Technical Datasheet

Magna Duramax

460nm

Photocentric

Optimised for:

- Jigs and fixtures requiring minimal deflections
- Cover-plates and enclosures
- Fastenings, tools & couplings
- Suitable for end-use parts

Bike Saddle

Photocentric's Magna Duramax formulation has been created for manufacturing functional parts that are durable and long lasting with high impact strength. Parts are stiff but can flex under strain, and quickly returning to their original form.

Compatible:	**Colour**	**Avaliable:**
LC Magna, LC Titan	Black	5kg bottles

MADE IN THE UK

Key Features

Smooth surface finish

Tough, durable, and long lasting

Exhibits intricate details

High strength and stiffness

Magna Duramax Properties

Tensile Properties*		
Tensile Modulus	1760 MPa	ASTM D638
Ultimate Tensile Strength	50 MPa	ASTM D638
Elongation at break	19%	ASTM D638
Flexural Properties*		
Flexural Modulus	1600 MPa	ASTM D790
Flexural Strength	70 MPa	ASTM D790
Impact Properties*		
Impact Strength Notched Izod	51 J/m	ASTM D256
Impact Strength Notched Izod	5.4 kJ/m2	ISO 180
General Properties*		
Shore Hardness	70 Shore D	ASTM D2240
Heat Deflection Temperature	60°C	ASTM D648
Water Absorption (Short Term)	1.4%	ASTM D570

* Mechanical properties stated based on fully cured material.

Liquid Properties	Value	Method
Viscosity	395 cPs	At 25°C Brookfield spindle 3
Density	1.11 g/cm3	
Storage	10<T>50°C	

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

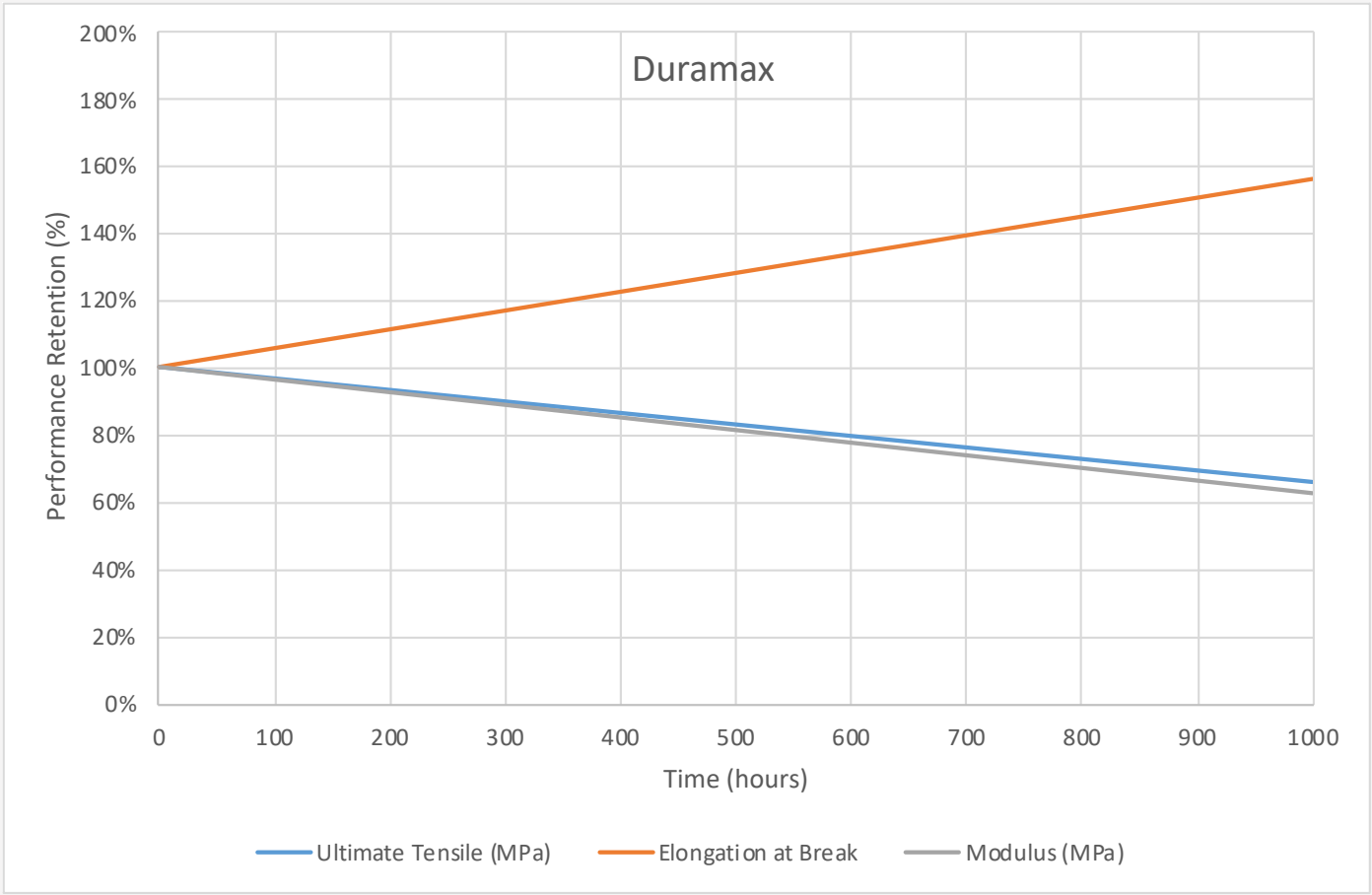
1. To print with Photocentric Liquid Crystal Magna, choose Magna Duramax - Black and the desired layer thickness when preparing your print file in Photocentric Studio.
2. Heat the resin to 30°C in the bottle.
3. Shake the resin bottle for 2 minutes before pouring into the resin vat.

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 orthe soft spatula.

Magna Duramax Aging

Specific UV ageing testing was externally performed on Photocentric Magna Duramax - 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.