



Raise3D Standard White V1 Resin Technical Data Sheet¹

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Easy-to-print resin for prototyping and design

Standard Resin is an easy-to-print well-rounded resin which provides fine detail, high accuracy and a matte smooth surface finish for an easier and more efficient post-processing process.

Benefits

- Easy-to-print with high accuracy
- Smooth and precise details
- Matte surface finish

Applications

- Prototyping and design
- Models with small features and intricate details
- Model for painting and other post-processing

¹ The cover shows a car interior door handle.



Physical Properties

Property	Testing Method	Typical Value	
		Metric	Imperial
Appearance	/	Liquid, White	
Density (liquid resin)	ASTM D4052	1.150 g/cm ³	9.60 lb/gal
Density (printed part)	ASTM D792	1.22 g/cm ³	10.18 lb/gal
Liquid Viscosity	ASTM D7867	450 cps@25°C	450 cps@77°F
Shore D Hardness	ASTM D2240	85D	85D

Mechanical Properties*

Property	Testing Method	Green		Post-Cured	
		Metric	Imperial	Metric	Imperial
Young's Modulus	ASTM D638	1663 MPa	241.19 ksi	2844 MPa	412.47 ksi
Tensile Strength	ASTM D638	39 MPa	5.66 ksi	67 MPa	9.72 ksi
Elongation at Break	ASTM D638	30%	30%	19%	19%
Flexural Modulus	ASTM D790	1318 MPa	191.15 ksi	2830 MPa	410.44 ksi
Flexural Strength	ASTM D790	51 MPa	7.40 ksi	108 MPa	15.66 ksi
Notched Izod	ASTM D256	33 J/m	0.62 ft-lbf/in	33 J/m	0.62 ft-lbf/in

***Note:**

All test specimens were printed with Raise3D DF2 printer (50 µm thickness, 3s).

All post-cured test specimens were cured with DF Cure for 30 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*

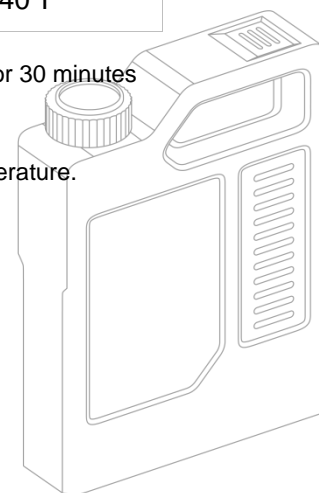
Property	Testing Method	Post-Cured	
		Metric	Imperial
Heat Deflection Temp. @0.45 MPa/66 psi	ASTM D648	77°C	170.6°F
Heat Deflection Temp. @1.82 MPa/264 psi	ASTM D648	60°C	140°F

***Note:**

All test specimens were printed with Raise3D DF2 printer (50 µm thickness, 3s) and cured with DF Cure for 30 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.



Workflow

Printer settings

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/cm² at 405 nm
- ◆ Layer thickness: 50 μm
- ◆ Normal layer curing time: 3 s

Cleaning

Standard White 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.

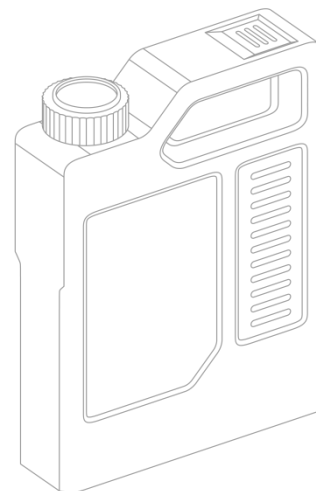
Post curing

After cleaning, Standard White V1 parts requires post curing to achieve optimal properties.

Recommended print parameters with Raise3D DF Cure:

- ◆ Intensity: 25 mW/cm² at 405 nm
- ◆ UV cure time: 30 min per side
- ◆ Cure temperature: Room temperature.

