Material Information

Precision Model Resin

Introduction
Formlabs Precision Model Resin is a high-accuracy dental 3D printing material designed to produce restorative models with exceptional dimensional fidelity and superior surface detail. Its matte, opaque beige finish mimics gypsum for easy visualization of fine features.

Advantages
Precision Model Resin delivers great accuracy and consistency for dental model production, enabling reliable fit verification and margin inspection. The gypsum-like appearance enhances the visibility of margins and occlusal anatomy.

Disadvantages
It is not suitable for functional intraoral devices or load-bearing applications. Its color and opacity are optimized for visual inspection rather than aesthetic presentation in non-dental contexts.

Tolerance
±200µm or 0.2%

Color
Warm Beige

Recommendation
Best suited for dental laboratories and clinics producing restorative, orthodontic, and diagnostic models that require precise margins, accurate contacts, and rapid turnaround.

Material Specifications			
Property	Method	Green	Post-Cured

Tensile Strength	ASTM D638-14	44MPa	50MPa
Tensile Modulus	ASTM D638-14	2.0GPa	2.2GPa
Elongation at Break	ASTM D638-14	11%	8.60%
Flexural Strength	ASTM D790-15	68MPa	87MPa
Flexural Modulus	ASTM D790-15	1.7GPa	2.3GPa
Notched Izod	ASTM D256-10	28J/m	32J/m
Unnotched Izod	ASTM D4812-11	440J/m	262J/m
Heat Deflection Temp. (1.8MPa)	ASTM D648-16	45.1°C	46.3°C
Heat Deflection Temp. (0.45MPa)	ASTM D648-16	51.7°C	53.5°C
Thermal Expansion	ASTM E813-13	80.2μm/m/°C	81.1μm/m/°C

Attention

As with all photopolymer resins, prolonged UV exposure may cause a gradual color change over time.

Applications

3DSPRO finds people using Precision Model Resin in the following industries and applications:

Restorative dentistry:
Crown and bridge models, veneer preparation models, and implant-supported restoration models.

Orthodontics:
Clear aligner models, retainer models, and orthodontic appliance fit models.

Diagnostic and study models:
Full-arch diagnostic casts, occlusal analysis models, and treatment planning models.

Implantology:
Surgical guide fit verification models, implant planning models, and abutment seating models.

Educational and demonstration:
Training models for dental students, patient education models, and case presentation models.