



Technical Datasheet

Magna Dental Model

 Daylight Resin

Photocentric

 Magna Dental Model

Accuracy (Low – High)



Shore Hardness (Low – High)



Compatible Printers



Liquid Crystal
MAGNA

Colour

 Beige

Available in
5kg bottles



Magna Platform pictured shows 48 x Aligner Models

Photocentric Magna Dental Model Beige has been specially created for 3D printing highly detailed and accurate dental models. It provides outstanding accuracy with at least 90% of scanned models within $\pm 100\mu\text{m}$ tolerance, perfect for Aligner Dental Model production. Using Magna Dental Model Beige ensures a dry surface finish, accurate detail and great mechanical stiffness, shorter print and post process cycles with a high Shore hardness of 84D.

Optimised for:

- Orthodontic models for clear aligner manufacture
- Thermoforming
- Study, opposing and denture base models

Unique features:



Easy to print and post process



High accuracy



High stiffness and hardness



Magna Dental Model Properties

Tensile Properties

Tensile Modulus *	2750 MPa	ASTM D638
Ultimate Tensile Strength *	56 MPa	ASTM D638
Elongation at break *	2.7%	ASTM D638

Flexural Properties

Flexural Modulus *	2570 MPa	ASTM D790
Flexural Strength *	84 MPa	ASTM D790

Impact Properties

Impact Strength Notched Izod *	19.5 J/m	ASTM D256
Impact Strength Notched Izod *	2.5 kJ/m ²	ISO 180

General Properties

Shore Hardness *	84 Shore D	ASTM D2240
Water Absorption (Short Term)	0.13%	ASTM D570
Viscosity	150 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 'Dental Model Beige' 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 60 minutes at 60°C or until parts are fully cured.
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. It is recommended to clean the resin vat after each print job as pigments may settle.



Technical Datasheet

Magna Dental Model

 Daylight Resin

Photocentric



Magna Dental Model

Accuracy (Low – High)



Shore Hardness (Low – High)



Compatible Printers



Liquid Crystal
MAGNA

Colour



White

Available in
5kg bottles



Magna Platform pictured shows 48 x Aligner Models

Photocentric Magna Dental Model White has been specially created for 3D printing highly detailed and accurate dental models. It provides outstanding accuracy and minimal shrinkage with at least 80% of scanned models within $\pm 100\mu\text{m}$ tolerance, perfect for Aligner Dental Model production. Using Magna Dental Model White ensures a dry surface finish, accurate details, and great mechanical stiffness with a high Shore hardness rating for 3D printed parts.

Optimised for:

- Orthodontic models for clear aligner manufacture
- Thermoforming
- Study, opposing and denture base models

Unique features:



Minimal shrinkage of 0.5%



High accuracy



High stiffness and hardness



Magna Dental Model Properties

Tensile Properties

Tensile Modulus *	3020 MPa	ASTM D638
Ultimate Tensile Strength *	63 MPa	ASTM D638
Elongation at break *	4.3%	ASTM D638

Flexural Properties

Flexural Modulus *	2200 MPa	ASTM D790
Flexural Strength *	95 MPa	ASTM D790

Impact Properties

Impact Strength Notched Izod *	22.7 J/m	ASTM D256
Impact Strength Notched Izod *	3.2 kJ/m ²	ISO 180

General Properties

Shore Hardness *	90 Shore D	ASTM D2240
Heat Deflection Temperature	95°C	ASTM D648
Viscosity	900 cPs	At 25°C Brookfield spindle 3
Density	1.09 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 'Dental Model White' 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 90 minutes at 60°C or until parts are fully cured.
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. It is recommended to clean the resin vat after each print job as pigments may settle.

Photocentric

UK Titan House, 20 Titan Drive, Peterborough, PE1 5XN email: info@photocentric.co.uk

USA Avondale 107 - Building 'A' 855 N. 107th Ave., Suite A110, Avondale, Arizona 85323 email: info@photocentricusa.com

www.photocentricgroup.com