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



Testing Geometries

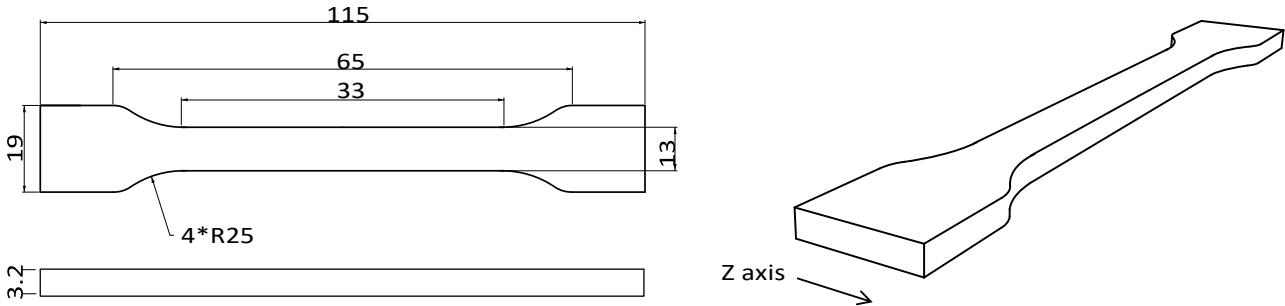


Fig 1. Tensile testing specimen

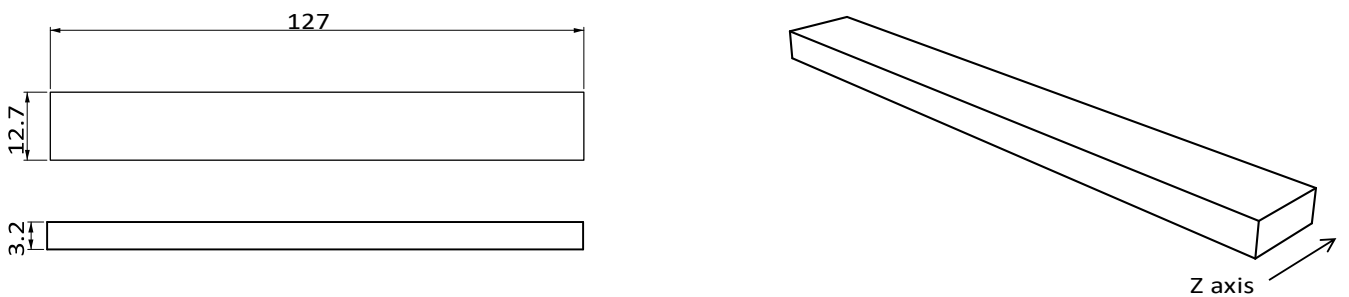


Fig 2. Flexural testing specimen

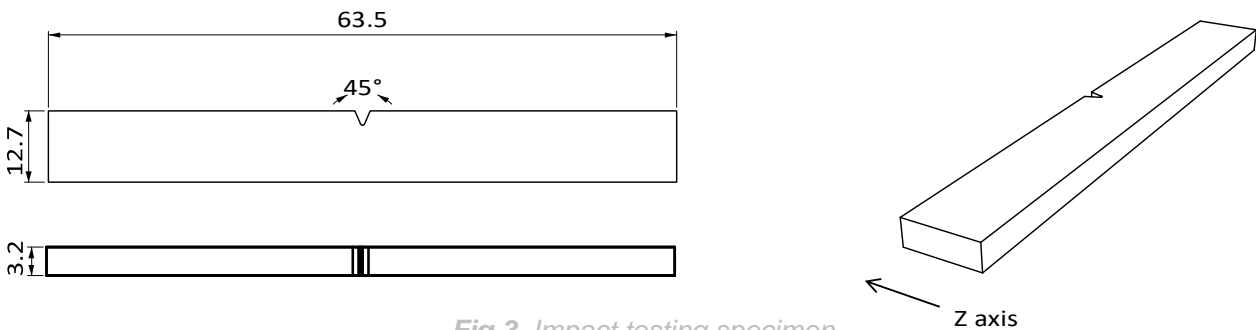


Fig 3. Impact testing specimen

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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