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

- **Product name:** Capa™ 2202A
- **Product identifier**
  - 2-oxepanone, polymer with 1,4-butanediol
  - Cas No.: 31831-53-5
  - EC No.: Polymer
- **Application of the substance / the preparation**
  - Adhesives
  - Sealant
  - Footwear industry
  - Paint
- **Details of the supplier of the safety data sheet**
  - **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
  - Perstorp Polyols Inc
    - 600 Matzinger Road
    - Toledo, Ohio 43612
    - Tel. 419-729-5448,
    - 800-537-0280
    - Fax. 419-729-3291
  - www.perstorp.com
  - **Information department:** productinfo@perstorp.com
  - **Emergency telephone number:**
    - (United States) - CHEMTREC 1-800-424-9300.
    - (Int.) +46 8 337043 (Emergency Response Center, Sweden)

2 Composition/information on ingredients

- **Chemical characterization:** Substances Yes.
- **Chemical components:**
  - 31831-53-5 2-oxepanone, polymer with 1,4-butanediol ≥ 99.5%

3 Hazards identification

- **Hazard description:** No special hazards are associated with this product.
- **Classification system:**
  - NFPA ratings (scale 0 - 4)
  - Health = 1
  - Fire = 1
  - Reactivity = 0

(Contd. on page 2)
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· HMIS-ratings (scale 0 - 4)

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<tr>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
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Health = 1
Fire = 1
Reactivity = 0

· Other hazards

Caution - substance not yet fully tested.
Due to the structure of the substance and studies made on similar products we assume that the product is unclassified.

4 First aid measures

· After inhalation: First aid measures not required, but get fresh air for personal comfort.
· After skin contact:
  First aid measures not required, but wash exposed skin with soap and water for hygienic reasons.
· After eye contact: Rinse opened eye for several minutes under running water.
· After swallowing:
  Rinse mouth with water.
  If a large quantity has been ingested or you feel unwell, get medical advice/attention.

5 Firefighting measures

· Extinguishing media
· Suitable extinguishing agents:
  Water
  Foam
  Carbon dioxide
  Fire-extinguishing powder
· For safety reasons unsuitable extinguishing agents: Water with full jet
· Special hazards arising from the substance or mixture
  In case of fire, the following can be released:
  Carbon monoxide (CO)
  Monomer (2-Oxepanone, Hexan-6-Olide, CAS 502-44-3)
· Protective equipment:
  Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures
  Wear safety glasses, gloves, protective clothing and rubber boots for hygienic reasons.
· Environmental precautions: Do not allow product to reach sewage system or any water course.
· Methods and material for containment and cleaning up:
  Pick up mechanically.
  Clean the affected area carefully; suitable cleaners are:
  water
· Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
7 Handling and storage

- **Precautions for safe handling**
  Wear personal protective equipment according to section 8 if risk of exposure.
  Keep away from heat and direct sunlight.
- **Information about protection against explosions and fires:** Not applicable
- **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.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/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:**
  - **OSHA-Ca (Occupational Safety & Health Administration)**
    Substance is not listed.
  - **TLV (Threshold Limit Value established by ACGIH)**
    Substance is not listed.
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
    Substance is not listed.
- **Personal protective equipment:**
  - **General protective and hygienic measures:**
    The usual precautionary measures for handling chemicals should be followed.
  - **Breathing equipment:** Not necessary if room is well-ventilated.
  - **Protection of hands:**
    Protective gloves not really required. However, we recommend using protective gloves made of rubber.
  - **Material of gloves**
    - PVC gloves
    - Chloroprene rubber, CR
    - Butyl rubber, BR
    The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
  - **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
- **Body protection:** Normal work clothes for the chemical industry (long legs and sleeves).
9 Physical and chemical properties

- **General Information**
  - **Appearance:** Solid (wax)
  - **Color:** White
  - **Odor:** Odorless
- **pH-value:** Neutral
- **Change in condition**
  - Melting point/Melting range: 40 °C (104 °F)
  - Boiling point/Boiling range: Not determined.
- **Flash point:** 275 °C (527 °F) (open cup)
- **Flammability (solid, gaseous):** Not determined.
- **Ignition temperature:**
  - Decomposition temperature: ca 200 °C (ca 392 °F)
- **Danger of explosion:** Not explosive.
- **Explosion limits:** Not applicable
- **Oxidizing properties**
  - Not oxidizing.
- **Vapor pressure:** Not determined.
- **Density at 60 °C (140 °F):** 1.05 g/cm³ (8.762 lbs/gal)
- **Solubility in / Miscibility with Water:** Insoluble.
- **Segregation coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - Dynamic at 60 °C (140 °F): 450 mPas
- **Other information**
  - No further relevant information available.

