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

1.1 Product identifier

Trade name: 4Cell® BHK-21 CD Liquid Medium
Substance name: 4Cell® BHK-21 CD Liquid Medium

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.3 Details of the supplier of the safety data sheet

Company: Sartorius Stedim Biotech GmbH
August-Spindler-Strasse 11
37079 Göttingen

E-mail address of person responsible for the SDS: Department CA-FM Environment@sartorius.com

1.4 Emergency telephone number

UK/Europe/Global: +44.1865.407.333 (Sartorius 29003)
United States: +1.866.928.0789 (Toll free), (Sartorius 29003)
Canada: +1.800.579.7421 (Toll free), (Sartorius 29003)
United States & Canada (geographic): +1.202.464.2554 (Sartorius 29003)
Asia-Pacific/East & South East Asia (without China): +65.3158.1074 (Sartorius 29003)
Japan: +81.3.4578.9341 (Sartorius 29003)
Indonesia: 007.803.011.0293 (Toll free Indonesia), (Sartorius 29003)
Malaysia: +60.3.6207.4347 (Sartorius 29003)
Thailand: 001.800.120.666.751 (Toll free Thailand), (Sartorius 29003)
India: 000.800.100.7479 (Toll free India) or +65.3158.1198 (Sartorius 29003)
South Korea: +82.2.3479.8401 (Sartorius 29003)
Australia: +61.2.8014.4558 (Sartorius 29003)
New Zealand: +64.9.929.1483 (Sartorius 29003)
Middle East/Africa: +44.1235.239671 (Sartorius 29003)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
Skin irritation, Category 2
Skin irritation, Category 2
Specific target organ toxicity - single exposure, Category 2
H316: Causes mild skin irritation.
H320: Causes eye irritation.
H335: May cause respiratory irritation.
2.2 Label elements

Labelling REGULATION (EC) No 1272/2008

Hazard pictograms : 

Signal word : Warning

Hazard statements : 
- H316 Causes mild skin irritation.
- H320 Causes eye irritation.
- H335 May cause respiratory irritation.

Precautionary statements : 
- P261 Avoid breathing spray.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response: 
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 If eye irritation persists: Get medical advice/ attention.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P332 + P313 If skin irritation occurs: Get medical advice/ attention.
- P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312 Call a POISON CENTER/doctor/ if you feel unwell.

2.3 Other hazards

EUH208: Contains cobalt (II) chloride hexahydrate, sodium pyruvate and sodium selenite. Can cause allergic reactions.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Mixture
Aqueous solution

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Chemical name</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No)</th>
<th>Concentration (%)</th>
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</table>

2 / 9
<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
<th>Hazard Statements</th>
<th>Limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>10102-18-8</td>
<td>Sodium selenite 233-267-9</td>
<td>T; T; R23/25 N; R51 R31 Acute Tox. 2; H300 Acute Tox. 2; H330 Skin Irrit. 2; H315 6.4 2; H319 Skin Sens. 1; H317 Aquatic Chronic 2; H411</td>
<td>&lt;= 0,01</td>
</tr>
<tr>
<td>7791-13-1</td>
<td>Cobalt chloride hexahydrate Xn-N; Xn; R45-R20/21/22-R42-R52/53</td>
<td>Acute Tox. 4; H302 Skin Sens. 1; H317 Resp. Sens. 1; H334 Mut. 2; H341 Carc. 1B; H350i Repr. 1B; H360F Aquatic Acute 1; H400 Aquatic Chronic 1; H410</td>
<td>&lt;= 0,01</td>
</tr>
<tr>
<td>7803-55-6</td>
<td>Ammonium metavanadate 232-261-3</td>
<td>T; T; R25 T; T; R48-R23 Repr.Cat.3; R62-R63 Xn; Xn; R20 N; R51/53 Acute Tox. 3; H301 Acute Tox. 4; H332 Eye Irrit. 2; H319 Repr. 2; H361 STOT RE 1; H372 Aquatic Chronic 2; H411</td>
<td>&lt;= 0,01</td>
</tr>
<tr>
<td>10025-69-1</td>
<td>Tin chloride dihydrate Xn; Xn; R21 C; C; R34 N; N; R50/53</td>
<td>Acute Tox. 4; H302 Skin Corr. 1B; H314 Aquatic Acute 1; H400</td>
<td>&lt;= 0,01</td>
</tr>
<tr>
<td>13517-24-3</td>
<td>Sodium metasilicate nonahydrate 229-912-9</td>
<td>Met. Corr. 1; H290 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335</td>
<td>&lt;= 0,01</td>
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<tr>
<td>7446-20-0</td>
<td>Zinc sulfate heptahydrate 616-097-3</td>
<td>Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410</td>
<td>&lt;= 0,01</td>
</tr>
<tr>
<td>113-24-6</td>
<td>Sodium pyruvate 204-024-4</td>
<td>Eye Irrit. 2; H319 Skin Sens. 1B; H317</td>
<td>&lt;= 0,1</td>
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<tr>
<td>45738-97-4</td>
<td>3,7-dihydropurin-6-one, Sodium</td>
<td>Eye Dam. 1; H318</td>
<td>&lt;= 0,01</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1 Description of first aid measures
If inhaled:
- Move to fresh air.
- If symptoms persist, call a physician.

In case of skin contact:
- Wash off immediately with soap and plenty of water.

