

# Polydioxanone PDO

## Safety Data Sheet

compliant to Regulation (EC) No 1907/2006 (REACH) as amended by Regulation (EU) 2015/830 Date of issue: 06/07/2020  
Version: 1.0

### HEADING 1: Identification of the substance/mixture and the company/undertaking

#### 1.1. Product Identifier

Product form : Substance  
Name : Polydioxanone - DIOXACTISSE 100  
CAS N° : 31621-87-1  
Synonyms : PDO

#### 1.2. Identified relevant uses of the substance or mixture and use not recommended

##### 1.2.1. Relevant identified uses

Use of substance/mixture: 3D printing application

##### 1.2.2. Uses not recommended

This product cannot be implanted in humans.

#### 1.3. Information about the provider of the safety data sheet

Lattice Medical  
80, rue du Docteur Yersin  
59120  
LOOS - FRANCE  
T +33 6 73 59 08 71  
[julien.payen@lattice-medical.com](mailto:julien.payen@lattice-medical.com)

#### 1.4. Emergency call number

| Country | Organization/Society | Address   | Emergency number     | Comment |
|---------|----------------------|---|----------------------|---------|
| France  | ORFILA               | <a href="http://www.centres-antipoison.net">http://www.centres-antipoison.net</a> | +33 (0)8 00 59 59 59 |         |

### HEADING 2: Hazard Identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008 [CLP]

Uncategorized

##### Adverse physicochemical effects on human health and the environment

To our knowledge, this product does not present any particular danger under normal conditions of use.

#### 2.2. Labelling elements

##### Labelling according to Regulation (EC) No 1272/2008 [CLP]

Labelling not applicable

#### 2.3. Other hazards

Other hazards that do not result in classification: Dust can form an explosive mixture with air.

This substance/mixture does not fulfill the PBT criteria of reach regulation annex XIII

This substance/mixture does not meet the vPvB criteria of reach regulation annex XIII

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### SECTION 3: Composition/Component Information

#### 3.1. Substances

| Name          | Product Identifier   | Classification according to Regulation (EC) No 1272/2008 [CLP] |
|---------------|----------------------|--|
| Polydioxanone | (CAS No.) 31621-87-1 | Uncategorized  |

#### 3.2 Mixtures

Not applicable

### HEADING 4: First aid

#### 4.1. Description of first aid

|                              |   |
|------------------------------|---|
| First aid after inhalation   | : Remove the subject from the contaminated area and bring him to the fresh air. If symptoms persist, call a doctor.                                       |
| First aid after skin contact | : Wash immediately with soap and plenty of water while removing all contaminated clothing and shoes. Seek immediate medical attention if symptoms appear. |
| First aid after eye contact  | : Rinse immediately and thoroughly with water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention if symptoms appear.      |
| First aid after ingestion    | : Rinse the mouth. Consult a doctor if symptoms appear.   |

#### 4.2. Main symptoms and effects, acute and delayed

Symptoms/effects : None known

#### 4.3. Indication of possible immediate medical care and special treatment required

Symptomatic treatment.

### HEADING 5: Fire-fighting measures

#### 5.1. Extinguishing means

Appropriate extinguishing means : Spray water, foam or carbon dioxide (CO<sub>2</sub>).

#### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products : By thermal decomposition (pyrolysis), releases: Carbon oxides (CO, CO<sub>2</sub>).

#### 5.3. Advice to firefighters

|                          |   |
|--------------------------|---|
| Firefighting Instruction | : Cool containers exposed to heat with sprayed water. Contain and contain extinguishing fluids.                               |
| Fire protection          | : Do not intervene without appropriate protective equipment. Self-contained breathing apparatus. Full protection of the body. |

### HEADING 6: Measures to be taken in the event of accidental dispersal

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Ensure proper ventilation

##### 6.1.1. For non-first aiders

Emergency procedures : Evacuate the danger zone. Do not touch or step on spilled product. Avoid contact with eyes, skin or clothing. Prevent or limit the formation and dispersion of dust. Avoid any possible source of ignition.

##### 6.1.2. For first aiders

Emergency procedures : Do not intervene without appropriate protective equipment. For more information, see section 8: "Control of exposure-personal protection".

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### 6.2. Precautions for environmental protection

Contain and contain land application. Do not discharge into sewers and rivers.

### 6.3. Containment and cleaning methods and equipment

|                   |   |
|-------------------|---|
| For retention     | : Prevent or limit the formation and dispersion of dust. Sweep or shovel the spilled product and put it in a suitable container for disposal. |
| Cleaning methods  | : Wash the non-recoverable remainder with plenty of water.  |
| Other information | : Dispose of solid materials or residues in a licensed centre   |

### 6.4. Reference to other headings

See section 13 for the disposal of waste resulting from clean-up.

