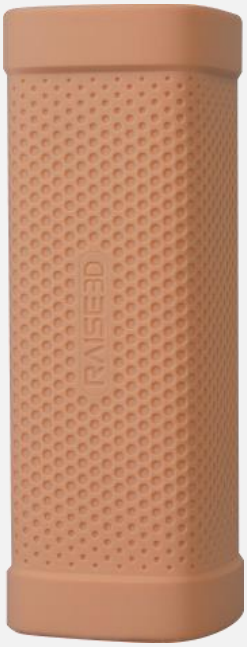


Raise3D High Detail Apricot V1 Resin Technical Data Sheet[1]

High-resolution material for detailed models

High Detail Resin features an ultra-high resolution matte appearance to bring your visual prototypes and model designs to life. The smooth apricot surface finish has a professional appearance and simplifies various post-processing and finishing methods (e.g., painting and plating).

Benefits

- Ultra-fine details and high resolution
- Ready for painting and plating
- Excellent matte surface finish

Applications

- Ultra-high resolution and detailed prototypes
- Complex and intricate models and sculptures
- Modpels for painting and plating

[1] The cover shows an audio-visual prototype.

Physical Properties

Property	Testing Method	Typical Value	
		Metric	Imperial
Appearance	/	Liquid, Apricot	
Density (liquid resin)	ASTM D4052	1.136 g/cm^3	1.136 g/cm^3
Density	ASTM D792	1.40 g/cm^3	1.40 g/cm^3
Liquid Viscosity	ASTM D7867	331 cps@25°C	331 cps@25°C
Shore D Hardness	ASTM D2240	88D	88D

Mechanical Properties*

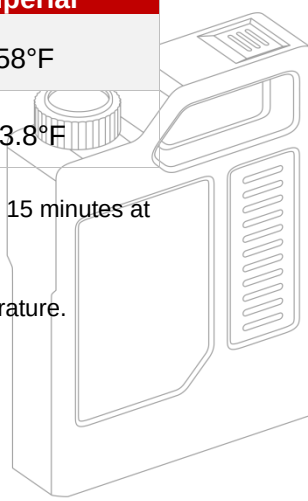
Property	Testing Method	Green		Post-Cured	
		Metric	Imperial	Metric	Imperial
Young's Modulus	ASTM D638	1781 MPa	258.30 ksi	2622 MPa	380.28 ksi
Tensile Strength	ASTM D638	42 MPa	6.09 ksi	58 MPa	8.41 ksi
Elongation at Break	ASTM D638	17%	17%	13%	13%
Flexural Modulus	ASTM D790	1521 MPa	220.59 ksi	2886 MPa	418.56 ksi
Flexural Strength	ASTM D790	61 MPa	8.85 ksi	98 MPa	14.21 ksi
Notched Izod	ASTM D256	32 J/m	0.62 ft-lbf/in	34 J/m	0.64 ft-lbf/in

***Note:**
All test specimens were printed in 50μm thickness with Raise3D DF2 printer (50μm thickness, 9s).
All post-cured test specimens were cured with DF Cure for 15 minutes per side at room temperature.
All specimens were conditioned in ambient lab conditions at 20-25 °C / 40-60% RH for 16 to 24 hours.
Test performance differs depending on part geometry, print placement orientation, print settings and temperature.

Thermal Properties*

Property	Testing Method	Post-Cured	
		Metric	Imperial
Heat Deflection Temp. @0.45 MPa/66 psi	ASTM D648	70°C	158°F
Heat Deflection Temp. @1.82 MPa/264 psi	ASTM D648	51°C	123.8°F

***Note:**
All test specimens were printed with Raise3D DF2 printer (50 μm thickness, 9s) and cured with DF Cure for 15 minutes at room temperature.
All specimens were conditioned in ambient lab conditions at 20-25 °C / 40-60% RH for 16 to 24 hours.
Test performance differs depending on part geometry, print placement orientation, print settings and temperature.



Workflow

Printer setting

Recommended to use the default printing profiles in ideaMaker.

Recommended printing parameters with Raise3D DF2 printer:

- Shake the resin bottle before usage
- Environmental conditions: 20-25 °C, 40-60% RH
- Power: 2 mW/cm^2 at 405 nm
- Layer thickness: 50 μm
- Normal layer curing time: 9 s

Cleaning

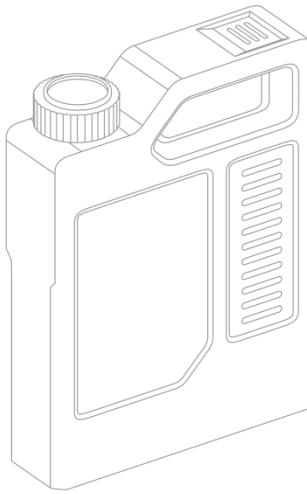
High Detail Apricot V1 Resin requires cleaning to achieve ideal properties of printed part.
Support structures should be removed from the printed part, and the part should then be washed before post-curing.
Blow dry the part with compressed air/nitrogen to remove residual solvent from the surface. Or leave the part for a short time at room temperature to dry.

