Siraya Tech Tenacious

Flexible Resin

Clear, Obsidian Black
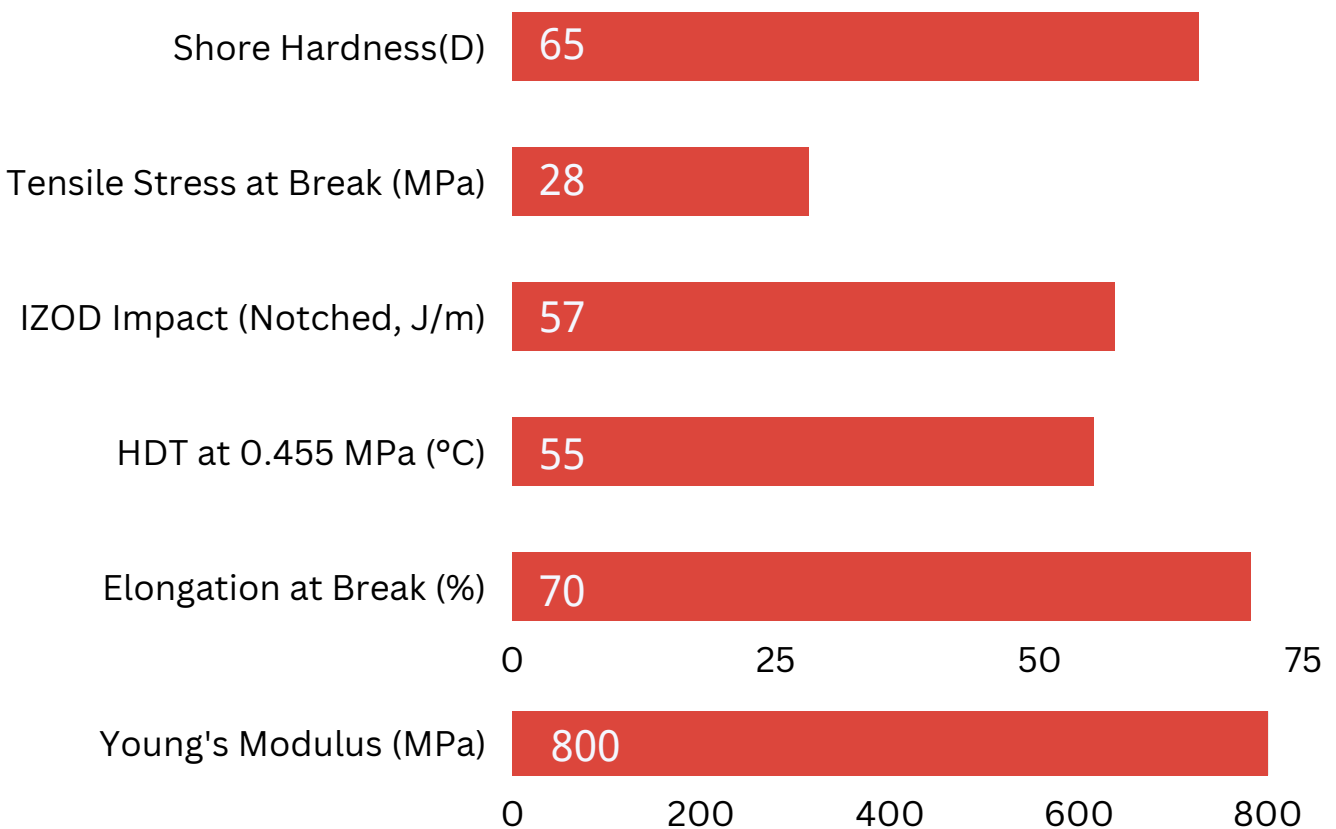
Product Introduction

Tenacious - Flexible Resin

Key Features

- Highly versatile and durable 3D printing resin that offers excellent impact resistance, flexibility, and toughness.
- Has a high polymer content, which contributes to its outstanding mechanical properties and adds significant toughness and durability to a part.
- Thin objects printed in Tenacious can be bent 180 degrees without shattering, while thicker objects show great strength and resilience, especially when printed thick.
- Can be mixed with other resins to increase toughness of other resins.

Application:

- Impact-resistant engineering applications
- Flexible functional parts
- O-rings and gaskets
- Blend with other resins to improve performance

Property	Value
Shore Hardness(D)	65
Tensile Stress at Break (MPa)	28
IZOD Impact (Notched, J/m)	57
HDT at 0.455 MPa (°C)	55
Elongation at Break (%)	70
Young's Modulus (MPa)	800

Property Data

Mechanical Properties	Measure	Method	Post Processed
Tensile Stress at Yield	30	ASTM D638	-
Tensile Stress at Break	28	ASTM D638	-
Young's Modulus	800	ASTM D638	-
Elongation at Break	70	ASTM D638	-
Flexural Modulus	770	ASTM D790	-
Flexural Stress at Yield	-	-	-
Flexural Strain at Break	-	-	-

Other Properties	Measure	Method	Post Processed
HDT at 0.455 MPa	55	0.455 MPa	-
IZOD Impact (Notched) J	57	-	-
Shore Hardness (D)	65	-	-
Solid Density	1.15	-	-
Water Absorption (24hr)	2%	-	-
Biocompatibility	Not Tested	-	-

Liquid Properties	Measure	Method	Post Processed
Viscosity at 25°C (77°F)	560	25°C (77°F)	-
Liquid Density	1.1	-	-

SIRAYA Tech

Work Flow

Printing

Tenacious Resin is a flexible resin material that is widely compatible with MSLA/LCD 3D printers. It can also print on some 405mm SLA/DLP printers if you have access to exposure controls.

To achieve optimal results with Tenacious Flexible resin, you need to use the appropriate slicer profiles for your printer model and software. You can download the slicer profiles for Chitubox and Lychee slicers from this link: https://siraya.tech/pages/print-settings-download

Clean

Here are some tips for cleaning your printed parts:

- Use a painter brush (or any brush made with hair) to remove excess resins from the printed part.
- Use 95% concentrated Ethanol (preferred) or IPA to clean. Some forms of methanol should work but make sure they do not contain acetone.
- After 2-3 minutes of cleaning action, remove the alcohol with a hair dryer or air blower.
- For complex parts with lots of cavities, it may be a good idea to clean and dry them multiple times.
- Check the dried surface of the part by touching it to see if it is still sticky. If the dried surface is still sticky, wash it again and dry it again.

Post Curing

- Here are some tips for post-curing your printed parts:

- Tenacious reaches its optimal strength when the printed part is post-cured with UV after cleaning.
- Use 395-405nm UV light and cure for about 25 minutes.
- Make sure the resin is completely cleaned off and there is no alcohol left on the print before curing.
- Curing by submerging the object in water will significantly increase curing efficiency.

SIRAYA Tech