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

Identification of the substance or mixture

Product code 15140122
Product name PENICILLIN STREPTOMYCIN SOL

Company/undertaking identification

Life Technologies Corporation  Life Technologies
5781 Van Allen Way  5250 Mainway Drive
PO Box 6482  Burlington, ONT
Carlsbad, CA 92008  CANADA L7L 6A4
+1 760 603 7200  800/263-6236

24 hour Emergency Response for Hazardous Materials
Within the USA + Canada: 1-800-424-9300 and +1 703-527-3887
Outside the USA + Canada: +1 703-741-5970

Country specific Emergency Number (if available):
CHEMTREC Brazil (Rio De Janeiro) +(55)-2139581449 (português)

Research Use Only. Not for use in diagnostic procedures.

SECTION 2: Hazards identification

GHS - Classification

Signal Word DANGER

Hazard pictograms

Health hazards

<table>
<thead>
<tr>
<th>Health hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Specific target organ systemic toxicity (single exposure)</td>
<td>Category 2</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Category 1A</td>
</tr>
</tbody>
</table>

Physical hazards
Not classified
Environmental hazards

Acute aquatic toxicity

Category 3

Hazard Statements
H317 - May cause an allergic skin reaction
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H360 - May damage fertility or the unborn child
H371 - May cause damage to organs
H402 - Harmful to aquatic life

Precautionary Statements

Prevention
P201 - Obtain special instructions before use
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash hands thoroughly after handling
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P313 - If skin irritation or rash occurs: Get medical advice/attention
P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
P362 + P364 - Take off all contaminated clothing and wash it before reuse

Storage
Not Applicable

Disposal
P501 - Dispose of contents/container to an approved waste disposal plant

Other hazards
Not Applicable

HMIS

<table>
<thead>
<tr>
<th>Health</th>
<th>4 * Chronic Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>0</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
</tbody>
</table>

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>EINECS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streptomycin sulfate</td>
<td>3810-74-0</td>
<td>223-286-0</td>
<td>0.5-1.5</td>
</tr>
<tr>
<td>Penicillin G Sodium Salt</td>
<td>69-57-8 (0.1-1.0)</td>
<td>-</td>
<td>0.1-1.0</td>
</tr>
</tbody>
</table>

We recommend handling all chemicals with caution.
SECTION 4: First aid measures

Description of first aid measures

Skin contact  
Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Immediate medical attention is required.

Eye contact  
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Ingestion  
Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Get medical attention if symptoms occur.

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

Notes to Physician  
Treat symptomatically.

Most important symptoms and effects, both acute and delayed
H317 - May cause an allergic skin reaction  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H360 - May damage fertility or the unborn child  
H371 - May cause damage to organs  
H402 - Harmful to aquatic life

Indication of any immediate medical attention and special treatment needed
If skin irritation occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media  

Unsuitable extinguishing media  
No information available.

Special hazards arising from the substance or mixture  
Not known.

Advice for fire-fighters  
Wear self-contained breathing apparatus and protective suit.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Use personal protection equipment. See Section 8 for more detail.

Environmental precautions
Avoid discharge into drains and waterways whenever possible.

Methods and material for containment and cleaning up
Soak up with inert absorbent material.

Reference to other sections
See section 8 for more information.
### SECTION 8: Exposure controls/personal protection

#### Control parameters

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA PEL</th>
<th>OSHA PEL (Ceiling)</th>
<th>ACGIH OEL (TWA)</th>
<th>ACGIH OEL (STEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streptomycin sulfate</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Penicillin G Sodium Salt</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**Engineering measures**
Ensure adequate ventilation, especially in confined areas

**Exposure controls**

**Personal Protective Equipment**

- **Respiratory protection**
  In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

- **Hand protection**
  Wear suitable gloves Glove material: Compatible chemical-resistant gloves.