10 Stability and reactivity

- **Reactivity**
  - There exists no specific test data for this product. For further information, see the subsequent subsections of this chapter.
- **Chemical stability**
  - The product is stable at normal conditions.
- **Possibility of hazardous reactions**
  - No dangerous reactions known.
- **Conditions to avoid**
  - Heat
- **Incompatible materials:**
  - Avoid contact with acids.
  - Avoid contact with bases.
- **Hazardous decomposition products:**
  - Possible decomposition and release of monomer at temperatures above 200°C (392°F).
11 Toxicological information

- Acute toxicity:
  - LD/LC50 values:
    | 31831-53-5 2-oxepanone, polymer with 1,4-butanediol |
    | Oral LD50 | >2000 mg/kg (rat) |
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.
  - Carcinogenicity: No information available.
  - Mutagenicity: No information available.
  - Reproductive toxicity: No information available.
  - Remark:
    Caution - substance not yet fully tested.
    Due to the structure of the substance and studies made on similar products we assume that the product is unclassified.

12 Ecological information

- Aquatic toxicity:
  | 31831-53-5 2-oxepanone, polymer with 1,4-butanediol |
  | LC50/96h | 72 mg/l (fish) |
  | NOEC | 460 mg/l (bacteria) |

- Persistence and degradability:
  | 31831-53-5 2-oxepanone, polymer with 1,4-butanediol |
  | Biotic degradation (7 d) | > 60 % (STURM) |

- Other information: The product is readily biodegradable.
- Behavior in environmental systems:
  - Bioaccumulative potential: No information available.

- Remark:
  Caution - substance not yet fully tested.
  Due to the structure of the substance and studies made on similar products we assume that the product is unclassified.

13 Disposal considerations

- Waste treatment methods: The product is not classified as hazardous waste.
- Uncleaned packagings:
  Contaminated packaging materials must be disposed of in the same manner as the product.
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.
### 14 Transport information

- **UN Number**
  - DOT, ADR, ADN, IMDG, IATA: -

- **Proper shipping name (Technical Name)**
  - DOT, ADR, ADN, IMDG, IATA: -

- **Transport hazard class(es)**
  - DOT, ADR, ADN, IMDG, IATA: -

- **Class**
  - -

- **Packing group**
  - DOT, ADR, IMDG, IATA: -

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.

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

### 15 Regulatory information

- **Sara**
  - **Section 355 (extremely hazardous substances):**
    - Substance is not listed.
  
  - **Section 313 (Specific toxic chemical listings):**
    - Substance is not listed.

- **Carcinogenic categories**
  - **EPA (Environmental Protection Agency):**
    - Substance is not listed.

  - **IARC (International Agency for Research on Cancer):**
    - Substance is not listed.

  - **NTP (National Toxicology Program):**
    - Substance is not listed.

- **Inventory status:**
  - **Australian Inventory of Chemical Substances (AICS):**
    - Substance is listed.

  - **Canadian Domestic Substance List (DSL):**
    - Substance is listed.

  - **Canadian Non Domestic Substance List (NDSL):**
    - Substance is not listed.

  - **Chinese Chemical Inventory of Existing Chemical Substances (CIECS):**
    - Substance is listed.

  - **European EINECS/ELINCS Listing**
    - Exempt, polymer
    - Substance is not listed.

  - **Japan Existing and New chemical Substance List (ENCS):**
    - Substance is listed.
Product name: **Capa™ 2202A**

- **Korea Existing Chemical Inventory (KECI)**
  Substance is listed.

- **New Zealand Inventory of Chemicals (NZIoC)**
  Substance is listed.

- **Philippines Inventory of Chemicals and Chemical Substances (PICCS)**
  Substance is listed.

- **TSCA listing**
  Substance is listed.

- **Other regulations, limitations and prohibitive regulations**

  - **Proposition 65**
    Substance is not listed.

  - **Chemicals known to cause reproductive toxicity for females:**
    Substance is not listed.

  - **Chemicals known to cause reproductive toxicity for males:**
    Substance is not listed.

  - **Chemicals known to cause developmental toxicity:**
    Substance is not listed.

- **Additional information:**
  TSCA IUR/CDR, Chemicals Exempt from Update Reporting [flagged XU on TSCA Inventory] (January, 2012)

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
- **Data compared to the previous version altered.**