1. Product and Company Information

Product Name: Trans109 Chemically Competent Cell
Cat. No.: CD301
Company: TransGen Biotech Co., Ltd.
Technical Phone: +86-400-898-0321
Fax: +86-10-57815011
E-mail Address: trans@transgen.com.cn

2. Hazards Identification

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.

3. Composition

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>56-81-5</td>
<td>5-10</td>
</tr>
</tbody>
</table>

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

**General advice**: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**Eye contact**: Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact**: Wash off immediately with plenty of water for at least 15 minutes.

**Inhalation**: Move to fresh air.
Ingestion
Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Not an expected route of exposure.

Notes to physician
Treat symptomatically.

5. Fire-Fighting Measures
Suitable extinguishing media
Water spray. Carbon dioxide (CO₂). Foam. Dry chemical

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.

7. Handling and Storage
Handling
Always wear recommended Personal Protective Equipment. No special handling advice required.

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

8. Exposure Controls/Personal Protection
Exposure limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA PEL (TWA)</th>
<th>OSHA PEL (Ceiling)</th>
<th>PEL</th>
<th>ACGIH OEL (TWA)</th>
<th>ACGIH OEL (STEL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>10 mg/m³</td>
<td>none</td>
<td>10 mg/m³</td>
<td>none</td>
<td></td>
</tr>
</tbody>
</table>

9. Physical and Chemical Properties
General Information
Form: liquid
Color: transparent
Water solubility: soluble
Others: No information available.

10. Stability and Reactivity

<table>
<thead>
<tr>
<th>Stability</th>
<th>Stable under normal conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials to avoid</td>
<td>No information available</td>
</tr>
<tr>
<td>Polymerization</td>
<td>None under normal processing.</td>
</tr>
</tbody>
</table>

11. Toxicological Information

<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>Glycerol</td>
<td>12600 mg/kg Oral</td>
<td>no data available</td>
<td>no data available</td>
</tr>
</tbody>
</table>

Principle Routes of Exposure/ Potential Health effects

- **Eyes**: May cause eye irritation with susceptible persons.
- **Skin**: May cause skin irritation in susceptible persons.
- **Inhalation**: May be harmful if inhalation.
- **Ingestion**: May be harmful if swallowed.
- **Carcinogenic effects**: none
- **Mutagenic effects**: none
- **Reproductive toxicity**: none
- **Sensitization**: none

12. Ecological Information

<table>
<thead>
<tr>
<th>Ecotoxicity effects</th>
<th>No information available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility</td>
<td>See log Pow</td>
</tr>
<tr>
<td>Biodegradation</td>
<td>No information available.</td>
</tr>
<tr>
<td>Bioaccumulation</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

<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>Glycerol 56-81-5</td>
<td></td>
<td>Daphnia species EC50=500 mg/L (24 h)</td>
<td></td>
<td></td>
<td>logPow-1.76</td>
</tr>
</tbody>
</table>
13. Disposal Considerations
Dispose of in accordance with local regulations.

14. Transport Information
- IATA: Not dangerous goods
- Proper shipping name: Not classified as dangerous in the meaning of transport regulations
- Hazard class: none
- Subsidiary Class: none
- Packing group: none
- UN-No: none

15. Regulatory Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>-</td>
</tr>
</tbody>
</table>

16. Other Information
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

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