



## RESINIFY – TECHNICAL DATA SHEET

**Product Name:** FlexX 95A **RT Code:** RT-FX95A **Category:** Engineering Resin – High-Durability Elastomer (95A Hardness)

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### 1. Product Description

FlexX 95A is a high-performance engineering elastomer designed to replicate the mechanical behavior of tough industrial TPU. With a Shore hardness of 95A, it offers excellent tear resistance, outstanding durability, and superior mechanical strength while maintaining controlled flexibility. This material is ideal for functional prototypes and end-use parts that require high fatigue resistance, repeated bending, and long-term mechanical reliability. FlexX 95A sits between flexible elastomers and rigid plastics, delivering the ideal balance for demanding engineering applications.

### 2. Key Features & Benefits

- True TPU-like strength and elasticity with Shore 95A hardness
- Exceptional tear and abrasion resistance
- High fatigue resistance under cyclic loading
- Excellent mechanical strength for functional parts
- Smooth surface finish with reliable layer adhesion
- Suitable for production-grade elastomer components

### 3. Mechanical & Thermal Properties

Property	Value
Shore Hardness	95A
Tensile Strength	12–18 MPa
Elongation at Break	40–80%



Property	Value
Tear Strength	Very High (30–45 kN/m equivalent)
Tensile Modulus	High for elastomer class
Impact Resistance	Very High
Heat Deflection Temp	55–65°C
Density	1.10–1.20 g/cm <sup>3</sup>
Viscosity	900–1300 cP

*Note: Values may vary depending on post-cure conditions and printer type. Flexural properties are not applicable for semi-flexible materials.*

#### 4. Recommended 3D Printing Parameters

Parameter	Setting
Printer Type	LCD / mSLA / DLP
Wavelength	385–405 nm
Layer Thickness	50–100 µm
Normal Exposure	3.0–4.0 sec
Bottom Layers	6–10
Bottom Exposure	50–70 sec
Lift Speed	Slow–Medium



Parameter	Setting
Rest Time	Recommended for stable printing

**Note:** Due to its toughness and high viscosity, slower lift speeds and reinforced supports are recommended to ensure successful printing.

## 5. Post-Processing

1. **Wash:** Wash gently in IPA for 2–3 minutes. Do **NOT** over-wash to avoid material stiffening.
2. **Dry:** Dry thoroughly with compressed air.
3. **Cure:** UV post-cure for 15–25 minutes.
  - For maximum toughness, a heat-assisted cure at 50–60°C is recommended.
  - Avoid over-curing to maintain optimal elasticity.

## 6. Applications

- Industrial-grade gaskets, seals, and high-durability flex hinges
- Shock-absorbing components and impact pads
- Snap-fit joints requiring repeated cycling
- Footwear components, grips, and robotics parts
- Drone vibration isolation components
- End-use elastomer products demanding mechanical reliability

## 7. Storage & Handling

- Store in a tightly sealed container between **10–25°C**, away from UV exposure.
- Mix gently before use.
- **Shelf Life:** 12 months from the date of manufacture when stored properly.

## 8. Compliance

- RoHS



- REACH
- Mechanical properties tested in accordance with **ASTM D412**.

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*This document is subject to change. For the latest version, please contact Resinify Technology LLC.*

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