Photocentric

Technical Datasheet

Magna Durable

Daylight Resin

Magna Durable

Tensile Modulus (Low – High)

Impact Strength (Low – High)

Compatible Printers

Liquid Crystal
MAGNA

Colour

Black

Available in
5kg bottle

Photocentric's Magna Durable formulation is ideal for 3D printing functional parts that are durable and long-lasting, with high impact strength that can also bend without breaking. Printed parts are able to flex under strain and return to their original form.

Optimised for

- Jigs and fixtures
- Cover-plates and enclosures
- Suitable for end-use parts

Revision 5
21/08/2025

Unique features

Smooth surface finish

Tough, durable, and long lasting

High definition

Magna Durable Properties

Tensile Properties		
Tensile Modulus *	1570 MPa	ASTM D638
Ultimate Tensile Strength *	42 MPa	ASTM D638
Elongation at break *	30%	ASTM D638
Flexural Properties		
Flexural Modulus *	1460 MPa	ASTM D790
Flexural Strength *	52 MPa	ASTM D790
Impact Properties		
Impact Strength Notched Izod *	91 J/m	ASTM D256
General Properties		
Shore Hardness *	60 Shore D	ASTM D2240
Heat Deflection Temperature	45°C	ASTM D648
Water Absorption (Short Term)	1%	ASTM D570
Viscosity	1200 cPs	At 25°C Brookfield spindle 3
Density	1.09 g/cm3	
Storage	10<T>50°C	
Biocompatibility		
Cytotoxicity*	Passed	ISO 10993-5

* Mechanical properties stated based on fully cured material.

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

Pre-Print Instructions

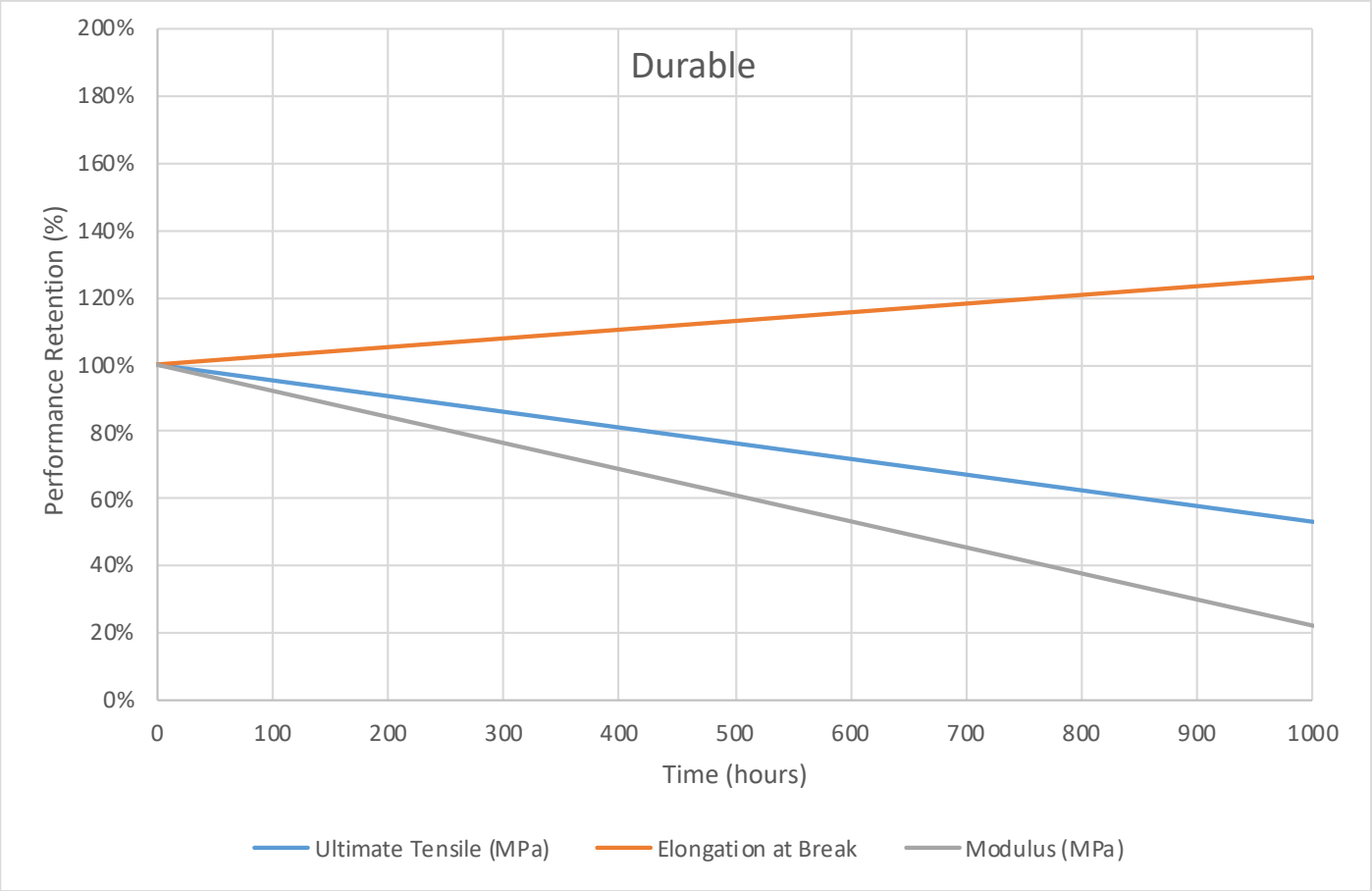
1. To print with Photocentric Liquid Crystal Magna, choose “Magna Durable - Black” and the desired layer thickness when preparing your print file in Photocentric Studio.
2. Heat the resin to 30°C in the bottle.
3. Shake the resin bottle for 2 minutes before pouring into the resin vat.

Post-Print Instructions

1. Parts can be washed in 15 minutes using Photocentric Resin Cleaner or alternatively, 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 4 hours at 60°C or until parts are fully cured. It can vary from 4-8 hours depending on dimensions of the parts.
5. Remove the platform from the Cure L2 and allow it cool to room temperature. Remove the printed parts with the supplied scraper or the soft spatula.

Magna Durable Aging

Specific UV ageing testing was externally performed on Photocentric Magna Durable - Black Resin. Mechanical properties including Tensile Modulus, Tensile Strength at Break and Elongation at Break were evaluated after 1000 hours of exposure and compared against a zero-hour control.*



*All mechanical testing was carried out under ASTM D412 (Type C) for flexible/elastomeric materials, and ASTM D638 (Type IV) for rigid/durable materials.

Photocentric

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