



Technical Datasheet

Durable DL110H

 Daylight Resin



Durable DL110H

Tensile Modulus (Low – High)



Impact Strength (Low – High)



Compatible Printers



Liquid Crystal

MAGNA

Colour



Black



Translucent

Available in
5kg bottle

Photocentric's Durable range is the most popular material among Photocentric's functional materials. They can handle impact, compression, bending and stress fatigue without breaking or deforming.

Optimised for

- Jigs and fixtures requiring minimal deflection at elevated temperature such as drills holders and air intakes
- Cover-plates and enclosures like automotive and motorsport interiors
- Fastenings, tools & couplings
- Strong and stiff prototypes

Unique features



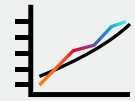
Heat deflection temperature 80 °C



High impact strength



Tough, durable, and long lasting



Simulating the strength and stiffness of ABS



High definition and can hold fine details



Smooth surface finish



Print at 350 µm layer thickness (Translucent only)



Durable DL110H Properties

Tensile Properties	Translucent	Black	Test Method
Tensile Modulus *	2240 MPa	2100 MPa	ASTM D638
Ultimate Tensile Strength *	52 MPa	54 MPa	ASTM D638
Elongation at break *	26%	28%	ASTM D638
Flexural Properties			
Flexural Modulus *	2080 MPa	1950 MPa	ASTM D790
Flexural Strength *	81 MPa	78 MPa	ASTM D790
Impact Properties			
Impact Strength Notched Izod *	150 J/m	110 J/m	ASTM D256
General Properties			
Hardness *	86 Shore D	86 Shore D	ASTM D2240
Heat Deflection Temperature	80 °C	75°C	ASTM D648
Water Absorption (Short Term)	0.66%	0.62%	1 x 1 x 1 cm ³ cube
Viscosity	480 cPs	480 cPs	Brookfield Spindle 3
Density	1.14 g/cm ³	1.14 g/cm ³	
Storage	10<T>50°C	10<T>50°C	

Translucent material cured for 2 hours in Cure L, Black material cured for 4 hours in the CureL, as outlined in Post-Print Instructions



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 'Durable DL110H (Black) or 'Durable DL110H (Translucent) 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.



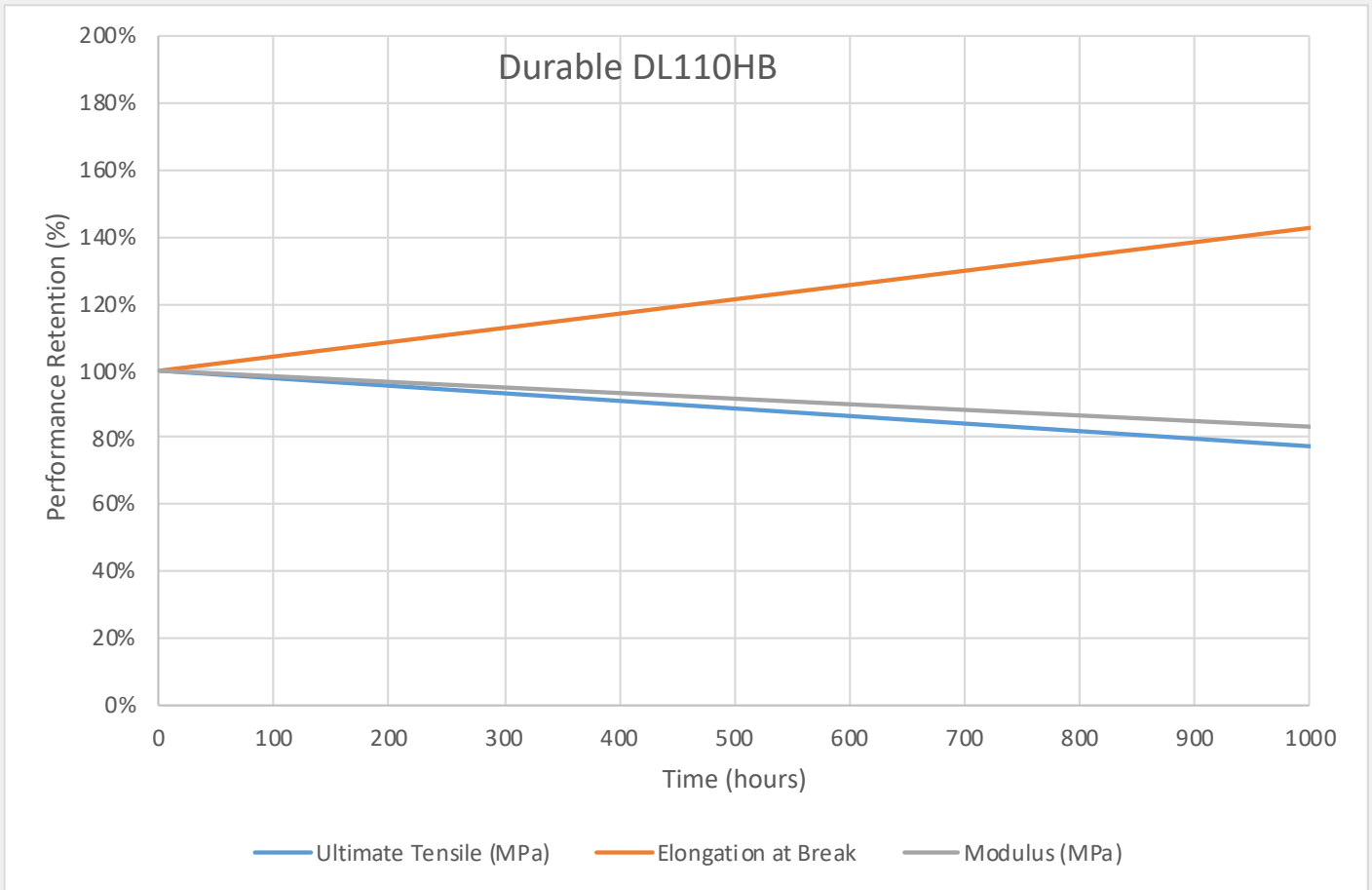
Post-Print Instructions

1. Parts can be washed in 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 for Durable DL110HB.
 - A minimum of 2 hours at 60°C for Durable DL110HTR.
5. For DL110HB & DL110HTR- Remove the platform from the Cure L2 and immediately submerge in cold water for thermal shocking. Parts can be removed from the platform with minimal effort.



Durable DL110H Black Aging

Specific UV ageing testing was externally performed on Photocentric Durable DL110H (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.