

## 1. Company and Product Identification

- 1.1 Product Name:** Press & Mold Molding Compound
- Chemical Name:** 2-Oxepanone, homopolymer
- Synonyms:** epsilon-Caprolactone polyester with 1,4-butanediol  
epsilon-Caprolactone polymer with 1,4-butanediol
- Chemical Formula:** (C<sub>6</sub>H<sub>10</sub>O<sub>2</sub>)<sub>x</sub>
- Molecular Weight:** 80000
- CAS Number:** 24980-41-4
- EINECS Number:** Not Applicable.
- 1.2 Recommended Uses:** Used in arts & crafts, rapid prototyping, hot melt adhesives, polymer processing aids, dispersion medium, and orthopedic applications.
- 1.3 Emergency Number:** **Emergencies (USA):**  
1-800-424-9300 (CHEMTREC)  
**Emergencies (Int.):**  
+46 8 337043 (Emergency Response Center, Sweden)
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## 2. Composition / Information on Ingredients

- 2.1 Ingredients** 2-Oxepanone, homopolymer
- Formula:** (C<sub>6</sub>H<sub>10</sub>O<sub>2</sub>)<sub>x</sub>
- Weight Percent:** > 99
- CAS Number:** 24980-41-4
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## 3. Hazards Identification

**Emergency Overview:** Under normal use conditions, this material is considered to present minimal human health and environmental hazards.

- 3.1 Route of Entry:** Inhalation: No Skin: No Ingestion: Yes
- 3.2 Potential Effects of exposure:**
- Inhalation:** Minimal hazard expected in normal industrial use.
- Eyes:** Mechanical irritation from particulates generated by product.

**Skin contact:** Molten polymer can burn skin.

**Ingestion:** Minimal hazard expected in normal industrial use.

**Carcinogenicity:** See section 11.3.

**3.4 Ratings:**

**NFPA (NATIONAL FIRE PROTECTION ASSOCIATION)**

Health = 1 Flammability = 1 Instability = 0 Special = None

**HMIS (HAZARDOUS MATERIAL INFORMATION SYSTEM)**

Health = 1 Fire = 1 Reactivity = 0 PPE = Supplied by User; dependent on local conditions

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## 4. First-Aid Measures

**General Recommendations:** No specific treatment is necessary

**4.1 Inhalation:**

- First aid measures not required, but get fresh air for personal comfort.

**Eyes:**

- Rinse opened eye for several minutes under running water.

**Skin:**

- First aid measures not required, but wash exposed skin with soap and water for hygienic reasons.
- Molten polymer can burn skin. After contact with molten/hot product, cool rapidly with cold water.

**Ingestion:**

- Rinse mouth with water.
- If a large quantity has been ingested or you feel unwell, get medical advice/attention.

**4.2 Medical Treatment/Notes to Physician:** None.

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## 5. Fire-Fighting Measures

**5.1 Common Extinguishing Methods:**

- Powder.
- Foam, AFFF.
- CO<sub>2</sub>.
- Water, water spray.

**5.2 In case of fire, the following can be released:**

- Carbon monoxide (CO)
- Monomer (2-Oxepanone, Hexan-6-Olide, CAS 502-44-3)

**5.3 Protective Equipment:** Wear self-contained respiratory protective device.

## **6. Accidental Release Measures**

### **6.1 Precautions:**

- Observe the protective measures given in Section 8.
- Spilled material may cause slipping hazard.

### **6.2 Cleanup methods:**

#### **Solid:**

- Pick up mechanically.

#### **Molten Solid:**

- Allow to solidify. Pick up mechanically.

Do not allow product to reach sewage system or any water source.

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## **7. Handling and Storage**

### **7.1 Handling:**

- Use electrically conductive materials for piping circuits and equipment.
- Avoid heating product above decomposition temperature (see Section 9).
- Ensure good ventilation/exhaustion at the workplace.
- If handling molten product, be ware of risk for burns

### **7.2 Storage:**

- Keep in the original packaging, closed.
- Store in dry area.
- Keep away from ignition and heat sources.

### **7.3 Specific Uses:** See Section 1.2.

### **7.4 Other precautions:**

- Use grounded equipment.
- No open flames or sparks. No smoking.
- Prevent electrostatic discharge.
- Avoid dust and formation of dust clouds.
- Warn personnel of the dangers of the product.
- Follow protective measures given in Section 9.

### **7.5 Packaging:**

- Polypropylene bag.
- HDPE Jars

## 8. Exposure Control / Personal Protection

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

### 8.1 Exposure Limit Values

**Authorized limit Values**  
PNOC (Particulates not  
otherwise classified)

**OSHA PEL**  
15 mg/m<sup>3</sup> total dust  
5 mg/m<sup>3</sup> resp. frac.

### 8.2 Exposure Controls:

#### Occupational Exposure Controls:

##### Respiratory protection:

- Use appropriate respiratory protection in case of dust or dust formation (Filter P1).

##### Hand protection:

- Where contact is likely, wear chemical-resistant gloves (PVC).

##### Eye protection:

- Wear safety glasses.

##### Skin protection:

- Where contact is likely, wear chemical-resistant gloves.
- Recommended materials are PVC, neoprene or rubber.
- Wear appropriate thermal protection when handling hot material.