In case of eye contact:
- Rinse thoroughly with plenty of water, also under the eyelids.
- If eye irritation persists, consult a specialist.

If swallowed:
- Rinse mouth with water.
- Never give anything by mouth to an unconscious person.
- Consult a physician if necessary.

4.2 Most important symptoms and effects, both acute and delayed
None known.

4.3 Indication of any immediate medical attention and special treatment needed
Treatment:
- No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media:
- Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Specific hazards during firefighting:
- No information available.

5.3 Advice for firefighters
Special protective equipment for firefighters:
- In the event of fire, wear self-contained breathing apparatus.

Further information:
- The product itself does not burn.
  Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Avoid formation of aerosol.

6.2 Environmental precautions

Environmental precautions: Should not be released into the environment. Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Pick up and transfer to properly labelled containers.

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: Avoid formation of aerosol.

Hygiene measures: Avoid contact with skin, eyes and clothing. Keep away from food and drink. When using do not eat or drink.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Protect from exposure to light. Keep container tightly closed. Keep in the refrigerator (2-8°C).

Storage class (TRGS 510): 10-13, German Storage Class 10 to 13

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

No data available

8.2 Exposure controls

Personal protective equipment

Eye protection: Goggles
Hand protection: butyl-rubber Nitrile rubber
Remarks: Lab coat
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- **Appearance**: liquid, Aqueous solution
- **Colour**: clear, light yellow
- **Odour**: specific smell
- **pH**: 6.9 to ≤ 7.1
- **Density**: ca. 1 g/cm3 similar to water

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

10.2 Chemical stability

10.3 Possibility of hazardous reactions

- **Hazardous reactions**: None known.
  - No decomposition if stored and applied as directed.

10.4 Conditions to avoid

10.5 Incompatible materials

- **Materials to avoid**: Oxidizing agents, Acids and bases

10.6 Hazardous decomposition products

- No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- **Further information**
  - **Product**:
    - Remarks: Health injuries are not known or expected under normal use.
SECTION 12: Ecological information

12.1 Toxicity
   No data available

12.2 Persistence and degradability
   No data available

12.3 Bioaccumulative potential
   No data available

12.4 Mobility in soil
   No data available

12.5 Results of PBT and vPvB assessment
   Not relevant

12.6 Other adverse effects
   Product: Additional ecological information : Remarks: In large quantities, this product may affect the functioning of waste-water treatment plants.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
   Product : In accordance with local and national regulations.

SECTION 14: Transport information

14.1 UN number

14.2 UN proper shipping name

14.3 Transport hazard class(es)

14.4 Packing group

14.5 Environmental hazards

14.6 Special precautions for user
   Remarks : Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
   Not applicable for product as supplied.
### SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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**4Cell® BHK-21 CD Liquid Medium**

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date:</th>
<th>SDS Number:</th>
<th>Date of last issue:</th>
<th>Date of first issue:</th>
</tr>
</thead>
</table>

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**SECTION 15: Regulatory information**

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

- **Water contaminating class (Germany):** WGK 1 slightly hazardous to water

15.2 Chemical safety assessment

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**SECTION 16: Other information**

**Full text of R-Phrases**

- R20 : Harmful by inhalation.
- R20/21/22 : Harmful by inhalation, in contact with skin and if swallowed.
- R21 : Also harmful in contact with skin.
- R23 : Toxic by inhalation.
- R23/25 : Toxic by inhalation and if swallowed.
- R25 : Toxic if swallowed.
- R31 : Contact with acids liberates toxic gas.
- R34 : Causes burns.
- R42 : May cause sensitisation by inhalation.
- R45 : May cause cancer.
- R48 : Danger of serious damage to health by prolonged exposure.
- R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R51 : Toxic to aquatic organisms.
- R51/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R62 : Possible risk of impaired fertility.
- R63 : Possible risk of harm to the unborn child.

**Full text of H-Statements**

- H290 : May be corrosive to metals.
- H300 : Fatal if swallowed.
- H301 : Toxic if swallowed.
- H302 : Harmful if swallowed.
- H314 : Causes severe skin burns and eye damage.
- H315 : Causes skin irritation.
- H317 : May cause an allergic skin reaction.
- H318 : Causes serious eye damage.
- H319 : Causes serious eye irritation.
- H330 : Fatal if inhaled.
- H331 : Harmful if inhaled.
- H334 : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335: May cause respiratory irritation.
H341: Suspected of causing genetic defects if inhaled.
H350i: May cause cancer by inhalation.
H360F: May damage fertility.
H361: Suspected of damaging fertility or the unborn child.
H372: Causes damage to organs through prolonged or repeated exposure if inhaled.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
H411: Toxic to aquatic life with long lasting effects.

Full text of other abbreviations
6.4: Eye irritation
Acute Tox.: Acute toxicity
Aquatic Acute: Short-term (acute) aquatic hazard
Aquatic Chronic: Long-term (chronic) aquatic hazard
Carc.: Carcinogenicity
Eye Dam.: Serious eye damage
Eye Irrit.: Eye irritation
Met. Corr.: Corrosive to metals
Muta.: Germ cell mutagenicity
Repr.: Reproductive toxicity
Resp. Sens.: Respiratory sensitisation
Skin Corr.: Skin corrosion
Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitisation
STOT RE: Specific target organ toxicity - repeated exposure
STOT SE: Specific target organ toxicity - single exposure

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