1 Identification of substance

· Trade name: Capa® 2304

· Application of the substance / the preparation
  Polyurethane
  Automotive industry
  Adhesives

· Manufacturer/Supplier:
  Perstorp UK Limited
  Baronet Road
  Warrington
  Cheshire WA4 6HA
  United Kingdom
  Tel. +44 (0) 1925 643500
  Fax. +44 (0) 1925 232207
  Web: www.perstorp.com
  E-mail: polyolinfo@perstorp.com

  Perstorp Polyols Inc
  600 Matzinger Road
  Toledo, Ohio 43612
  Tel. 419-729-5448,
  800-537-0280
  Fax. 419-729-3291

· Information department: Corporate EHSQ Perstorp Holding AB.

· Emergency information:
  (United States) - CHEMTREC 1-800-424-9300.
  (Int.) +46 8 337043 (Emergency Response Center, Sweden)

2 Composition/Data on components

· Chemical components:

<table>
<thead>
<tr>
<th>CAS NO.</th>
<th>Description</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>36890-68-3</td>
<td>2-Oxepanone, polymer with 2,2’-oxybis[ethanol]</td>
<td>&gt;99%</td>
</tr>
</tbody>
</table>

3 Hazards identification

· Information pertaining to particular dangers for man and environment:

· Classification system:
  The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

· NFPA ratings (scale 0 - 4)
  1 0
  Health = 1
  Fire = 1
  Reactivity = 0

· HMIS-ratings (scale 0 - 4)
  HEALTH 1
  FIRE 1
  REACTIVITY 0

4 First aid measures

· General information: Immediately remove any clothing soiled by the product.

· After inhalation: Supply fresh air; consult doctor in case of complaints.

(Contd. on page 2)
5 Fire fighting measures

- **Suitable extinguishing agents:**
  - Water spray
  - Foam
  - Carbon dioxide
  - Fire-extinguishing powder
- **Special hazards caused by the material, its products of combustion or resulting gases:**
  - In case of fire, the following can be released:
    - Carbon monoxide (CO)
    - Monomer (2-Oxepanone, Hexan-6-Olide, CAS 502-44-3)
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information** The product is combustible.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:** Do not allow to enter sewers/surface or ground water.
- **Measures for cleaning/collection:**
  - Pick up mechanically.
  - Clean the affected area carefully; suitable cleaners are:
    - Water
- **Additional information** No dangerous substances are released.

7 Handling and storage

- **Information for safe handling:** Keep away from heat and direct sunlight.
- **Storage:**
  - **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
  - **Further information about storage conditions:** Store in cool, dry conditions in well-sealed receptacles.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
  - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
  - **Breathing equipment:** Not necessary if room is well-ventilated.
  - **Protection of hands:**
  - **Protective gloves**
  - PVC gloves
  - Chloroprene rubber, CR
  - Butyl rubber, BR
Trade name: Capa® 2304

- Penetration time of glove material
  The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection:
  Safety glasses

9 Physical and chemical properties

- General Information
  Form: Solid (wax)
  Color: White
  Odor: Odorless

- Change in condition
  Melting point/Melting range: Undetermined.
  Boiling point/Boiling range: Undetermined.

- Flash point: 275°C (527°F)

- Ignition temperature: 200°C (392°F)

- Auto igniting: Product is not selfigniting.

- Danger of explosion: Product does not present an explosion hazard.

- Density at 60°C (140°F): 1.05 g/cm³

- Solubility in / Miscibility with Water: Insoluble.

- Segregation coefficient (n-octanol/water): Undetermined.

- Viscosity: Dynamic at 60°C (140°F): 175 mPas

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:
  To avoid thermal decomposition do not overheat.
- Materials to be avoided:
  Avoid contact with acids.
  Avoid contact with bases.
- Dangerous products of decomposition:
  Possible decomposition and release of monomer at temperatures above 200°C

11 Toxicological information

- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    38890-68-3 2-Oxepanone, polymer with 2,2'-oxybis[ethanol]
    Oral LD50 >2000 mg/kg (rat)
Trade name: **Capa® 2304**

- **Primary irritant effect:**
  - on the skin: No irritant effect.
  - on the eye: No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
  The product is not subject to classification according to internally approved calculation methods for preparations:
  When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

### 12 Ecological information

- **Information about elimination (persistence and degradability):**
  - **36890-68-3 2-Oxepanone, polymer with 2,2’-oxybis[ethanol]**
    - Biotic degradation >60 % (STURM)
  - **Other information:** The product is readily biodegradable.

- **Aquatic toxicity:**
  - **36890-68-3 2-Oxepanone, polymer with 2,2’-oxybis[ethanol]**
    - EC50/96 h 80-82 mg/l (fish)
    - NOEC (16hr) 330-530 mg/l (bacteria)
  - **Remark:** The product is harmful to fish, but shows less effects to aquatic organisms.

### 13 Disposal considerations

- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- **DOT regulations:**
  - Hazard class: -

- **Land transport ADR/RID (cross-border):**
  - ADR/RID class: -

- **Maritime transport IMDG:**
  - IMDG Class: -

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

- **Transport/Additional information:** Not dangerous according to the above specifications.

### 15 Regulations

- **Sara**
  - Section 355 (extremely hazardous substances):
    None of the ingredient is listed.

- **Section 313 (Specific toxic chemical listings):**
  None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**
  - 36890-68-3 2-Oxepanone, polymer with 2,2’-oxybis[ethanol]
Trade name: **Capa® 2304**

- **Proposition 65**
  - **Chemicals known to cause cancer:** None of the ingredients is listed.
  - **Chemicals known to cause reproductive toxicity for females:** None of the ingredients is listed.
  - **Chemicals known to cause reproductive toxicity for males:** None of the ingredients is listed.
  - **Chemicals known to cause developmental toxicity:** None of the ingredients is listed.

- **Carcinogenicity categories**
  - **EPA (Environmental Protection Agency)** None of the ingredients is listed.
  - **IARC (International Agency for Research on Cancer)** None of the ingredients is listed.
  - **NTP (National Toxicology Program)** None of the ingredients is listed.
  - **TLV (Threshold Limit Value established by ACGIH)** None of the ingredients is listed.
  - **MAK (German Maximum Workplace Concentration)** None of the ingredients is listed.
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)** None of the ingredients is listed.
  - **OSHA-Ca (Occupational Safety & Health Administration)** None of the ingredients is listed.
  - **Canadian Domestic Substance List (DSL)** All ingredients are listed.
  - **Chinese Chemical Inventory of Existing Chemical Substances** All ingredients are listed.
  - **Japan Existing and New chemical Substance List (ENCS)** 7-786
  - **Korea Existing Chemical Inventory** 36890-68-3 [2-Oxepanone, polymer with 2,2'-oxybis[ethanol]] KE-27510

- **Product related hazard informations:**
  Observe the general safety regulations when handling chemicals.
  The substance is not subject to classification according to the sources of literature known to us.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Corporate EHSQ Perstorp Holding AB