RESINIFY – TECHNICAL DATA SHEET

Product Name: ResinMax **RT Code:** *(Please provide the RT Code for this product)* **Category:** Engineering Resin – High-Toughness / Balanced Mechanical Performance

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1. Product Description

ResinMax is a next-generation engineering resin designed to deliver a **balanced combination of stiffness, toughness, and impact resistance** for real-world functional parts. It bridges the gap between rigid and tough resins by offering high mechanical strength with excellent durability and reduced brittleness. Parts printed with ResinMax exhibit **high impact absorption**, strong layer bonding, dimensional accuracy, and long-term stability, making it well-suited for prototyping and low-volume manufacturing.

2. Key Features & Benefits

- High toughness with ductile performance
- Strong impact resistance and shock absorption
- Balanced stiffness–flexibility profile
- Excellent layer adhesion and low warpage
- High dimensional accuracy and smooth surface finish
- Suitable for functional and mechanical prototyping

3. Mechanical & Thermal Properties

Property	Value
Tensile Strength	45–55 MPa
Tensile Modulus	1,500–2,000 MPa
Elongation at Break	20–35%

Property	Value
Flexural Strength	75–95 MPa
Flexural Modulus	1,900–2,400 MPa
Impact Strength	35–55 J/m
Notched Izod	30–45 J/m
HDT @ 0.45 MPa	55–65°C
Shore Hardness	82–84D
Water Absorption	<0.45%
Shrinkage	0.4–0.7%
Density	1.10–1.18 g/cm³
Viscosity	650–900 cP

Note: Optimized for balanced durability and structural performance.

4. Recommended 3D Printing Parameters

Parameter	Setting
Printer Type	LCD / mSLA / DLP
Wavelength	385–405 nm
Layer Thickness	50–100 µm

Parameter	Setting
Normal Exposure	2.6–3.2 sec
Bottom Layers	6–8
Bottom Exposure	40–55 sec
Lift Speed	Medium
Rest Time	Recommended for thicker parts

5. Post-Processing

1. **Wash**: Wash for 3–5 minutes in IPA or a dedicated resin cleaner.
2. **Dry**: Dry parts fully before curing.
3. **Cure**: UV post-cure for **15–25 minutes**.
    - A mild heat cure at **50–55°C** may increase toughness.
    - Avoid over-curing, as it may reduce elongation slightly.

6. Applications

- Functional mechanical prototypes and impact-resistant housings
- Snap-fit components, tools, jigs, and fixtures
- Wearable and consumer product prototypes
- Robotics, drone parts, and structural components
- Low-volume functional production runs

7. Storage & Handling

- Store in a sealed container between **10–30°C**, away from light.
- Mix gently before use.
- **Shelf Life:** 12 months from the date of manufacture when stored properly.

8. Compliance

- RoHS
- REACH
- Tested in accordance with ASTM D638, D790, D256.

This document is subject to change. For the latest version, please contact Resinify Technology LLC. **RESINIFY – Innovating Additive Manufacturing Materials**