Technical Data Sheet (TDS) – CeramixGrey DLP Resin

Product Description:

CeramixGrey DLP Resin is a **high-performance ceramic-filled photopolymer** designed for **Digital Light Processing (DLP) 3D printing**. This resin offers a superior blend of **high-temperature resistance, exceptional surface finish, and dimensional accuracy**, making it ideal for applications requiring both **technical precision and artistic finesse**.

Key Features & Benefits

- **High-Temperature Resistance** – Ideal for applications requiring heat resistance, including vulcanized rubber mold production.
- **Exceptional Surface Finish** – Produces **smooth, detailed** prints for intricate designs.
- **Dimensional Accuracy** – Maintains **precise geometries** for high-detail applications.
- **Versatile Application** – Suitable for **dental models, jewelry, and prototyping**.

Applications

- **Dental** – Used for **crowns, bridges, and highly detailed dental models**. Suitable for vulcanized rubber mold production.
- **Jewelry** – Enables **intricate, high-resolution jewelry designs** with crisp features.
- **Prototyping** – A preferred choice for **engineering and design prototypes**, offering durability and **dimensional precision**.

Material Properties

Property	Value	Test Method
Tensile Strength	32 MPa	ASTM D-638
Tensile Modulus	1450 MPa	ASTM D-638
Elongation at Break	7%	ASTM D-638
Flexural Strength	65 MPa	ASTM D-790
Flexural Modulus	1700 MPa	ASTM D-790
Hardness (Shore D)	81	ASTM D-2240
Heat Deflection Temperature (1.82 MPa)	37-45°C	ASTM D-648
Heat Deflection Temperature (0.45 MPa)	45-60°C	ASTM D-648

Property	Value	Test Method
Notched Impact Izod	28 J/m	ASTM D-256

Considerations for Mechanical Parts

- **Brittleness** – As a **ceramic-filled photopolymer**, this resin may be more brittle than **engineering-grade** mechanical materials.
- **Load-Bearing Limitations** – Not ideal for **high-load or structural mechanical components**.
- **Precision** – Suitable for **tight-tolerance mechanical parts** that prioritize **dimensional accuracy** over impact resistance.
- **Testing Required** – Always test before using in **functional mechanical applications** to verify strength and durability.

Recommended 3D Printer Compatibility

- **SLA**
- **DLP**
- **mSLA**

Storage & Handling

⚠ **Store in a dark, cool environment** when not in use.
⚠ **Shake well before use** to ensure even consistency.
⚠ **Use protective gloves and ensure proper ventilation** during handling.
⚠ **Follow post-processing guidelines** for best performance.

Regulatory Compliance

✓ **ISO 13485 & ISO 14971 Certified**
✓ **Manufactured by Resinify Technology LLC, Detroit, Michigan, USA**
