Alpha White Resin V1

Material Code : FLAPWH01 | Datasheet Version : V1 | Revision Date : September 28, 2026 | Category : General Purpose Resin

Technical data as published by Formlabs for the Form Studio 1.

Mechanical Properties

	Default Post-Cure	Max Strength Post-Cure	Method[1,2]
Tensile Properties			
Ultimate Tensile Strength	35 MPa [5100 psi]	45 MPa [6500 psi]	ASTM D638, Type 1
Tensile Modulus	1690 MPa [250 ksi]	2190 MPa [320 ksi]	ASTM D638, Type 1
Elongation at Break	26%	23%	ASTM D638, Type 1
Flexural Properties			
Flexural Strength	63 MPa [9100 psi]	81 MPa [12000 psi]	ASTM D790
Flexural Modulus	1770 MPa [260 ksi]	2190 MPa [320 ksi]	ASTM D790
Toughness Properties			
Izod Impact Strength (Unnotched)	210 J/m [3.93 (ft·lb)/in]	188 J/m [3.52 (ft·lb)/in]	ASTM D4812
Izod Impact Strength (Notched)	34 J/m [0.64 (ft·lb)/in]	34 J/m [0.64 (ft·lb)/in]	ASTM D256

Thermal Properties

Thermal Properties	Default Post-Cure	Max Strength Post-Cure	Method[1,2]
Heat Deflection Temp. at 1.8 MPa	44.3 °C [112 °F]	48.3 °C [119 °F]	ASTM D648
Heat Deflection Temp. at 0.45 MPa	51.7 °C [125 °F]	58 °C [136 °F]	ASTM D648
Glass Transition Temp (Tg)	103 °C [217 °F]	112 °C [234 °F]	DMA, Tension mode

General Properties

	Default Post-Cure	Method[1,2]
Bulk Density	1.21 g/cm3 [0.0437 lb/in3]	ASTM D792
Liquid Density	1.11 g/cm3 [0.0401 lb/in3]	ASTM D792
Shore Hardness	65D	ASTM D2240-15
Viscosity at 25 °C	596 cP	ASTM D7867

Green Properties

	No Post-Cure	Method[1]
Ultimate Tensile Strength	28 MPa [4060 psi]	ASTM D638, Type 1
Tensile Modulus	1300 MPa [189 ksi]	ASTM D638, Type 1
Elongation at Break	40%	ASTM D638, Type 1

1. Material properties may vary based on part geometry, print orientation, print settings, temperature, and disinfection or sterilization methods used.

2. Data was obtained from parts printed on a Form Studio 1 printer with 100 µm Alpha White Resin V1 settings, washed in Form Studio Wash+Cure for 5 minutes in ≥99% Isopropyl Alcohol, and post-cured according to the corresponding column description.

Printer Compatibility

Platform	Printer	Compatibility	Resin Tank
Form Studio 1	Form Studio 1	Supported	Form Studio Resin Tank
Form 4	Form 4	Incompatible Use White Resin V5	N/A
Form 4	Form 4B	Incompatible Use White Resin V5	N/A
Form 4	Form 4L	Incompatible Use White Resin V5	N/A
Form 4	Form 4BL	Incompatible Use White Resin V5	N/A
Form 3	Form 3/+	Incompatible Use White Resin V4.1	N/A
Form 3	Form 3B/+	Incompatible Use White Resin V4.1	N/A
Form 3	Form 3L	Incompatible Use White Resin V4.1	N/A
Form 3	Form 3BL	Incompatible Use White Resin V4.1	N/A

Supported: Dispensing will be enabled and print settings are available in PreForm.

Compatible: Automatic dispensing from cartridges is enabled, but the user will be responsible for settings tuning. If printing on Form Studio 1, Resin Tank Pro must be used. Mechanical properties may not be equivalent to those published here.

Incompatible: Open Material Mode required, and automatic dispensing from cartridge is disabled. Mechanical properties may not be equivalent to those published here.

Post-Processing

Step	Recommended Hardware	Default	Max Strength
Washing	Form Wash V2 Form Wash L V2 Form Studio Wash+Cure	5 minutes or until clean*	5 minutes or until clean*
Drying	--	30 minutes at room temperature, or use compressed air	30 minutes at room temperature, or use compressed air
Post-Curing	Form Studio Wash+Cure	5 minutes	N/A
Post-Curing	Form Cure V2 Form Cure L V2	1 minute at room temperature	5 minutes at 60 °C

*Use >90% IPA or Resin Washing Solution

Handling and Storage

Shelf-life	2 years
Storage temperature	10 - 25 °C

Storage and handling notes

Review Safety Data Sheet to ensure safe handling, storage, and disposal.
Shake resin cartridges before printing to ensure the resin is thoroughly mixed.
To avoid contamination, do not pour resin back into cartridges.
For best performance and shelf life keep opened resin away from direct light.
Short-term freezing during shipping is generally not detrimental to shelf life. Thaw and shake the resin cartridge thoroughly before use.
High temperatures decrease shelf life. Transient high temperature conditions (e.g., during shipping) should have a minimal effect.