1. Identification of the Substance/Preparation and Company

Name of substance/preparation: Quaternary-amino-α-cyclodextrin

Use of substance/preparation: Laboratory chemicals, solubilizer, chiral separator

Information about Manufacturer:
CYCLOLAB R&D. Ltd., Budapest, Hungary
H-1097 Budapest, IX. Illatos út 7, Hungary
Tel: (36-1)-347-60-60; Fax: (36-1)-347-60-68; e-mail: cyclolab@cyclolab.hu

2. Hazards Identification

Not a dangerous substance according to GHS.

Classification and labelling according to 67/548/EEC, EC 1999/45

This substance is not classified as dangerous according to Directive 67/548/EEC.

Further information:
Risk of dust explosion.

3. Composition/Information on ingredients

Chemical characterization (preparation):

4. First-Aid Measures

General information:
In case of accident or if you feel unwell seek medical advice (show label or MSDS where possible)

If inhaled:
Provide fresh air.

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

In case of eye contact:
Rinse thoroughly with plenty of water.

If swallowed:
Rinse mouth with water. Drink several small portions of water. Do not induce vomiting. Never give anything by mouth to an unconscious person.

5. Fire Fighting Measures

Suitable extinguishing media:
Water, extinguishing powder, alcohol-resistant foam, carbon dioxide

Extinguishing media which must not be used for safety reasons:
n.d.

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:
At low oxygen level: carbon monoxide

Special protective equipment for fire fighters:
Use respiratory protection independent of recirculated air.
6. Accidental Release Measures

**Personal precautions:**
Avoid dust formation. Do not inhale dust.

**Environmental precautions:**
Cover any spilled material in accordance with regulations to prevent dispersal by wind. Observe local/state/federal regulations.

**Methods for cleaning up:**
Take up mechanically and dispose of according to local/state/federal regulations. Avoid formation of dust and dust deposition. Dispose of cleaning water in accordance with local/state/federal regulations.

7. Handling and Storage

**Handling**
- **Precaution for safe handling:** Avoid dust formation.

- **Precautions against fire and explosion:** Observe the general rules for fire prevention. Avoid dust deposit, remove dust regularly. Take precautionary measures against electrostatic charging. Take precautionary measures against dust explosion.

**Storage**
- **Conditions for storage rooms and vessels:** Observe precautionary measures against dust explosion.
- **Advice for storage of incompatible materials:** None known

Further information for storage:
Keep container tightly closed. Protect from direct light and source of heat. Store under dry conditions below 30 °C, in well-ventilated place.

8. Exposure Control and Personal Protection Equipment

**Exposure limits**
- n.d.

**Exposure limited and controlled**

**Exposure in the workplace limited and controlled:**
- **General protection and hygiene measures:** Observe standard industrial hygiene practices for the handling of chemical substances.
- **Personal protection equipment:**
  - **Respiratory protection:** In case of dust formation: fine dust mask without protection rating.
  - **Hand protection:** Rubber gloves
  - **Eye protection:** Tight-fitting protective goggles

**Exposure to the environment limited and controlled:**
Prevent material from entering surface waters and soil

Further information for system design and engineering measures
Observe information in section 7.

9. Physical and Chemical Properties

**General information**

<table>
<thead>
<tr>
<th>Physical state/form</th>
<th>solid - powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>white</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
</tbody>
</table>

**Important information about the protection of health, safety, and the environment**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point</td>
<td>n.d.</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>n.d.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>n.d.</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>no</td>
</tr>
<tr>
<td>Lower explosion limit (LEL)</td>
<td>n.d.</td>
</tr>
<tr>
<td>Upper explosion limit (UEL)</td>
<td>n.d.</td>
</tr>
<tr>
<td>Bulk density</td>
<td>n.d.</td>
</tr>
<tr>
<td>Water solubility (in 100 cm³, at 25 °C)</td>
<td>n.d.</td>
</tr>
<tr>
<td>pH-value</td>
<td>n.d.</td>
</tr>
</tbody>
</table>
**Material Safety Data Sheet EC 1907/2006**

**Product Name:** Quaternary-amino-α-cyclodextrin  
**Product Number:** CY-1099  
**Date:** 26.09.2012  
**Date of Revision:** 26.09.2015  
**Version:** 1.0

CYCLOLAB R&D. Ltd., Budapest, Hungary

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<table>
<thead>
<tr>
<th><strong>Other information</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hygroscopic substance. See Product Information Sheet.</td>
</tr>
</tbody>
</table>

**10. Stability and Reactivity**

**General information:**
If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

**Conditions to avoid:**
none known

**Materials to avoid:**
Decomposes in strongly acidic and basic solutions

**Hazardous decomposition products:**
none known

**11. Toxicological Information**

**General information:**
According to our present state of knowledge no damaging effect expected when treated in accordance with standard industrial practices and local regulations where applicable.

**Toxicological tests:**
- **Acute toxicity (LD50/LC50-values relevant to classification):** n.d.
- **Primary irritation:** n.d.
- **Sensitization:** n.d.
- **Substance to chronic toxicity:** n.d.
- **Reference points for mutagenic potential:** n.d.

**Experience with man:**
n.d.

**12. Ecological Information**

**Ecotoxicity**
n.d.

**Mobility**
n.d.

**Persistence and degradability**
- **Biodegradation / further information:** n.d.

**Bio-accumulation potential**
n.d.

**Additional information**
Prevent material from entering surface waters and soil. Only introduce into water purification plants in diluted state.
No environmental problems expected if handled and treated in accordance with standard industrial practices and local regulations where applicable.
13. Disposal Considerations

**Material**

**Recommendation:**
Dispose of according to regulations by incineration in a special waste incinerator. Observe local/state/federal regulations.

**Uncleaned packaging**

**Recommendation:**
Completely discharge containers (no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations.

14. Transport Regulations

**Land transport ADR and RID:**

**Road ADR:**
Not regulated for transport.

**Railway RID:**
Not regulated for transport

**Transport by sea IMDG-Code:**

**Sea IMDG-Code:**
Not regulated for transport

**Air transport ICAO-TI/IATA-DGR:**

**Air transport ICAO-TI/IATA-DGR:**
Not regulated for transport

15. Regulatory Information

National and local regulations must be observed.

16. Other Information

**Material**

The above information describes exclusively the safety requirements of the product(s) and is based on our present-day knowledge. It does not represent a guarantee for the properties of the product(s) described in terms of the legal warranty regulations. Properties of the product are to be found in the respective product leaflet (if applicable).

**Further information**

This version supersedes all previous versions.