



# Durable DL902 Plant-Based

460nm

## Optimised for:

Functional prototypes

Snap-Fit and Assembly Components

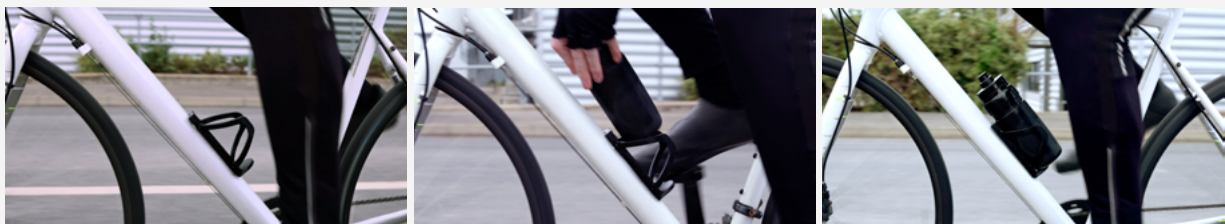
Industrial End-Use Parts

Consumer Product Parts



"Bicycle Bottle Cage / Holder"

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- Remix by An2



Durable DL902 Plant-Based is an ABS-like engineering resin formulated with 52% bio-based raw materials for stereolithography (SLA) and LCD 3D printing. Designed for the Photocentric LC Magna and LC Titan platforms, it delivers a combination of toughness, impact resistance and flexibility for functional prototypes, production tooling and durable end-use components. This technical data sheet provides the mechanical properties, processing parameters and performance characteristics of DL902.

**Compatible:**  
LC Magna, LC Titan

**Colour**  
Black



**Available:**  
5kg bottles



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# Key Features



## Durability Where it Matters

Durable functional resin balancing strength, stiffness, and flexibility for demanding applications.



## Stable Under Heat and Stress

Heat-resistant to 73°C with excellent structural stability and dimensional accuracy.



## Tough and Flexible Performance

37% elongation provides ABS-like toughness, flexibility, and crack resistance.



## Reliable for End-Use Applications

Low water absorption ensures stable long-term mechanical performance in demanding environments.



## 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   |

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

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



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 $\leq 60^\circ$   |
| Minimum unsupported wall thickness | Unsupported walls with a thickness of 2.0 mm or greater can be printed at the full build height.<br>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.