DMR III

DMR III is a UV-cured resin intended for 3D printing dental appliances, such as prosthodontics and orthodontics application models.

DMR III is an orange-red resin that can be used for the fabrication of 3D dental models. Excelling with high precision, DMR III can restore the details of the margin and occlusal surface of dental models and produce precise fit dental prosthetics. DMR III has low water absorption, shrinkage rate, and deformation rate, and maintains dryness and strength even under long time. DMR III delivers both precision and stability.

DMR III

High accuracy

Stability

Low deformation

Mechanical properties

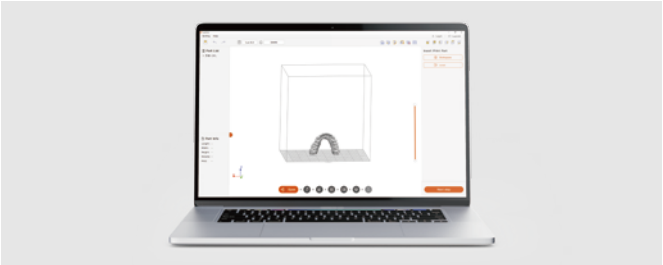
	STANDARD	RESULT
Flexural strength	ASTM FD790	70 MPa
Flexural modulus	ASTM FD790	1948 MPa
Elongation of break	ASTM D638	6.76%
IZOD impact (23°C)	ASTM D256	26.9 J/m

	STANDARD	RESULT
Hardness shore D	ASTM D2240	88 D
Viscosity (25°C)	ASTM D2196	932 cps
Water Sorption	ASTM D570	14 days 1.95%
		24hr 0.7%

Process

01 Software

LuxFlow is a user-friendly software. After importing CAD files designed by 3Shape and EXOCAD into LuxFlow, users can easily produce their desired dental model arrangement. In addition, LuxFlow can automatically generate support and layout, making the whole operation more convenient.



02 Printing

he highly efficient iLux series printers enable fast printing speeds. Up to 8 dental molds can be placed on the forming table horizontally each print. This can be increased to 21 dental models with vertical print, further improving overall productivity.

03 Washing

It only takes 2-6 minutes for washing, effectively reducing IPA consumption. A sealing gasket is added to the bottom of the iLuxWash tank to seal the internal liquid and avoid solvent evaporation.

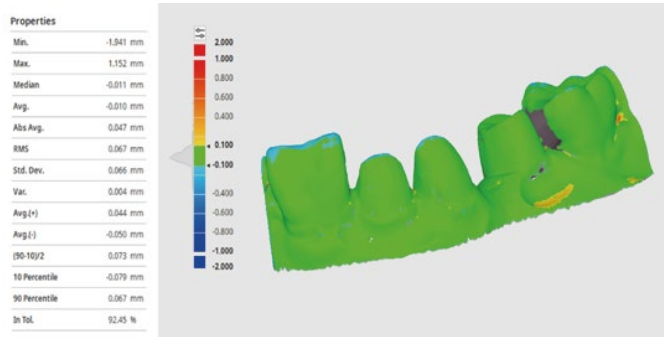
04 Curing

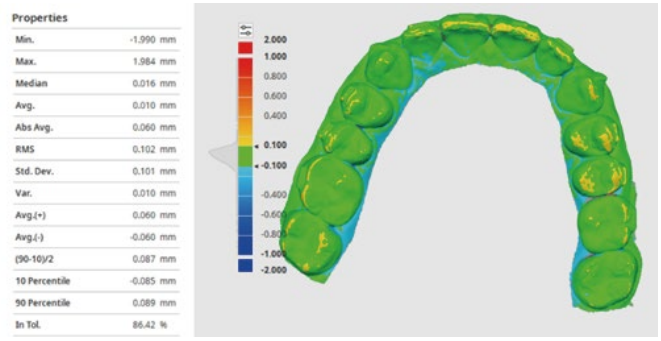
Cure both front and back for 15 minutes at a temperature of 60 degrees Celsius. iLuxCure offers a maximum output of 144W with a fast curing speed.

05 Finish

Ready for use

DMR III 30 days after production





1/2 arch

Precuring	Cure in water	5days	10days	30days	Mean ± sd
96.4%	95.7%	95.4%	94.3%	92.4%	94.7±1.3%

full arch

Precuring	Cure in water	5days	10days	30days	Mean ± sd
96.0%	95.0%	93.8%	92.1%	86.4%	92.9±3.1%

* Result is done by LuxCreo internal testing. The testing results will vary based on scanning machine, printing configuration and post-processing of the printed parts.

Conclusion

30-day aging test confirmed excellent dimensional stability of DMR III. The data shows that the scanning accuracy of DMR III is maintained at over 85% for both half and full dental arches, which can provide dental offices and dental laboratories with the most stable and accurate dental model making plan.

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