

ToughMold 141

1. Product Identification

Product Name: ToughMold 141

2. Description

ToughMold 141 is a high-temperature and high-pressure molding material designed for use in various industrial applications. This advanced 3D printing resin offers exceptional thermal resistance and high-definition precision, making it an ideal choice for manufacturers. With a heat deflection temperature of 141°C straight out of the printer, ToughMold 141 is suitable for producing parts that can be directly vulcanized in rubber, eliminating the need for a metal master. It excels in applications requiring thermal resistance, including metallized items, high-temperature oil and gas components, and small-run injection molding tools.

3. Technical Specifications

Material Properties

Property	Value	Units	Standard
Tensile Strength	56 MPa		ASTM D638
Flexural Modulus	3350 MPa		ASTM D790-02
Elongation at Failure	3.5%		ASTM D638
Heat Deflection Temperature	141°C	@ 0.455 MPa	ASTM D648

Key Features

- Heat deflection temperature of 141°C straight out of the printer
- High stiffness and rigidity
- Capable of being vulcanized in rubber for direct molding

4. Application Instructions

ToughMold 141 is designed for use in high-temperature and high-pressure 3D printing applications. Ensure surfaces are clean and dry before application. Follow the 3D printer manufacturer's guidelines for optimal printing settings and curing conditions to achieve the best results.

5. Safety Information

Follow all safety guidelines provided in the Safety Data Sheet (SDS). Ensure proper ventilation and use personal protective equipment (PPE) during handling and application.

6. Packaging and Storage

ToughMold 141 is available in various packaging options. Store in a cool, dry place, away from direct sunlight and moisture. Ensure containers are tightly sealed when not in use.

7. Contact Information

Resinify Technology LLC, Detroit Michigan USA

Uses and Benefits of ToughMold 141

Uses:

- Ideal for creating high-precision and high-definition molds for industrial applications.
- Suitable for producing parts that require thermal resistance, such as metallized items and high-temperature oil and gas components.
- Effective for small-run injection molding tools, eliminating the need for a metal master.

Benefits:

- **High Precision:** Offers superior detail resolution, making it easy to create high-definition parts with precise features.
- **Thermal Resistance:** Provides a high heat deflection temperature, ensuring stability and performance in high-temperature applications.
- **Versatile Application:** Suitable for a wide range of industrial uses, including direct vulcanization in rubber.
- **Enhanced Durability:** High stiffness and rigidity provide strong, long-lasting parts that can withstand demanding conditions.
- **Efficient Production:** Compatible with various 3D printers, allowing for fast and efficient printing.