## HEADING 7: Handling and Storage

### 7.1. Precautions to be taken for safe handling

|                               |  |
|-------------------------------|--|
| Precautions for safe handling | : Handle in accordance with good industrial hygiene and safety practices. Ensure proper ventilation. Avoid dust formation. Avoid contact with skin, eyes or clothing. Do not breathe in dust. Keep away from ignition sources. |
| Hygiene measures              | : Do not drink, eat or smoke in the workplace. Wash hands after handling.  |

### 7.2. Conditions for safe storage, including possible incompatibilities

|                        |  |
|------------------------|--|
| Storage conditions     | : Store in a dry, cool and well-ventilated place. Keep the container tightly closed.<br>Store under inert gas. Protect from moisture. Keep away from ignition sources. |
| Incompatible materials | : Water, humidity  |
| Storage temperature    | : - 20 °C / -4°F   |

### 7.3. Specific end-use(s)

No additional information available.

## HEADING 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available.

### 8.2. Exposure controls

#### Hand protection:

Not required under normal conditions of use. In case of risk of splashing: Gloves resistant to chemicals (according to the standard NF EN 374 or equivalent)

#### Eye protection:

Not required under normal conditions of use. In case of risk of splashing: Safety glasses with side protections

#### Protection of the skin and body:

Wear appropriate long-sleeved protective clothing.

#### Respiratory protection:

Adequate ventilation. In case of formation of vapours / dusts, use an approved respirator for dust protection

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### HEADING 9: Physical and chemical properties

#### 9.1. Information on essential physical and chemical properties

|   |   |
|---|---|
| Physical state                                  | : Solid   |
| Appearance                                      | : Filament                                      |
| Colour  | : Variable. Transparent with golden reflections |
| Smell   | : Odorless.                                     |
| Olfactory threshold                             | : No data available                             |
| ph  | : No data available                             |
| Relative evaporation rate (butyl acetate=1)     | : No data available                             |
| Melting point                                   | : $\approx 140 - 160$ °C                        |
| Freezing point                                  | : No data available                             |
| Boiling point                                   | : No data available                             |
| Flash point                                     | : Not applicable                                |
| Auto-ignition temperature                       | : No data available                             |
| Decomposition temperature                       | : $> 250$ °C                                    |
| Flammability (solid, gas)                       | : No data available                             |
| Vapour pressure                                 | : No data available                             |
| Relative vapour density at 20 °C                | : No data available                             |
| Relative density                                | : No data available                             |
| Solubility                                      | : Insoluble                                     |
| n-octanol/water partition coefficient (Log Pow) | : No data available                             |
| Viscosity, kinematics                           | : Not applicable                                |
| Viscosity, dynamic                              | : Not applicable                                |
| Explosive properties                            | : Dust can form an explosive mixture with air.  |
| Oxidizing properties                            | : Non-oxidizing according to EC criteria.       |
| Explosive limits                                | : No data available                             |

#### 9.2. Other information

Other properties : None

### HEADING: Stability and responsiveness

#### 10.1. Responsiveness

To our knowledge, this product does not present any particular danger under normal conditions of use.

#### 10.2. Chemical stability

Hydrolysis in water.

#### 10.3. Possibility of dangerous reactions

Dust can form an explosive mixture with air.

#### 10.4. Conditions to avoid

Avoid the formation of dust. The powdered material can form explosive dust-air mixtures.

#### 10.5. Incompatible substances

Water, humidity (air)

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### 10.6. Hazardous decomposition products

No dangerous decomposition products are formed in the event of a fire: Carbon oxides.

## HEADING 11 : Toxicological information

### 11.1. Information on toxicological effects

|   |   |
|---|---|
| Acute toxicity (oral/dermal/inhalation)             | : Unclassified (Based on available data, classification criteria are not met) |
| Skin corrosion/irritation                           | : Unclassified (Based on available data, classification criteria are not met) |
| Severe eye damage/eye irritation                    | : Unclassified (Based on available data, classification criteria are not met) |
| Respiratory or skin sensitization                   | : Unclassified (Based on available data, classification criteria are not met) |
| Germ cell mutagenicity                              | : Unclassified (Based on available data, classification criteria are not met) |
| Carcinogenicity                                     | : Unclassified (Based on available data, classification criteria are not met) |
| Reproductive toxicity                               | : Unclassified (Based on available data, classification criteria are not met) |
| Specific target organ toxicity (single exhibition ) | : Unclassified (Based on available data, classification criteria are not met) |
| Specific target organ toxicity (repeated exposure ) | : Unclassified (Based on available data, classification criteria are not met) |
| Suction hazard                                      | : Unclassified (Technical impossibility to obtain data)                       |

