avoid                       No dangerous reaction known under conditions of normal use.
Hazardous decomposition products        None under normal use.
polymerisation                           Hazardous polymerisation does not occur.

11. Toxicological information

Acute toxicity                          Not hazardous

Potential Health effects

Eyes                                       May cause eye irritation with susceptible persons.
Skin                                       May cause skin irritation in susceptible persons.
Inhalation                                 May be harmful by inhalation.
Ingestion                                  May be harmful if swallowed.
Carcinogenic effects                      none.
Mutagenic effects                         none.
Reproductive toxicity                     none.
Sensitisation                             none.
Target Organ Effects                      None under normal use conditions

12. ECOLOGICAL INFORMATION

Ecotoxicity effects                      No information available.
Mobility                                  No information available.

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Product Name: ES Cell FBS
Fetal Bovine Serum, Qualified
www.lifetechnologies.com
13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

IATA

<table>
<thead>
<tr>
<th>Proper shipping name</th>
<th>Not classified as dangerous in the meaning of transport regulations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard class</td>
<td>None</td>
</tr>
<tr>
<td>Subsidiary Class</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>None</td>
</tr>
<tr>
<td>UN-No</td>
<td>None</td>
</tr>
</tbody>
</table>

15. Regulatory information

International Inventories

<table>
<thead>
<tr>
<th>International Inventories</th>
<th>Complies</th>
</tr>
</thead>
</table>

Industrial Safety and Health Law
This product complies with ISHL

Toxic Chemicals Control Law

Japan

Industrial Safety and Health Law
This product complies with ISHL

Korea
Complies

16. OTHER INFORMATION

Reason for Revision
(M)SDS sections updated

For in vitro diagnostic use. CAUTION: Not for human or animal therapeutic use.
The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

End of Safety Data Sheet