

Material Safety Data Sheet

According to EU Regulation No. 1907/2006

Issued on: 22 March 2018



Thibra3D SKULPT

1. Identification of the substance/preparation and of the company

- 1.1 Trade name: SKULPT
- 1.2 Chemical name: 2-Oxepanone, homopolymer based polymer blend
- 1.3 Typical use of the material: Monofilament or granules for FFF/FDM technology based 3D printing
- 1.4 Identification of the company: Formfutura BV
Groenestraat 215
6531 HH Nijmegen
The Netherlands
- Phone: +31 (0)85 002 0881

Emergency phone number: +31 (0)30 274 8888

2. Hazards identification

- 2.1 Risk advise to man and the environment: No risk exists to the health of users if the product is handled and processed properly.
- 2.2 Classification of the substance or mixture: Not classified as dangerous according to Regulation (EC) No 1272/2008.
- 2.3 Special advice on hazards: Danger of burns while handling the heated or molten product.

3. Composition / information on ingredients

- 3.1 Chemical nature: 2-Oxepanone, homopolymer (weight: 10-40%) based polymer enhanced for 3D printing.
- 3.2 CAS number: 24980-41-4 (weight: 10-40%)
- 3.3 Additional information: No harmful substances used.
None of the substances, named in the Candidate list art. 59 (1,10) of the REACH regulation EC no. 1907/2006 has been used in a concentration > 0,1%.

4. First-aid measures

- 4.1 If inhaled: After inhalation of decomposition products, gases or dust, bring the affected person to a source of fresh air and keep calm. Contact a physician in case of discomfort.
- 4.2 On skin contact: In case of contact with melted material, immediately cool the skin with plenty of cold running water. Removal of adhering to skin polymer, or burns caused by molten material require hospital treatment.
- 4.3 On contact with eyes: In case of contact with eyes, rinse open eyes thoroughly with water. If symptoms occur, seek immediate medical attention.
- 4.4 On ingestion: No effects known. Rinse mouth with water and induce vomiting immediately and seek medical attention. If a person vomits when lying on his back, place him in the recovery position.
- 4.5 Note to the physician: Treat symptomatically

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5. Firefighting measures

- 5.1 Suitable extinguishing media: Dry chemical powder, foam, water, CO₂.
- 5.1.1 Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.
- 5.2 Specific hazards: Fire can cause thick, black smoke. Thermal decomposition can lead to release of irritating and toxic gases and vapours: Carbon monoxide (CO). Monomer (2-Oxepanone, Hexan-6-Olide, CAS 502-44-3). Exposure to combustion or decomposition products can be harmful to your health
- 5.3 Special protective equipment: Full protective clothing and self-contained breathing apparatus.
- 5.4 Further information: Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

- 6.1 Personal precautions: Use personal protective equipment/clothing (see Section 8). Avoid breathing gases from molten filament. Ensure adequate ventilation, especially in confined areas. Prevent entry into drainage systems, or surface water.
- 6.2 Environmental precautions: Sweep/shovel into suitable container for disposal.
- 6.3 Methods for cleaning up: Avoid raising dust and ensure adequate ventilation.

7. Handling and storage

- 7.1 Handling: Handle in a well ventilated area. Install local exhaust at 3D printers area is recommended when many printers are operated at once. Avoid contact with heated or molten product. Use personal protective equipment (see Section 8). Avoid dust formation and electrostatic charge. Keep away from fire ignition sources.
- 7.2 Storage: Protect from water and moisture. Store material in dry rooms and keep material in closed packaging/container with desiccant when not in use. Store at ambient temperatures. Avoid all sources of ignition.
- 7.3 Precautions: No special precautions required.
- 7.4 Specific end use(s): Primarily used for 3D printing.

8. Exposure controls / personal protection

- 8.1 Occupational exposure limits: Given suitable ventilation it can be that the threshold limits will not be reached.
- 8.2 Exposure controls: Provide appropriate exhaust ventilation while printing.
- 8.3 Personal protective equipment
- 8.3.1 Hand protection: Wear heat protection gloves, preferably cotton or leather, when handling hot molten product.
- 8.3.2 Eye protection: Wear protective glasses, preferable with side-shields.
- 8.3.3 Skin and body protection: Wear (protective) clothing to avoid direct exposure of skin to hot molten product when handling.