Post curing

After cleaning, High Detail Apricot V1 parts requires post curing to achieve optimal properties.
Recommended print parameters with Raise3D DF Cure:

- Intensity: 25 mW/cm^2 at 405 nm
- UV cure time: 15 min per side
- Cure temperature: Room temperature.

More printing information please read *Raise3D DF2 3D Printer User Manual*.



Testing Geometries

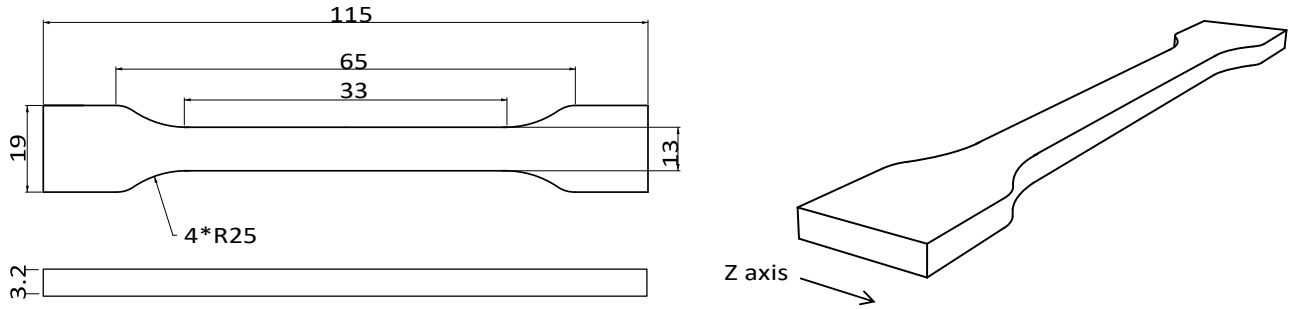


Fig 1. Tensile testing specimen

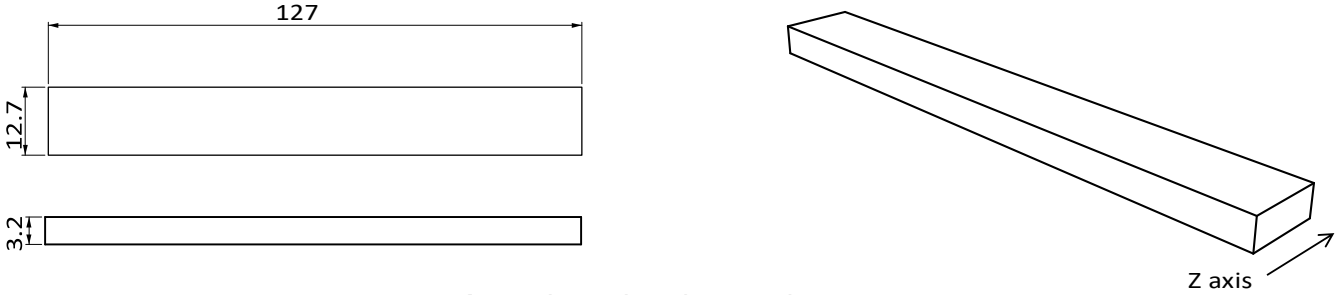


Fig 2. Flexural testing specimen

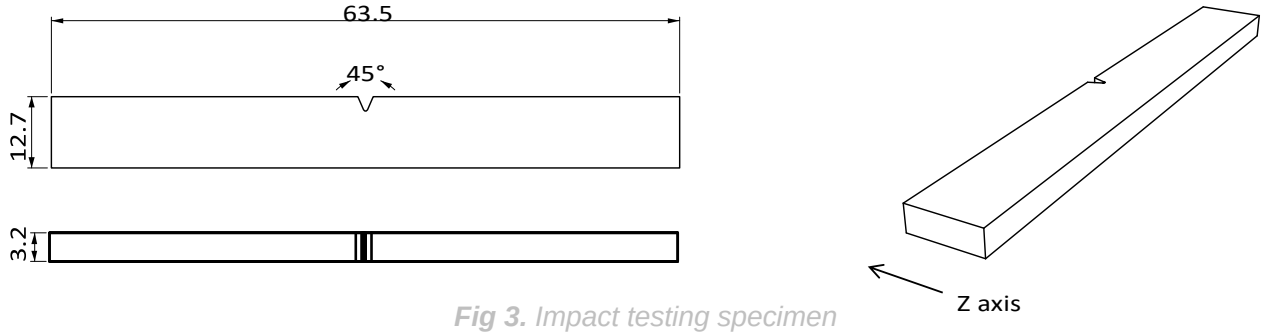


Fig 3. Impact testing specimen

Disclaimer

The typical values presented in this data sheet are intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values may vary significantly with printing conditions. End-use performance of printed parts depends not only on materials, but also on part design, environmental conditions, printing conditions, etc. Product specifications are subject to change without notice.

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