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Version 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier****Product Name** **Facilan™ PCL100****Pure substance/mixture** Substance**1.2. Relevant identified uses of the substance or mixture and uses advised against****Application** Additive manufacturing**Uses advised against** Not identified.**1.3. Details of the supplier of the safety data sheet****Manufacturer****3D4MAKERS**
Waarderweg 56
2031BP Haarlem
Netherlands
Tel +31 (0) 23 820 0584
<https://www.3d4makers.com/>**E-mail address** info@3d4makers.com**1.4. Emergency telephone number****Europe****Emergency Telephone** - +31 (0) 23 820 0584 (08.00-17.00 CET)**United Kingdom** See above.**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

This substance is not classified as dangerous according to regulation (EC) 1272/2008 [CLP].

2.2. Label elements

This substance is not classified as dangerous according to regulation (EC) 1272/2008 [CLP].

Symbols/Pictograms

Not applicable

Signal word

None

Hazard statements

Not applicable

Precautionary Statements

Not applicable

2.3. Other hazards

This substance does not meet the criteria for classification as PBT or vPvB.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Chemical Name	EC No	CAS No	REACH Registration Number	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-oxepanone, homopolymer	Not available	24980-41-4	No data available	>99	Not classified

Full text of H- and EUH-phrases: see section 16

Additional information

The product is exempt from REACH registration (polymer).

SECTION 4: First aid measures**4.1. Description of first aid measures**

Inhalation	Move to fresh air in case of accidental inhalation of vapours. If irritation persists get medical advice/attention.
Skin contact	In contact with molten product immediately flush with cold water for at least 10 minutes. Do not pull solidified product off the skin. In case of burn injury immediately get medical attention.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids.
Ingestion	If a large quantity has been ingested or if you feel unwell, get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

None known.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Water spray (fog), Foam, Carbon dioxide (CO₂), Extinguishing powder.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture**Hazardous combustion products**

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

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment as required. Avoid contact with eyes and skin. Remove all sources of ignition.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.

6.3. Methods and material for containment and cleaning up

Methods for containment

Prevent product from entering drains.

Methods for cleaning up

Collect in closed and suitable containers for disposal.

6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Ensure adequate ventilation, especially in confined areas. Protect from direct sunlight. Keep away from heat. Use personal protective equipment as required.

General Hygiene Considerations

Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Ensure good ventilation at the work station.

7.2. Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry and cool place.

7.3. Specific end use(s)

This information is supplied in the present Safety Data Sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure Limits**

Keep personal exposure levels below Derived No Effect Level (DNEL) and national exposure limit values (if existing).

Derived No Effect Level (DNEL) - worker

Not determined

Derived No Effect Level (DNEL) - Consumer

Not determined

Predicted No Effect Concentration (PNEC)

Not determined

8.2. Exposure controls**Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand Protection	Protective gloves not really required. However, we recommend using protective gloves made of rubber. PVC gloves, Butyl rubber, Chloroprene rubber, CR.
Skin and body protection	Long sleeved clothing.
Respiratory protection	None under normal use conditions. Provide adequate ventilation.

Environmental exposure controls

No information available.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Appearance**

Filament
white

Odour

Odourless

Odour threshold	Not applicable	
Property	Value	Remarks • Method
pH		No information available
Melting point / freezing point	58 - 60 °C / 136 - 140 °F	
Boiling point / boiling range		Not determined
Flash point	275 °C / 527 °F	
Evaporation rate		No information available
Flammability (solid, gas)		Not determined
Explosive limits		
Upper explosive limits		Not applicable
Lower explosive limits		Not applicable
Vapour pressure		Not determined
Vapour density		Not applicable
Relative density		No information available
Water solubility		Insoluble in water
Solubility(ies)		No information available
Partition coefficient		No information available
Autoignition temperature		No information available
Decomposition temperature	200 °C	
Kinematic viscosity		No information available
Dynamic viscosity	1 500 000 mPa s	
Explosive properties	Not explosive.	Examination of the structure indicates that there are no groups associated with explosive properties.
Oxidising properties	Not oxidising.	Due to structural composition of the substance it is not considered to be oxidizing.
Density	1.1 g/cm ³	@ 60 °C
Bulk density		No information available

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

There exists no specific test data for this product. For further information, see the subsequent subsections of this chapter.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

Avoid contact with acids. Avoid contact with bases.

10.6. Hazardous decomposition products

Possible decomposition and release of monomer at temperatures above 200° C.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Inhalation, Dermal.

Symptoms related to the physical, chemical and toxicological characteristics

None known.

Numerical measures of toxicity

Acute toxicity

The polymer is not bioavailable because of its molecular size.

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitisation

No sensitising effects known.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

STOT - single exposure No information available

STOT - repeated exposure No information available

Aspiration hazard

No hazard identified.

SECTION 12: Ecological information

12.1. Toxicity

The polymer is not bioavailable because of its molecular size.

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products

The product is not classified as hazardous waste. Incinerate at a licensed installation.

Contaminated packaging

Thoroughly emptied and clean packaging may be recycled.

Waste codes / waste designations according to EWC / AVV

16 03 06.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

ADR Road transport

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	None

RID Rail transport

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	None

IMDG Sea transport

14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special precautions for user	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

IATA Air transport

	Not regulated
14.1 UN number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental hazard	Not applicable
14.6 Special precautions for user	None

SECTION 15: Regulatory information

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

International Regulations

Not applicable.

European Union

Not applicable.

France

Occupational Illnesses (R-463-3, France)

Not applicable

Germany

Water hazard class (WGK)

Water endangering class = 1 (self classification)

15.2. Chemical safety assessment

Not applicable.

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet**

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This safety data sheet complies with the requirements of: Regulation (EC) No. 1907/2006, COMMISSION REGULATION (EU) No. 830/2015 of 20 May 2015.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet