1 Identification of substance

- Trade name: **Capa® 2043**
- **Application of the substance / the preparation**
  - Polyurethane
  - Footwear industry
  - Paints
  - Construction
  - Automotive industry
- **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:**
  - 110-63-4 butane-1,4-diol 2%
  - 31831-53-5 2-oxepanone, polymer with 1,4-butandiol 98%

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)**
    - 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.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

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 respirator protective device.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
  - Prevent from spreading (e.g. by damming-in or oil barriers).
  - Do not allow product to reach sewage system or any water course.
- **Measures for cleaning/collection:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 13.
  - Clean the affected area carefully; suitable cleaners are:
    - Water

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

- **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
Material Safety Data Sheet
acc. to ISO/DIS 11014

Trade name: Capa® 2043

- Material of gloves
  PVC gloves
  Chloroprene rubber, CR
  Butyl rubber, BR
- 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: Liquid
  Color: Colorless
  Odor: uncharacteristic
- Change in condition
  Melting point/Melting range: 0 - 10°C (32 - 50°F)
  Boiling point/Boiling range: Undetermined.
- Flash point: 275°C (527°F)
- Ignition temperature:
- Decomposition temperature: ca 200°C (ca 392°F)
- Auto igniting: Product is not selfigniting.
- Danger of explosion: Product does not present an explosion hazard.
- Density at 20°C (68°F): 1.05 g/cm³
- Solubility in / Miscibility with Water: Not miscible or difficult to mix.
- Segregation coefficient (n-octanol/water): Undetermined.

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.

11 Toxicological information

- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    31831-53-5 2-oxepanone, polymer with 1,4-butandiol
    Oral LD50 >2000 mg/kg (rat)
- Primary irritant effect:
  - on the skin: No irritant effect.
Trade name: **Capa® 2043**

- **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.

### 12 Ecological information

- **Information about elimination (persistence and degradability):**
  - 31831-53-5 2-oxepanone, polymer with 1,4-butandiol
    - Biotic degradation: (7 d) > 60% (STURM)
  - **Other information:** The product is readily biodegradable.
- **Ecotoxic effects:**
  - **Aquatic toxicity:**
    - 31831-53-5 2-oxepanone, polymer with 1,4-butandiol
      - LC50/96 h: 72 mg/l (fish)
      - NOEC: 460 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):**
    - 31831-53-5 2-oxepanone, polymer with 1,4-butandiol
    - 110-63-4 butane-1,4-diol

(Contd. on page 5)
Trade name: **Capa® 2043**

<table>
<thead>
<tr>
<th>Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>- <strong>Chemicals known to cause cancer:</strong></td>
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<tr>
<td>None of the ingredients is listed.</td>
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<tr>
<td>- <strong>Chemicals known to cause reproductive toxicity for females:</strong></td>
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<td>None of the ingredients is listed.</td>
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<tr>
<td>- <strong>Chemicals known to cause reproductive toxicity for males:</strong></td>
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<tr>
<td>- <strong>Chemicals known to cause developmental toxicity:</strong></td>
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<table>
<thead>
<tr>
<th>Carcinogenicity categories</th>
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</thead>
<tbody>
<tr>
<td>- <strong>EPA (Environmental Protection Agency)</strong></td>
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<tr>
<td>None of the ingredients is listed.</td>
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<tr>
<td>- <strong>IARC (International Agency for Research on Cancer)</strong></td>
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<td>None of the ingredients is listed.</td>
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<tr>
<td>- <strong>NTP (National Toxicology Program)</strong></td>
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<td>None of the ingredients is listed.</td>
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<tr>
<td>- <strong>TLV (Threshold Limit Value established by ACGIH)</strong></td>
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<tr>
<td>- <strong>MAK (German Maximum Workplace Concentration)</strong></td>
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<td>None of the ingredients is listed.</td>
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<tr>
<td>- <strong>NIOSH-Ca (National Institute for Occupational Safety and Health)</strong></td>
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<td>None of the ingredients is listed.</td>
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<td>- <strong>OSHA-Ca (Occupational Safety &amp; Health Administration)</strong></td>
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<tr>
<td>None of the ingredients is listed.</td>
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<tr>
<td>- <strong>Canadian Domestic Substance List (DSL)</strong></td>
</tr>
<tr>
<td>All ingredients are listed.</td>
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<tr>
<td>- <strong>Chinese Chemical Inventory of Existing Chemical Substances</strong></td>
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<tr>
<td>All ingredients are listed.</td>
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<tr>
<td>- <strong>Japan Existing and New chemical Substance List (ENCS)</strong></td>
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<tr>
<td>110-63-4 butane-1,4-diol</td>
</tr>
<tr>
<td>- <strong>Korea Existing Chemical Inventory</strong></td>
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<tr>
<td>110-63-4 butane-1,4-diol</td>
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<td>- <strong>Product related hazard informations:</strong></td>
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<td>Observe the general safety regulations when handling chemicals.</td>
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<tr>
<td>The substance is not subject to classification according to the sources of literature known to us.</td>
</tr>
<tr>
<td>The product is not subject to identification regulations according to directives on hazardous materials.</td>
</tr>
</tbody>
</table>

### 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

**USA**