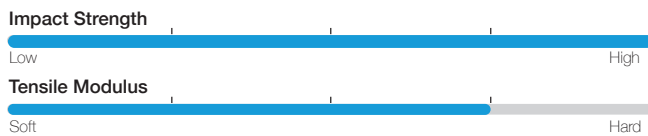




Durable DL110H



## Properties



## Compatible Printers



## Colours

- Black- B
- White- W
- Amber- TR

Available in 5kg bottles

## Introduction

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.

## Best Used 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

## Processing Instructions

- 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.
- Heat the resin to 30°C in the bottle.
- Shake the resin bottle for 2 minutes before pouring into the resin vat.

## Post Processing

- Parts can be washed in 15 minutes using Photocentric Resin Cleaner or alternatively, in 10 minutes using Photocentric Resin Cleaner 30.
- Once washed, rinse with warm water for 2 minutes
- Dry with compressed air to remove any remaining water. Or alternatively, leave to air-dry.
- 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.
- 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.
- 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.

## 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/m2 | ISO 180 |
|--------------------------------|----------|---------|

### 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/cm3 |                              |
| Storage                       | 10<T>50°C  |                              |

\* Mechanical properties stated based on fully cured material.