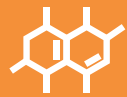




Technical Datasheet

HighTemp DL400



Daylight Resin

Photocentric



HighTemp DL400

Tensile Modulus (Low – High)



Temperature Resistance (Low – High)



Compatible Printers



Liquid Crystal
MAGNA

Colour



Amber

Available in
5kg bottle



Full size motorcycle fuel tank

Photocentric's HighTemp DL400 is the first Photocentric high temperature resistant resin possessing superior properties of both strength and stiffness. It can handle impact, compression, fatigue, high temperatures and moisture without bending or deforming, able to print with an impressive layer thickness of 350µm.

Optimised for:

- | | |
|--|--|
| <input type="radio"/> Hot fluid and gas manifolds | <input type="radio"/> Moulds and inserts |
| <input type="radio"/> Heat resistant housings and fixtures | <input type="radio"/> Outdoor applications |

Unique features:



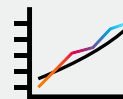
Temperature resistant
(HDT 230 °C)



Excellent long-lasting performance under heat and stress



Print at 350 µm layer thickness



Simulating the strength and stiffness of glass filled Nylon 6



Minimal shrinkage



Dry and smooth surface finish and ability to print fine details



HighTemp DL400 Properties

Tensile Properties

| | | |
|-----------------------------|----------|-----------|
| Tensile Modulus * | 4000 MPa | ASTM D638 |
| Ultimate Tensile Strength * | 80 MPa | ASTM D638 |
| Elongation at break * | 4% | ASTM D638 |

Flexural Properties

| | | |
|---------------------|----------|-----------|
| Flexural Modulus * | 3300 MPa | ASTM D790 |
| Flexural Strength * | 109 MPa | ASTM D790 |

Impact Properties

| | | |
|--------------------------------|-----------------------|-----------|
| Impact Strength Notched Izod * | 15.6 J/m | ASTM D256 |
| Impact Strength Notched Izod * | 3.1 kJ/m ² | ISO 180 |

General Properties

| | | |
|-------------------------------|------------------------|------------------------------|
| Hardness * | 95 Shore D | ASTM D2240 |
| Heat Deflection Temperature * | 230 °C | ASTM D648 (0.455 MPa) |
| Water Absorption (Short Term) | 0.35% | ASTM D570 |
| Viscosity | 650 cPs | At 25°C Brookfield spindle 3 |
| Density | 1.10 g/cm ³ | |
| Storage | 10<T>50°C | |

Biocompatibility

| | | |
|---------------|--------|-------------|
| Cytotoxicity* | Passed | ISO 10993-5 |
|---------------|--------|-------------|

*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 'HighTemp DL400' and the desired layer thickness when preparing your print file in Photocentric Studio.
2. Heat the resin to 60°C for 5 hours or until the resin is fully liquified in the bottle. Failure to do so prior to printing will result in the resin crystalizing, leading to print failures.
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 2 hours at 60°C or until parts are fully cured (4 hours maximum).
5. 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. Draining and cleaning the vat is highly recommended after print job completion as the ambient temperature may drop below 23 °C resin crystallization temperature.