

Nylon-Like

385-405nm

Optimised for:

Functional Prototypes

Jigs, Fixtures and Tooling

Snap-fit, clips and brackets

Housings and Enclosures



RC Car Components
Printed in Nylon-like

Nylon-Like is a 3D printing resin developed to reproduce the feel and failure behaviour of injection-moulded polyamide. Unlike standard rigid resins, it yields before it breaks: printed parts bend, absorb energy and deform plastically rather than shattering. A high green strength modulus (623 MPa) supports overhangs and functional parts during printing, while low surface friction helps reduce wear and gives a pleasant hand feel.

Designed for high-resolution 385-405nm 3D printing, this Technical Data Sheet details the resin's mechanical properties, processing parameters and performance characteristics.

Compatibility:
385-405nm LCD 3D Printers

Colour
Black



Available:
1 & 5kg bottles



[Click Here](#) or Scan
to Learn More

Key Features



High Energy Absorption

Absorbs impact and vibration energy, helping parts withstand repeated loading without cracking.



Matt Finish

Produces matt surfaces with reduced layer lines for easier finishing.



Low Viscosity

610 cPs at 25°C for fast, clean printing and easy handling.



Good Heat Deflection Temperature

HDT of 89°C at 0.455 MPa keeps parts stable in warmer working environments.



Nylon-like Properties

Tensile Properties	Green	Post-cured*	Method
Tensile Modulus	623 MPa	1240 MPa	ASTM D638 (Type V)
Tensile Strength (Break)	20.2 MPa	41.7 MPa	ASTM D638 (Type V)
Tensile Strength (Yield)	15.8 MPa	46.5 MPa	ASTM D638 (Type V)
Elongation at Break	73%	27.9%	ASTM D638 (Type V)
Flexural Properties		Post-Cured	Method
Flexural Strength		52 MPa	ASTM D790
Flexural Modulus		1380 MPa	ASTM D790
Impact Properties		Post-Cured	Method
Impact Strength Notched Izod		38 J/m	ASTM D256
General Properties			
Shore Hardness*		83 Shore D	ASTM D2240
HDT (@ 0.455 MPa)		89°C	ASTM D648
HDT (@ 1.82 MPa)		TBC	ASTM D648
Water absorption (%) after 24 hrs		>5%	Internal

*Post cured for 2 hrs at 60°C in a Photocentric Cure M+. Green values are measured on as-printed, washed and dried parts with no post-cure.

Liquid Properties	Value	Method
Viscosity	610 cPs	At 25°C, Brookfield spindle L3
Density	1.11 g/cm ³	Internal
Storage	10 < T < 50°C	Keep sealed, away from light



We are constantly reviewing and improving our range of high-performance materials. For the very latest information, please visit the Photocentric website



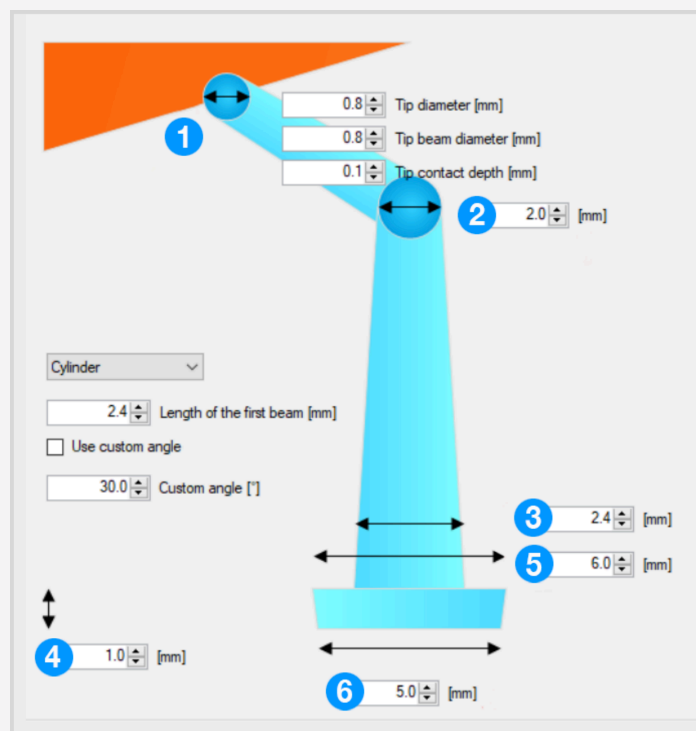
Design Consideration Parameters

Property	Parameters
Minimum feature size (pins)	0.5 mm
Minimum hole diameter	0.6 mm
Minimum slot thickness	0.5 mm
Minimum wall thickness	0.4 mm
Overhangs	Successful for overhangs < 60°
Delamination	Visible at 5 mm (maximum overhang 4 mm); between two walls, visible at 7 mm (maximum overhang 6 mm)
Scaling factor	+0.65% XY axis, +0.2% Z axis
Dimensional accuracy	25 mm nominal printed 25.00 mm (X) / 25.03 mm (Y)
Recommended orientation	45° around all axes



Recommended Support Parameters & Orientation

These are recommended support settings in relation to the Photocentric JENI system with pixel pitch of 16.8 x 24.8 μm .



Large Models

Small Models

Diagram Ref. Nr	Parameters	Values	Parameters	Values
	Density (%)	70%	Density (%)	50%
1	Tip Diameter (mm)	0.6	Tip Diameter (mm)	0.5
	Critical Build Angle (°)	47	Critical Build Angle (°)	47
2	Pole Diameter (mm)	2	Pole Diameter (mm)	1.5
3	Pole Widening Factor	1.5	Pole Widening Factor	1
	Model Height from Base (mm)	10	Model Height from Base (mm)	10
4	Height of Support Foot (mm)	2	Height of Support Foot (mm)	2
5	Top of Foot Diameter (mm)	7	Top of Foot Diameter (mm)	7
6	Bottom of Foot Diameter (mm)	5	Bottom of Foot Diameter (mm)	5



Printer and Resin Profiling

3rd Party UV Printers

- Photocentric UV high-performance resins have been formulated to be compatible with a wide range of 3rd Party Printers. This list is continually updated, for the most up-to-date information, please visit our [UV Resin Compatibility Page](#). All resins are functional at a wavelength of 385-405nm.
- Please see below instruction on how to calculate appropriate exposure time with regards to your 3rd party UV printer and purchased resin:



Layer Exposure Guidelines

Overview

This guide will assist you in establishing a layer exposure time for a desired resin and layer thickness based on the characteristics of Photocentric's UV Resin range and your UV 3D printer.

Each resin requires a specific energy (E_c) to cure a certain layer thickness (D_p). 'Energy' is defined by multiplying 'light output intensity' of your printer and a 'given time of exposure'. The equation below simply explains the matter:

$$\text{Energy [mJ/cm}^2\text{]} = \text{Light Output Intensity [mW/cm}^2\text{]} \times \text{Exposure Time [s]}$$

Your UV 3D printer manufacturer will provide you with light output intensity value.

Layer Thickness (μm)	25	50	100
Exposure time for a UV 3D printer with 5mW/cm ² light output intensity	-	-	2.4
E_c (mJ/cm ²)	12		
D_p (μm)	220		



Bear in mind the exposure time vs energy is not a linear trend, and this data is intended strictly as a guideline. Settings may need to be further optimised to suit each printer.



Pre-Print Instructions

- Shake the resin bottle for at least 2 minutes before pouring into the vat.
- Photocentric UV resins are compatible with a wide range of third-party printers. For the latest list and print profiles, visit photocentricgroup.com/print-settings.



Post-Print Instructions

1. Wash for 10 minutes in a resin cleaner (for example, Photocentric Resin Cleaner 30). Do not exceed the recommended wash time.
2. Rinse with water for approximately 2 minutes to remove residual cleaner.
3. Dry thoroughly with compressed air or leave until completely dry.
4. Post-cure for 1–2 hours at 60°C in a cure unit (for example, a Photocentric Cure M+) to reach the full mechanical properties quoted above.
5. Remove the platform from the cure unit and immediately submerge in cold water to thermally shock the parts; they can then be removed with minimal effort. Alternatively, allow the platform to cool to room temperature and remove the parts with the supplied scraper or a soft spatula.