Ceramic Tough 150 - High-Temperature Ceramic-Filled 3D Printing Resin

Product Description: Ceramic Tough 150 is a high-temperature, ceramic-filled photopolymer resin designed to produce tough, stiff parts with exceptional resolution. Engineered for high-detail precision applications, this material is ideal for prototyping, engineering, mold masters, and custom connectors. It supports a variety of finishing techniques such as painting and plating, making it a preferred choice for industrial applications.

Technical Specifications:

Property	Value	Units	Standard
Tensile Strength	45	MPa	ASTM D638
Elongation at Break	2.5%	-	ASTM D638
Flexural Strength	105	MPa	ASTM D790-02
Flexural Modulus	3850	MPa	ASTM D790-02
Izod Impact, Notched	0.002	KJ/m^2	ASTM D256
Hardness, Shore D	93	-	ASTM D2240
Heat Deflection Temperature	240°C @ 0.455 MPa	°C	ASTM D648
Heat Deflection Temperature	195°C @ 1.82 MPa	°C	ASTM D648

Key Features:

- **High-Temperature Resistance:** Heat deflection temperatures up to 240°C at 0.455 MPa and 195°C at 1.82 MPa.
- **Tough and Stiff:** Engineered for durable, long-lasting parts that withstand demanding conditions.
- **Ceramic-Filled Composition:** Enables high-detail precision and excellent dimensional accuracy.
- **Versatile Finishing:** Supports painting, plating, and polishing, making it ideal for both functional and aesthetic applications.
- **Efficient Production:** Compatible with various 3D printers for fast and effective manufacturing.

Applications:

- **Prototyping & Engineering:** With its high strength, stiffness, and temperature resistance, Ceramic Tough 150 is a reliable choice for engineers and designers needing durable prototypes and functional components.
- **Mold Masters:** High-temperature resistance and precision make this resin perfect for creating mold patterns used in thermal and molding processes.
- **Custom Connectors & Fine Details:** Ideal for high-resolution parts with dimensional accuracy and intricate designs.
- **Animation & Industrial Use:** Supports multiple finishing methods, including painting and plating, allowing enhanced visual and functional properties.

Benefits:

- **High Precision:** Exceptional resolution for fine details and accurate geometries.
- **Thermal Resistance:** High heat deflection temperature for performance stability in extreme conditions.
- **Tough and Stiff:** Ceramic-filled structure ensures long-lasting durability.
- **Versatile Finishing:** Compatible with painting, plating, and polishing for enhanced aesthetic and functional properties.
- **Optimized for Efficiency:** Works seamlessly with various 3D printers, enabling fast and efficient production.

Application Instructions: Ceramic Tough 150 is designed for use in high-resolution 3D printing applications. Ensure surfaces are clean and dry before application. Follow the 3D printer manufacturer's guidelines for optimal printing and curing conditions to achieve the best results.

Safety Information:

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

Packaging and Storage:

- Available in various packaging options to meet different production needs.
- Store in a cool, dry place, away from direct sunlight and moisture.
- Ensure containers are tightly sealed when not in use.

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