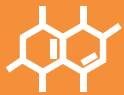




Technical Datasheet

Durable DL110H



Daylight Resin

Photocentric

Durable DL110H

Tensile Modulus (Low – High)



Impact Strength (Low – High)



Compatible Printers



Liquid Crystal
MAGNA

Colour



Black



Translucent

Available in
5kg bottle



Photocentric's DL110H resin 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



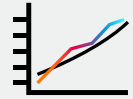
Heat deflection temperature up to 80°C



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 up to 350 µm layer thickness



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 (@ 0.45 MPa)	80°C	75°C	ASTM D648
Water Absorption (Short Term)	0.66%	0.62%	1 x 1 x 1 cm cube
Viscosity	480 cPs	480 cPs	Brookfield Spindle 3
Liquid 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 L2, Black material cured for 4 hours in the Cure L2, 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

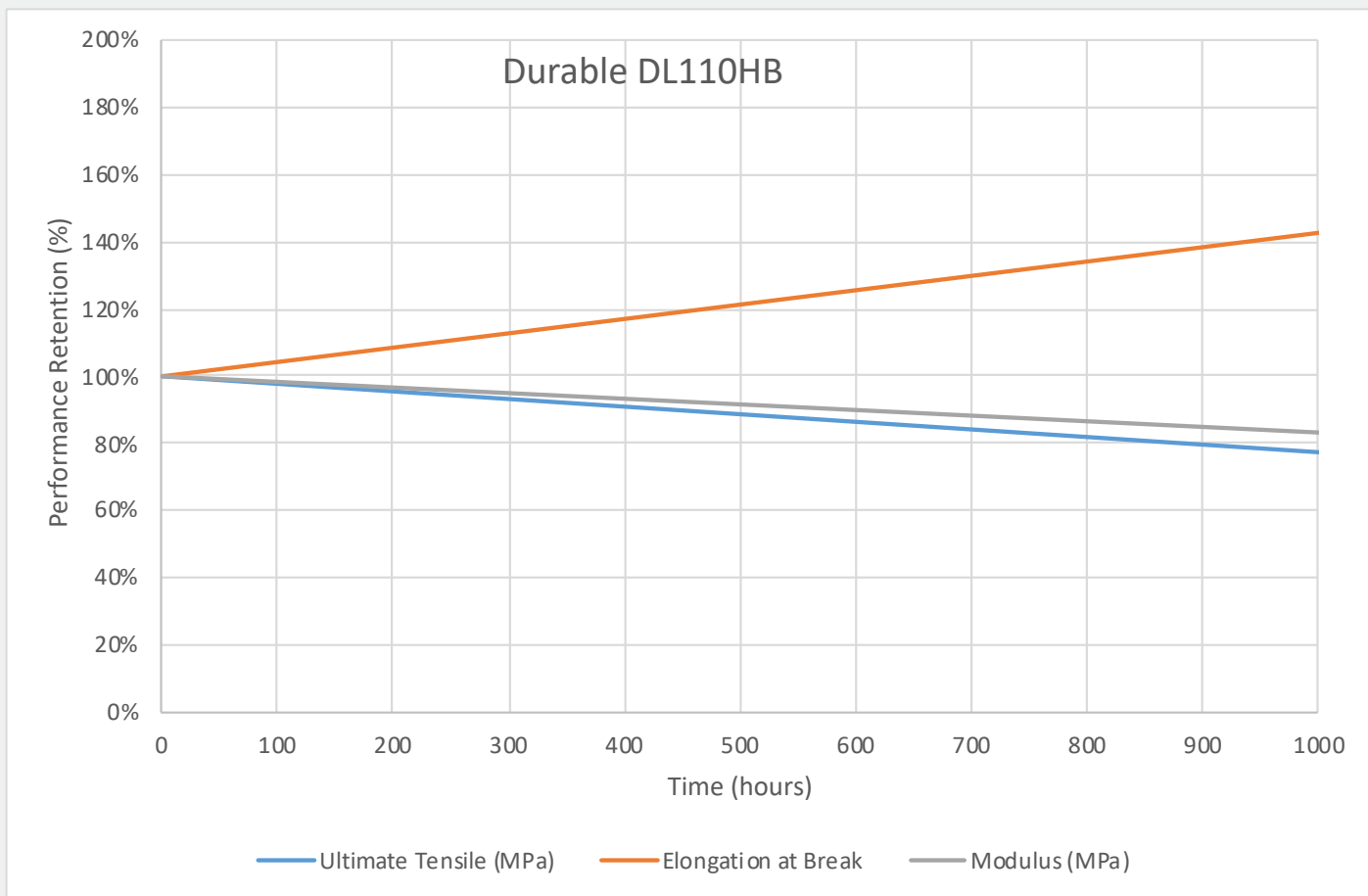
1. Parts can be washed in 15 minutes using Photocentric Resin Cleaner or alternatively, in 10 minutes using Photocentric Resin Cleaner 30.
2. Once washed, rinse with warm water for 2 minutes
3. Dry with compressed air to remove any remaining water. Or alternatively, leave to air-dry.
4. Place the platform into the Photocentric Cure L2 for
 - A minimum of 4 hours at 60°C for Durable DL110H - Black.
 - A minimum of 2 hours at 60°C for Durable DL110H - Translucent.
5. Parts printed on the platform can be thermally shocked from the platform by submerging it in cold water immediately after the cure. For parts printed on supports they are most easily removed from the supports while still warm.



Durable DL110H Black Ageing

Specific UV ageing testing in accordance with 'ISO 4892 Part2 Method A Cycle 1 for a duration of 1000 hrs' 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.