Resinify HighTemp™ 150

Engineering Resin — High-Temperature / Heat-Resistant

RT Code: RT-HT150

Document ID: RES-TDS-ENG-HIGHTEMP150-Rev.A

Manufacturer: Resinify Technology LLC — Detroit, MI

Product Description

HighTemp 150 is an advanced engineering resin formulated for applications requiring elevated thermal resistance, excellent rigidity, and dimensional stability. With a heat deflection temperature (HDT) reaching 150°C, this material is designed for functional prototypes and tooling that must withstand high heat, hot air, steam, or heated mechanical environments. HighTemp 150 is ideal for mold components, heat-resistant housings, jigs, fixtures, and testing parts used near engines, heating elements, or industrial equipment.

Key Features & Benefits

- Extremely high heat deflection — up to 150°C
- Maintains rigidity under elevated temperatures
- Low shrinkage and high dimensional accuracy
- Excellent mechanical strength and stiffness
- Stable performance for thermal testing and engineering validation
- Compatible with LCD, mSLA, and DLP printers

Mechanical & Thermal Properties

Property	Value
Tensile Strength	55–65 MPa
Tensile Modulus	2,200–2,900 MPa
Elongation at Break	3–6%
Flexural Strength	95–115 MPa
Flexural Modulus	2,800–3,400 MPa
Impact Strength	18–28 J/m
HDT @ 0.45 MPa	140–150°C
Shore Hardness	88–90D
Shrinkage	0.30–0.55%

Density	1.20–1.30 g/cm³
Viscosity	900–1200 cP

> Values may vary depending on cure and annealing methods.

Recommended 3D Printing Parameters

Property	Value
Printer Type	LCD, mSLA, DLP
Wavelength	385–405 nm
Layer Thickness	50–100 µm
Normal Exposure	3.2–4.0 sec
Bottom Layers	6–10
Bottom Exposure	45–65 sec
Lift Speed	Medium
Rest Time	Recommended for large solid parts

> For maximum thermal performance, annealing is highly recommended after UV curing.

Post-Processing

1. Wash: Wash for 3–5 minutes in IPA or a dedicated resin cleaner.
2. Dry: Dry parts thoroughly.
3. Cure: UV post-cure for 30–40 minutes.
4. Anneal for Maximum HDT: Heat the part to 80°C for 1 hour, then allow it to cool slowly. Avoid rapid heating or cooling to prevent warping.

Applications

- High-temperature housings, fixtures, and mold inserts
- Under-hood automotive components
- Functional prototypes requiring heat exposure
- Jigs, fixtures, and industrial equipment parts
- Sterilization-resistant components

Storage & Handling

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

Compliance

- RoHS
- REACH
- Tested in accordance with ASTM D638, D790, D648.

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