- **Eye protection**
  Tight sealing safety goggles

- **Skin and Body Protection**
  Wear laboratory coat for body protection

- **Hygiene measures**
  Handle in accordance with good industrial hygiene and safety practice

**Environmental exposure controls**
Avoid discharge into drains and waterways whenever possible.
### SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Mixture has not been tested</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Mixture has not been tested</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Melting point / melting range °C</td>
<td>Mixture has not been tested</td>
<td>°C</td>
</tr>
<tr>
<td>Boiling point / boiling range °C</td>
<td>Mixture has not been tested</td>
<td>°C</td>
</tr>
<tr>
<td>Flash point</td>
<td>Mixture has not been tested</td>
<td>°C</td>
</tr>
<tr>
<td>Autoignition Temperature °C</td>
<td>Mixture has not been tested</td>
<td>°C</td>
</tr>
<tr>
<td>Decomposition temperature °C</td>
<td>Mixture has not been tested</td>
<td>°C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Mixture has not been tested</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Mixture has not been tested</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Mixture has not been tested</td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>Mixture has not been tested</td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>Mixture has not been tested</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>Mixture has not been tested</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Mixture has not been tested</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Mixture has not been tested</td>
<td></td>
</tr>
<tr>
<td>Other information</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>None known.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under normal conditions.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Hazardous reaction has not been reported.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>None known.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>No dangerous reaction known under conditions of normal use.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>No known hazardous decomposition products.</td>
</tr>
</tbody>
</table>
SECTION 11: Toxicological information

Information on toxicological effects

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 (oral, rat/mouse)</th>
<th>LD50 (dermal, rat/rabbit)</th>
<th>LC50 (inhalation, rat/mouse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streptomycin sulfate</td>
<td>= 430 mg/kg (Rat)</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Penicillin G Sodium Salt</td>
<td>= 6916 mg/kg (Rat) &gt; 2 g/kg (Mouse)</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Principal Routes of Exposure

- **Irritation**: Conclusive but not sufficient for classification
- **Corrosivity**: Conclusive but not sufficient for classification
- **Sensitization**: May cause sensitization by inhalation and skin contact
- **STOT - Single Exposure**: No information available
- **STOT - Repeated Exposure**: Conclusive but not sufficient for classification
- **Carcinogenicity**: Conclusive but not sufficient for classification
- **Mutagenicity**: Conclusive but not sufficient for classification
- **Reproductive toxicity**: May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility
- **Aspiration hazard**: Conclusive but not sufficient for classification

SECTION 12: Ecological information

Toxicity

Hazardous to the Aquatic Environment.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Freshwater Algae Data</th>
<th>Water Flea Data</th>
<th>Freshwater Fish Species Data</th>
<th>Microtox Data</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streptomycin sulfate</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Penicillin G Sodium Salt</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Results of PBT and vPvB assessment

No information available.

Other adverse effects

No information available.

SECTION 13: Disposal considerations

Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.
SECTION 14: Transport information

IATA / ADR / DOT-US / IMDG
Not regulated in the meaning of transport regulations.

UN number Not Applicable
UN proper shipping name Not Applicable
Transport hazard class(es) Not Applicable
Packing group Not Applicable
Environmental hazards Not Applicable
Special precautions for user Not Applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not Applicable.

SECTION 15: Regulatory information

<table>
<thead>
<tr>
<th>Component</th>
<th>US TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streptomycin sulfate 3810-74-0 (0.5-1.5)</td>
<td>Listed</td>
</tr>
<tr>
<td>Penicillin G Sodium Salt 69-57-8 (0.1-1.0)</td>
<td>-</td>
</tr>
</tbody>
</table>

US Federal Regulations

SARA 313
This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contains HAPs.

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streptomycin sulfate</td>
<td>3810-74-0</td>
<td>0.5-1.5</td>
<td>Developmental</td>
</tr>
</tbody>
</table>

WHMIS Hazard Class
D2A - Very toxic materials

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

Reason for revision SDS sections updated.
References

- ECHA: http://echa.europa.eu/
- LOLI database: https://www.chemadvisor.com/loli-database

“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 SDS DOES NOT CONSTITUTE A WARRENTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE"