Technical Datasheet

Durable DL902 Plant-Based

Daylight Resin

Durable DL902

Elongation at Break (Low – High)

Toughness (Low – High)

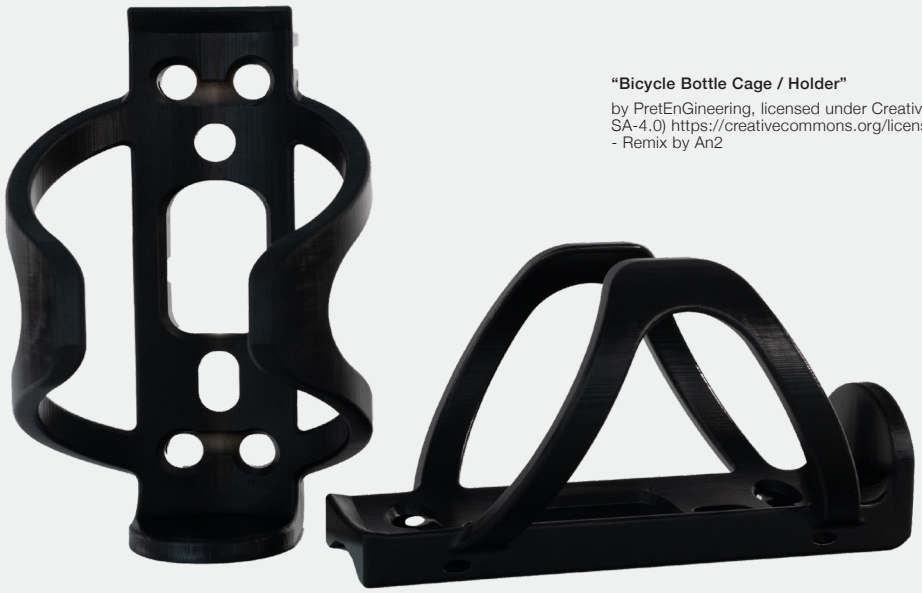
Compatible Printers

Liquid Crystal MAGNA

Colour

Black

Available in
5kg bottles



"Bicycle Bottle Cage / Holder"
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- Remix by An2

Durable DL902 is a tough, ABS-like 3D printing resin made from 52% bio-based raw materials, significantly reducing net CO_2 emissions compared to conventional resins.

It's designed for functional, end-use parts that need to be strong yet able to flex under stress, offering exceptional durability and impact resistance.

Best Used for

- DL902 is ideal for printing functional prototypes and end-use parts that require a careful balance of strength, stiffness, and toughness.

Revision 1
03/11/2025

Unique Features

Tough and flexible — similar to ABS or polypropylene blends

Difficult to break under typical use

Made with 52% bio-renewable content

Low water absorption

Moderate heat resistance (HDT)

Durable DL902 Plant-Based Properties

Tensile Properties	Green	Post-cured*	Test Method
Tensile Modulus	548 MPa	2290 MPa	ASTM D638
Tensile Strength (Break)	15.6 MPa	37 MPa	ASTM D638
Tensile Strength (Yield)	10.4 MPa	46 MPa	ASTM D638
Elongation at Break	56%	37%	ASTM D638
Flexural Properties			
Flexural Strength	-	71 MPa	ASTM D790
Flexural Modulus	-	1790 MPa	ASTM D790
Impact Properties			
Impact Strength Notched Izod	-	51J/m	ASTM D256
General Properties			
Shore Hardness	-	82 Shore D	ASTM D2240
HDT (@ 0.455 MPa)	-	73°C	ASTM D648
Water absorption (%) after 24 hrs		0.28%	ASTM D570
Water absorption (%) after 72 hrs		0.34%	ASTM D570
Water absorption (%) after 7 days		0.53%	ASTM D570

Liquid Properties	Value	Method
Viscosity	900 cPs	At 25°C Brookfield spindle 3
Density	1.06 g/cm3	Internal;
Storage	10<T<50°C	

*Post cured for 3 hrs at 60°C in Photocentric Cure L2.

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

Printed on Photocentric LC Magna (100 µm layer height)

Properties	Parameters
Minimum feature size (pins)	0.5 mm
Minimum hole diameter	0.8 mm
Minimum slot thickness	0.7 mm
Minimum wall thickness	0.3 mm
Overhangs	Successful for overhangs ≤ 60°
Minimum unsupported wall thickness	Unsupported walls with a thickness of 2.0 mm or greater can be printed at the full build height. Unsupported walls with a thickness of 1.0 mm can be printed up to a maximum height of 100 mm.
Scaling factor	+0.5% XY (X 1.005, Y1.005, Z 1.00)
Pro design tip	Due to the durable and slightly flexible nature of this resin, thermal shock methods will not be effective for removing parts from the build platform after post-curing. Any part with a surface area greater than 10 mm in either the X or Y axis should be printed on supports to ensure easy removal and optimal print quality.

Pre-Print Instructions

1. To print with Photocentric LC Magna, choose Durable DL902 at desired layer thickness when preparing your print file in Photocentric Studio.
2. Heat the resin to 30°C in the bottle.
3. Shake the resin bottle for 2 minutes before pouring into the resin vat.

Post-Print Instructions

1. Parts can be washed in 10 minutes using Photocentric Resin Cleaner 30.
2. Once washed, rinse with warm water for 2 minutes
3. Dry with compressed air to remove any remaining water. Or alternatively, leave to air-dry.
4. Place the platform into the Photocentric Cure L2 for a minimum of 3 hours at 60°C.
5. Allow the Photocentric Cure L2 to cool down by leaving door ajar. Remove the build platform and scrape the parts off.

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