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Castable resin for Dental Technical Data Sheet

The resin is developed for dental casting; very little burning ash and residues, good casting performance; high precision, printing details are clearly visible; low shrinkage performance, the printed model is not easy to deform.

Material Status	Mass Production
Characteristics	• Ash Free • High precision
Applications	• Dentistry
Appearance	• Multiple Colors
Form	• Resins
Processing method	• (surface exposure molding) LCD

	Testing method	Typical value	
Physical Properties			
Density	GB/T 4472	1.05-1.12	g/cm^3
Viscosity	GB/T 22235	100-150	mPa•s
Hardness	ASTM D2240	80	Shore D
Mechanical Properties			
Tensile Strength	ASTM D638	42-62	MPa
Elongation at Break	ASTM D638	11-20	%
Flexural Strength	ASTM D790	49-58	MPa
IZOD Impact Strength	ASTM D638	44-49	J/m
Thermal Properties			
Heat distortion Temperature	GB/T 1634	N/A	°C

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Recommended printing parameters

Settings	Machine Type		
	Low Light Intensity	Medium Light Intensity	High Light Intensity (Monochrome LCDScreen)
Representative Machine	AnyCubic Photon	eSUN LCD 3.0 Nova Bene 4 Creality LD-002R	Anycubic MONO X ELEGOO Saturn Phrozen Sonic Mini
Exposure Time/s	26-34	15-20	Not recommended
Bottom Layer Count	3-5		
Bottom Exposure Time	130-200	80-120	Not recommended
Lifting Distance/mm	5.5&6-inch screen：5-6or Higher	8.9&13.3-inch screen：8-12 or Higher	
Lift Speed/mm•min^{-1}	90-150	90-120	Not recommended
Retract Speed/mm•min^{-1}	150-200		

1. The above parameters are for reference only. The performance of the cured material will be affected by factors such as equipment, environment, parameter settings, post-processing methods, detection methods, etc., which will cause big differences. Please contact us if necessary;2. Shake the resin well before use; please recycle the resin in time after printing; avoid prolonged soaking of the molded parts in the cleaning agent;3. It is not recommended to add other ingredients or mix them to the resin to avoid molding failure or other problems;4. The resin should be stored in a cool, dark place, and sealed with an opaque container;5. The photopolymer resin is made of chemicals, which has a certain odor and skin irritation. Pay attention to protection during transportation and use. If the resin accidentally touches your skin or eyes, please rinse with plenty of water, and the skin can be cleaned with detergent, decontamination powder, etc.; if the allergic reaction is severe or even enters the mouth or nasal cavity, please seek medical attention immediately;6. The model should be printed at a room temperature of 25-35 degrees. IF it is winter, it is recommended to turn on the air conditioner for printing.
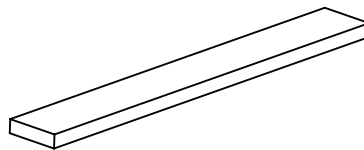
Matters needing attention

1. Shake well before printing
2. Dental casting resin needs to be fully cured to achieve the best mechanical strength. It is recommended that the surface is cured until it is not sticky.
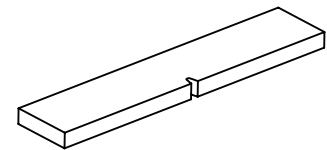
Mechanical Properties
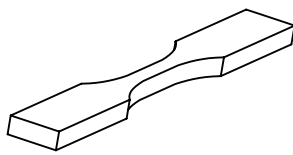
Tensile testing specimen   ASTM D638   Flexural testing specimen   ASTM D790   IZOD Impact Strength   ASTM D638

The physical properties, mechanical properties, and thermal properties of the resin are obtained based on the printing spline test.

Notice

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