### 8.3 Other precautions:

- Provide a shower and eyewash station.
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## 9. Physical and Chemical Properties

### 9.1 Appearance: Pellets

**Color:** White

**Odor:** Odorless

### 9.2 Important Health, Safety and Environmental information:

#### Change of state:

- Melting point: 58-60°C (136-140°F).
- Boiling point: Not determined.
- Decomposition Temperature: 200°C (392°F).

**Flash Point:** 275°C (527°F)

**Flammability:** Non-flammable.

**Auto Igniting:** Product is not selfigniting

**Oxidizing Properties:** Non-oxidizer.

**Danger of Explosion:** Product does not present an explosion hazard

**Density at 60°C (140°F):** 1.1 g/cm<sup>3</sup>

**Solubility:**

- Water: Insoluble in water.
- Fat: Not Applicable.
- Soluble in aromatic solvents and chlorinated hydrocarbons.

**Viscosity:**

- Dynamic at 100°C (212°F): 1500000 mPas
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## 10. Stability and Reactivity

**10.1 Stability:**

- Stable under normal conditions of use (see Section 7).
- Moisture.
- Excessive temperatures.

**10.2 Materials and substances to avoid:**

- Acids.
- Bases.

**10.3 Hazardous decomposition products:**

- Carbon monoxide and carbon dioxide when involved in a fire.
- Particulates of carbon.
- Caprolactone / monomer.

**10.4 Hazardous Polymerization:** Will not occur.

**10.5 Other information:** None.

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## 11. Toxicological Information

**11.1 Acute toxicity:**

- **Inhalation:** No data.
- **Oral:** No data.
- **Dermal:** No irritant effect.
- **Irritation:** No irritant effect.
- **Sensitization:** No sensitizing effects known.

**Comments:** 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.

**11.2 Chronic toxicity:** No data.

11.3 **Carcinogenic Designation** Not listed.

## 12. Ecological Information

12.1 **Acute ecotoxicity:** No data.

12.2 **Chronic ecotoxicity:** No data.

12.3 **Mobility:** No data.

12.4 **Degradation:** No data.

**Abiotic:** No data.

**Biotic:** No data.

12.5 **Other information:** The product is readily biodegradable.

12.6 **Other adverse effects/Comments:** Ingestion of pellets by wildlife and fish may cause satiation (fullness) or bowel constriction. Consult the Society of the Plastics Industry's Clean Sweep Program to assure minimal impact to the environment.

## 13. Disposal Considerations

13.1 **Waste treatment:** Product is not considered hazardous waste under Federal Hazardous Waste Regulations (40 CFR 261). Please be advised, however, that federal laws may change and that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult current federal, state and local regulations regarding the proper disposal of this material and its emptied containers.

13.2 **Packaging treatment:** Consult current federal, state and local regulations regarding the proper disposal of emptied containers.

13.3 **RCRA Hazardous Waste:** Not listed.

## 14. Transport Information

Mode	DOT	IMDG	IATA
UN Number	Not a regulated hazardous material	Not a regulated hazardous material	Not a regulated hazardous material
Other	It is recommended that ERG Guide # 111 be used for all non-DOT-regulated material.		

## 15. Regulatory Information

### SARA (US)

- **TSCA Inventory 8(b):** All ingredients are listed.
- **SARA 355 (extremely hazardous substances):** None of the chemicals are listed.
- **SARA 313 (Specific toxic chemical listings):** None of the chemicals are listed.

### Proposition 65

- **Chemicals known to cause cancer:** None of the chemicals are listed.
- **Chemicals known to cause reproductive toxicity for females:** None of the chemicals are listed.
- **Chemicals known to cause reproductive toxicity for females:** None of the chemicals are listed.
- **Chemicals known to cause developmental toxicity:** None of the chemicals are listed.

### Carcinogenicity categories

- **EPA (Environmental Protection Agency):** None of the chemicals are listed.
- **IARC (International Agency for Research on Cancer):** None of the chemicals are listed.
- **NTP (National Toxicology Program) :** None of the chemicals are listed.
- **TLV (Threshold Limit Value established by ACGIH):** None of the chemicals are listed.
- **MAK (German Maximum Workplace Concentration):** None of the chemicals are listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health):** None of the chemicals are listed.
- **OSHA-Ca (Occupational Safety & Health Administration):** None of the chemicals are 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):** 24980-41-2 2-Oxepanone, homopolymer
- **Korea Existing Chemical Inventory:** 24980-41-2 2-Oxepanone, homopolymer

This product has been classified in accordance with the hazard criteria of the **Controlled Products Regulations**, and the MSDS contains all the information required by the **Controlled Products Regulations**.

## 16. Other Information

### 16.1 Other Information:

The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. (Unless noted to the contrary, the technical information applies only to pure product). To our actual knowledge, the information contained herein is accurate as of the date of this document. However, neither Primera Technology, Inc. nor any of its affiliates makes any warranty, express or implied, or accepts any liability in connection with this information or its use. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right. The user alone must finally determine suitability of any information or material for any contemplated use, the manner of use and whether any patents are infringed. This information gives typical properties only and is not to be used for specification purposes. Primera Technology, Inc. reserves the right to make additions, deletions or modifications to the information at any time without prior notification.