### Polydioxanone (31621-87-1)

Viscosity, kinematics : Not applicable

## HEADING 12 : Ecological information

### 12.1. Toxicity

Hazards to the aquatic environment, short-term (acute) : Unclassified (Based on available data, classification criteria are not met)

Hazards to the aquatic environment, long-term (chronic) : Unclassified (Based on available data, classification criteria are not met)

### 12.2. Persistence and degradability

#### Polydioxanone (31621-87-1)

|                               |                                   |
|-------------------------------|-----------------------------------|
| Persistence and degradability | Hydrolysis. Easily biodegradable. |
|-------------------------------|-----------------------------------|

### 12.3. Bioaccumulation potential

#### Polydioxanone (31621-87-1)

|                           |                      |
|---------------------------|----------------------|
| Bioaccumulation potential | Non-bioaccumulative. |
|---------------------------|----------------------|

### 12.4. Mobility in soil

No additional information available

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### 12.5. Results of PBT and vPvB assessments

#### Polydioxanone (31621-87-1)

This substance/mixture does not fulfil the PBT criteria of reach regulation annex XIII

This substance/mixture does not meet the vPvB criteria of reach regulation annex XIII

### 12.6. Other adverse effects

No additional information available

## HEADING 13: Disposal Considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose in accordance with applicable local requirements.

Recommendations for product/package processing : Do not reuse empty containers.

Additional information : The user's attention is drawn to the possible existence of specific laws, regulations and administrative provisions, Community, national or local, relating to disposal, concerning him.

European Waste Catalogue Code (EDC) : 16 05 09 - discarded chemicals other than those specified in 16 05 06, 16 05 07 or 16 05 08

## HEADING 14 : Transport information

In accordance with adr / RID / IMDG / IATA / AND requirements

| ADR                                      | IMDG        | IATA        | DNA         | RID         |
|--|-------------|-------------|-------------|-------------|
| <b>14.1. UN number</b>                   |             |             |             |             |
| Unregulated                              | Unregulated | Unregulated | Unregulated | Unregulated |
| <b>14.2. UN proper shipping name</b>     |             |             |             |             |
| Unregulated                              | Unregulated | Unregulated | Unregulated | Unregulated |
| <b>14.3. Transport hazard class(ies)</b> |             |             |             |             |
| Unregulated                              | Unregulated | Unregulated | Unregulated | Unregulated |
| <b>14.4. Packing group</b>               |             |             |             |             |
| Unregulated                              | Unregulated | Unregulated | Unregulated | Unregulated |
| <b>14.5. Environmental hazards</b>       |             |             |             |             |
| Unregulated                              | Unregulated | Unregulated | Unregulated | Unregulated |

### 14.6. Special precautions to be taken by the user

#### Overland transport

Unregulated

#### Shipping

Unregulated

#### Air transport

Unregulated

#### Inland waterway transport

Unregulated

#### Rail transport

Unregulated

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### 14.7. Carriage in bulk in accordance with Annex II to the Marpol Convention and the IBC Code

Not applicable

## HEADING 15: Regulatory Information

### 15.1. Safety, health and environmental regulations/legislation specific to the substance or mixture

#### 15.1.1. EU regulation

No restrictions according to Annex XVII of REACH

Polydioxanone is not on the REACH Candidate list

Polydioxanone is not listed in Annex XIV of REACH

Polydioxanone is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 on the export and import of dangerous chemicals

Polydioxanone is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

#### 15.1.2. National guidelines

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## HEADING 16: Other information

| Abbreviations and acronyms: |  |
|-----------------------------|--|
| DNA                         | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways                    |
| ADR                         | European Agreement concerning the International Carriage of Dangerous Goods by Road                                |
| CASE                        | Chemical Abstracts Service (division of the American Chemical Society)   |
| CLP                         | Regulation on Classification, Labelling and Packaging; Regulation (EC) No 1272/2008                                |
| ECHA                        | ECHA - European Chemicals Agency   |
| IATA                        | International Air Transport Association  |
| IMDG                        | International Maritime Dangerous Goods Code  |
| PBT                         | Persistent, bioaccumulative and toxic  |
| REACH                       | Registration, evaluation, authorisation and restriction of chemical substances. REACH Regulation (EU) No 1907/2006 |
| RID                         | International Regulations concerning the Carriage of Dangerous Goods by Rail                                       |
| vPvB                        | Very persistent and very bioaccumulative   |

Data sources : ECHA - European Chemicals Agency. Supplier SDS.

EU SDS (Annex II REACH)

This information is based on our current knowledge and describes the product for health, safety and environmental needs only. They should therefore not be interpreted as guaranteeing any specific property of the product.