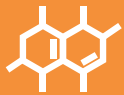




Technical Datasheet

Durable DL110H



Daylight Resin

Photocentric

Durable DL110H

Tensile Modulus (Low – High)



Impact Strength (Low – High)



Compatible Printers



Liquid Crystal
MAGNA

Available in
5kg bottle

Colour



Black



White



Smoky Quartz
Translucent



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



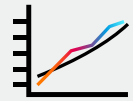
Heat deflection temperature 80 °C



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

Tensile Modulus *	2100 MPa	ASTM D638
Ultimate Tensile Strength *	60 MPa	ASTM D638
Elongation at break *	14%	ASTM D638

Flexural Properties

Flexural Modulus *	2080 MPa	ASTM D790
Flexural Strength *	81 MPa	ASTM D790

Impact Properties

Impact Strength Notched Izod *	110 J/m	ASTM D256
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General Properties

Hardness *	85 Shore D	ASTM D2240
Heat Deflection Temperature	80 °C	ASTM D648
Water Absorption (Short Term)	1.06%	ASTM D570
Viscosity	480 cPs	At 25°C Brookfield spindle 3
Density	1.14 g/cm ³	
Storage	10<T>50°C	

* 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 'Durable DL110HB' or 'Durable DL110HW' or 'Durable DL110HTR' at desired layer thickness when preparing your print file in Photocentric Studio.
2. For Durable DL110HW, it is recommended to print models which do not take longer than 12hrs to print at 100 µm layer thickness or build height no greater than 150mm at any desired layer thickness.
3. Heat the resin to 30°C in the bottle.
4. Shake the resin bottle for 2 minutes before pouring into the resin vat.



Post-Print Instructions

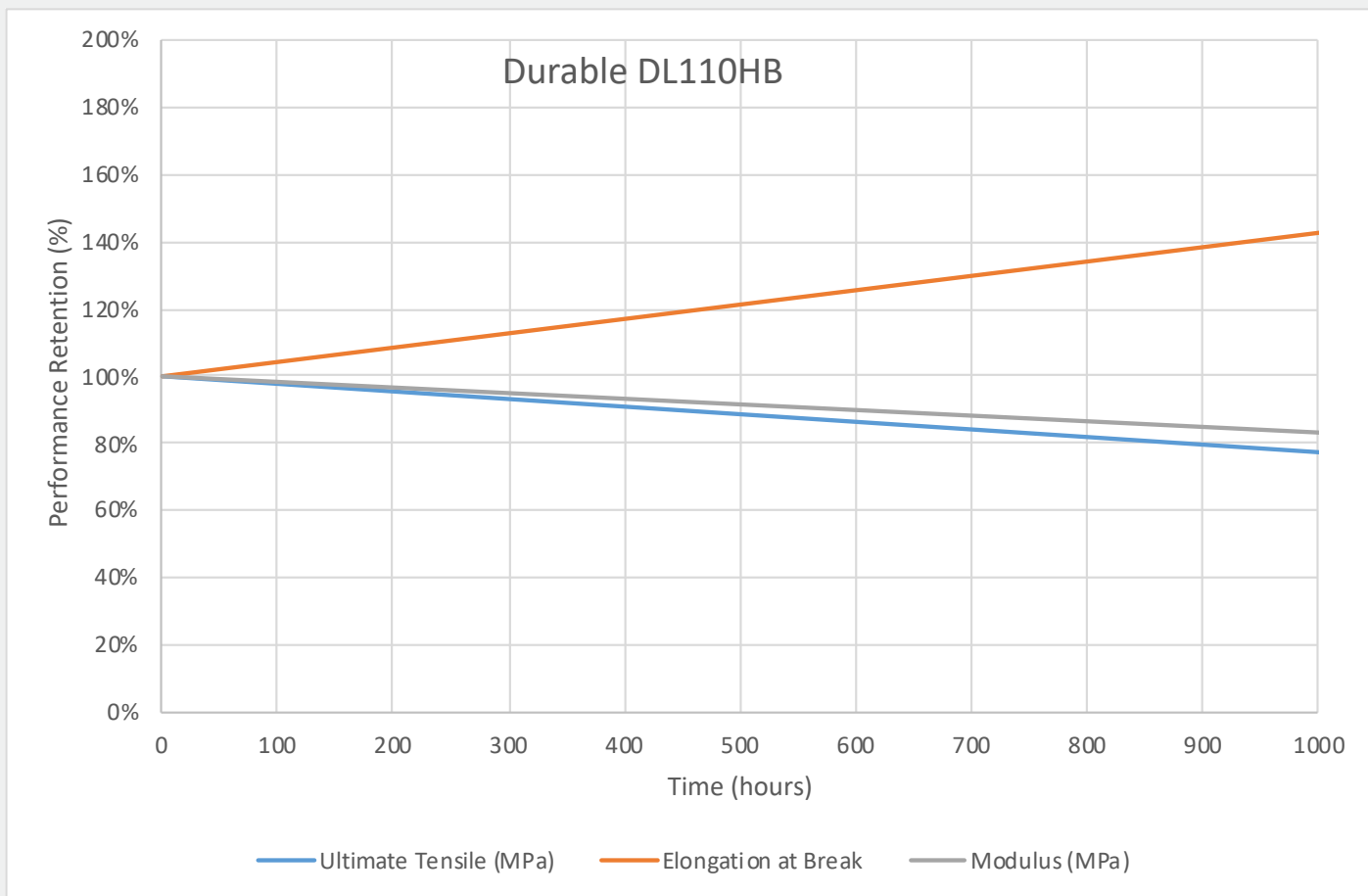
1. Parts can be washed in 15 minutes using Photocentric Resin Cleaner or alternatively, in 10 minutes using Photocentric Resin Cleaner 30.
2. Once washed, rinse with warm water for 2 minutes
3. Dry with compressed air to remove any remaining water. Or alternatively, leave to air-dry.
4. Place the platform into the Photocentric Cure L2 for
 - A minimum of 3 hours at 60°C for Durable DL110HW
 - 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.
6. For DL110HW- 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.



Durable DL110HB Aging

Specific UV ageing testing was externally performed on Photocentric Durable DL110HB 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.