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8.3.4 Safety and hygiene measures: Avoid contact of hot molten material to skin. Avoid inhalation of dust, mists and vapours. Eye wash fountains and safety showers must be easily accessible. Handle in accordance with good industrial hygiene and safety practice. No eating or drinking during working.

8.4 Environmental exposure controls: Prevent entry into drainage systems, or surface water.

9. Physical and chemical properties

9.1 Form: Granules / Filament
9.2 Colour: Depending on product variant (natural in uncoloured/natural variant)
9.3 Odour: Neutral
9.4 Melting/freezing point: 60-65 °C
9.5 Auto-ignition temperature: Not self-igniting
9.6 Decomposition temperature: > 200 °C
9.7 Explosions limit: Not specified
9.8 Density: 1.26 g/cc
9.9 Solubility in water: No data available

10. Stability and reactivity

10.1 Stability: Product is stable at recommended storage conditions.
10.2 Conditions to avoid: Avoid elevated temperatures for prolonged periods of time.
10.3 Substances to avoid: Avoid contact with acids, bases and Strong oxidizing materials.
10.4 Hazardous reactions: The product is chemically stable.
10.4.1 Hazardous decomposition products: Material does not decompose at ambient temperatures

11. Toxicological information

11.1 Information on toxicological effects: Toxicological data has not been determined for this product. Information is based on similar products.

11.1.1 Acute toxicity

Inhalation:	No data available, but not expected.
Ingestion:	No data available, but not expected.
Skin contact:	No data available, but not expected.
Eye contact:	No data available, but not expected.

11.1.2 Irritation

Skin:	No data available, but not expected to be irritating.
Eye:	No data available, but not expected to be irritating.

11.1.3 Sensitization: No data available, but not expected to be a skin sensitizer.
11.1.4 Repeated dose toxicity: No data available, but not expected to cause toxic effects.
11.1.5 Carcinogenicity: No data available, but not expected.
11.1.6 Mutagenicity: No data available, but not expected.
11.1.7 Toxicity for reproduction: No data available, but not expected.

11.2 Other information: Based on our state of knowledge and experience no injurious health effects are expected if product is properly handled for the designated use.

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12. Ecological information

- 12.1 Information on eco-toxicity: No ecological toxicity data has been generated for this product. There are no test results available and information is based on similar products.
- 12.1.1 Ecological toxicity effects: No data available. No negative ecological effects are known at the present state of knowledge.
- 12.2 Mobility in soil: No data available, but expected to be essentially insoluble in water.
No data available, but expected to have low mobility in soil.
- 12.3 Persistence and degradability: Difficult to degrade.
- 12.4 Bioaccumulation potential: No information available.

13. Disposal considerations

- 13.1 Product: Generation of waste should be minimized, check possibility for recycling. Waste product can be incinerated or dumped together with domestic waste in compliance with local authority requirements.
- 13.2 Packaging: Packaging material has to be emptied completely and disposed in accordance with the regulations. Packaging can be recycled if not contaminated.

14. Transport information

- 14.1 International Air Transportation Association Classification (IATA): This product is not classified as hazardous.
- 14.2 International Maritime Organization (IMDG): This product is not classified as hazardous.
- 14.3 14.3 UN, IMO, ADR/RID, ICAO Code: This product is not classified as hazardous.

15. Regulatory information

- 15.1 EU / National regulations: This product does not require a hazard warning label in accordance with EC Directives.

16. Other information

- Company name: Formfutura BV
- Additional data: In addition to the information given in this Material Safety Data Sheet (MSDS) we refer to the products specific Technical Data Sheet (TDS).
- Disclaimer: The information given in the Material Safety Data Sheet only applies to the described product in connection with its appropriate use. All information is based on the latest state of our knowledge. In particular, it describes our product under the aspect of possible hazards and pertaining safety measures. The information does not constitute any guarantee of specific product and/or quality properties. The information given in this Material Safety Data Sheet is not required according to article 31 and Annex II of Regulation (EC) No.1907/2006. It merely serves the purpose of providing sufficient information on a voluntary basis to ensure safe use of the compound/product. There is no obligation on the part of Formfutura to revise this document.