



RESINIFY – TECHNICAL DATA SHEET

Product Name: RigidPro 3000 **RT Code:** RT-RG3000 **Category:** Engineering Resin – Rigid / High-Stiffness

1. Product Description

RigidPro 3000 is a high-stiffness, dimensionally stable rigid engineering resin designed for functional prototyping, tooling, housings, fixtures, and precision components. It provides the ideal balance of **mechanical strength, rigidity, and low shrinkage**, making it suitable for mechanical assemblies and components requiring consistent tolerances. Compared to standard rigid resins, RigidPro 3000 offers improved modulus, enhanced HDT, and stronger durability without becoming brittle.

2. Key Features & Benefits

- High rigidity with low deformation under load
- Excellent dimensional accuracy & low shrinkage
- Strong mechanical stability and good impact resistance for a rigid polymer
- Smooth surface finish; ideal for visual and functional prototypes
- Improved thermal stability vs. standard rigid resins
- Reliable performance for mechanical assemblies

3. Mechanical & Thermal Properties

Property	Value
Tensile Strength	55–70 MPa
Tensile Modulus	2,000–2,800 MPa
Elongation at Break	4–7%



Property	Value
Flexural Strength	95–120 MPa
Flexural Modulus	2,500–3,200 MPa
Impact Strength	18–25 J/m
HDT @ 0.45 MPa	65–75°C
Shore Hardness	85–87D
Shrinkage	0.25–0.45%
Density	1.15–1.25 g/cm ³
Viscosity	600–900 cP

Note: Values are tuned to match or exceed typical engineering-grade rigid resins.

4. Recommended 3D Printing Parameters

Parameter	Setting
Printer Type	LCD, mSLA, DLP
Wavelength	385–405 nm
Layer Thickness	50–100 µm
Normal Exposure	2.6–3.4 sec
Bottom Layers	6–8



Parameter	Setting
Bottom Exposure	40–55 sec
Lift Speed	Medium–High
Rest Time	Recommended for large parts

5. Post-Processing

1. **Wash:** Wash for 3–5 minutes in IPA or an approved resin cleaner.
2. **Dry:** Ensure the part is fully dry before curing.
3. **Cure:** UV post-cure for **20–30 minutes**.
 - Optional: 10–15 minutes at **50–60°C** improves rigidity & modulus.
 - Avoid over-curing to prevent brittleness.

6. Applications

- Rigid housings, enclosures, and functional mechanical prototypes
- Jigs, fixtures, and manufacturing tools
- Precision components requiring dimensional accuracy
- Assemblies with threaded or fastened features
- High-stiffness engineering components

7. Storage & Handling

- Store in a sealed container between **10–30°C**, away from UV light.
- Shake or 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.



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