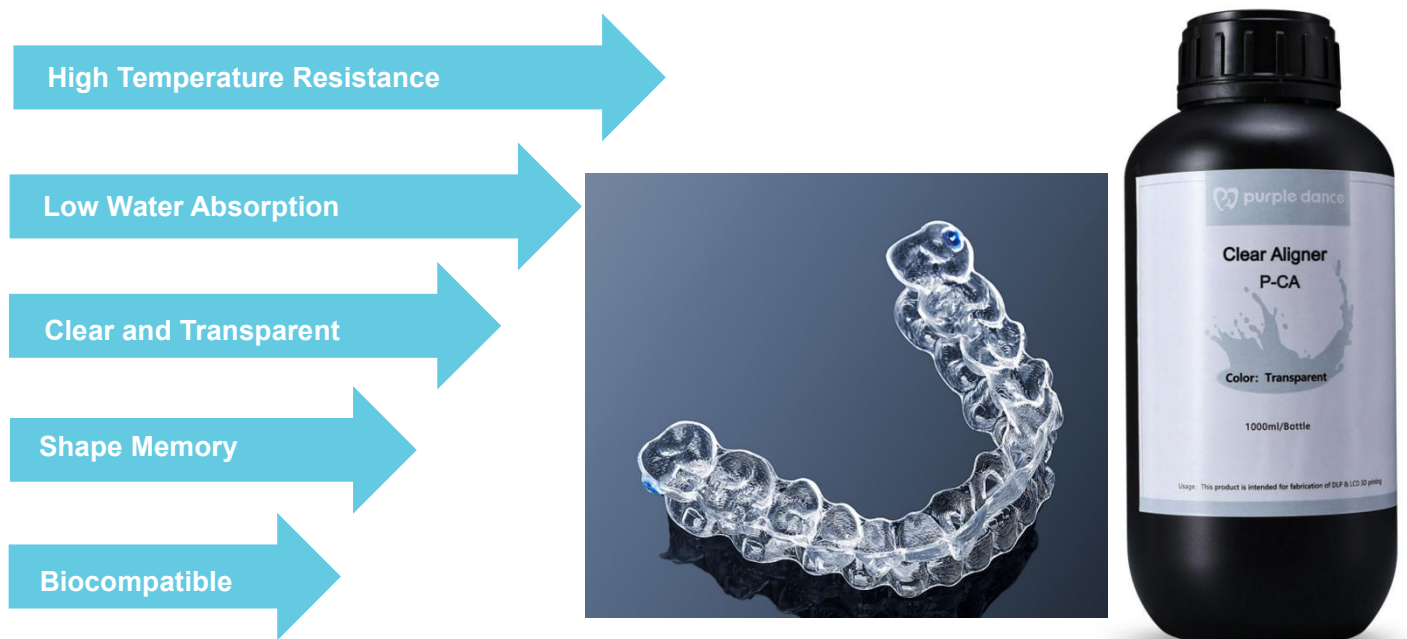




Introducing The Dental Clear Aligner Resin P-CA

The Purple Dance P-CA specially developed for 3D printing of clear aligners and retainers, it can also print high temperature resistant surgical guides and flexible night guards. This resin is compatible with LCD/DLP 3D printers with adjustable printing parameters at 405nm and 385nm wavelengths on the market. This material has a unique shape memory function. Within a specific temperature range (27 °C-100 °C), the retainer printed with this material can return to its normal shape within 1 minute, and can be maintained for 30 minutes at a high temperature of 130 °C, which is very convenient for dentists who are accustomed to using high-temperature sterilization.



Measurement	Value	Test Method
Suggested Wall Thicknesses	0.6mm-0.8mm	-
Hardness , Shore D	65-85	ASTM D 2240
Flexural Strength , Mpa	25-37	ASTM D 790
Flexural Modulus , Mpa	850-1300	ASTM D 790
Tensile Strength , Mpa	30-45	ASTM D 638
Tensile Modulus, Mpa	200-350	ASTM D 638
Heat Deflection Temperature, °C	68-85	ASTM D648 @66PSI
Water Absorption, %	<2%	ASTM D570
Liquid Viscosity, cps (@25°C)	750-1000	ASTM D 2196
Liquid Density, g/cm ³ (@25°C)	1.05-1.15	ASTM D 792
Compatibility	Compatible with LCD/DLP 3D printers with adjustable printing parameters at 405nm and 385nm wavelengths on the market.	

Suggested Printing Setting:

Tips: Please shake well before use. This resin is compatible with LCD/DLP 3D printers with adjustable printing parameters at 405nm and 385nm wavelengths on the market.

3D Printer	Layer Thickness	Base Layer Exposure Time	Normal Layer Exposure Time	Motor Lift Speed
D9K Pro 	0.025-0.1 mm	35-55 s	3.0-6.0 s	60-80 mm/minutes
D8K Pro 	0.025-0.1 mm	35-55 s	3.0-6.0 s	60-80 mm/minutes

Finishing Process :

Step 1, Washing:

Please use anhydrous ethanol or isopropyl alcohol to soak and clean the model for 1 to 6 minutes. You can also put it in a low-frequency ultrasonic cleaner to improve the cleaning efficiency. However, in order to avoid damage to the surface of the model, it is not recommended to use an ultrasonic cleaner with too high a frequency.



Step 2, Drying:

Please use a compressed air gun or hair dryer to dry the model.

Step 3, Remove the Support:

To avoid damage to the model, please remove the support before proceeding to the next step of the curing process. Before post-curing the printed models, please use compressed air to clean again excess resin and support residues. Depending on the power of the UV lamp, the recommended post-curing time is 4 to 8 minutes.



Step 4, Polishing:

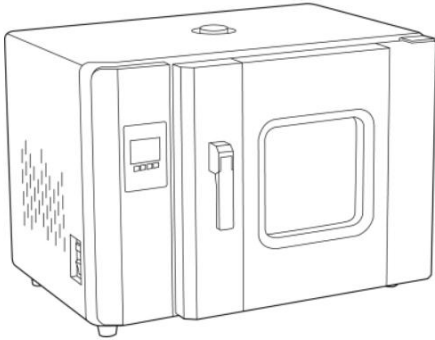
It is recommended to use diamond tools or carbide tools to fine-tune the surface and contours. In order to avoid dimensional deviations, avoid overheating the resin during polishing.



Step 5, Curing:

Irradiate in a 240W 405nm wavelength UV curing box for 15 minutes. UV lamps of different powers should appropriately increase or decrease the exposure time according to actual conditions. You can also put the clear aligner in food-grade glycerin and then put it in a UV curing box for irradiation. This can isolate the oxygen in the air and minimize the yellowing of the clear aligner. Finally you can rinse it with pure water and blow dry the model.

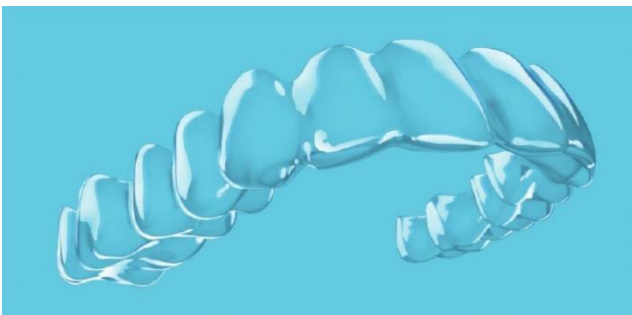
Step 6, To make the clear aligner more resilient, you can bake in an 80°C constant temperature blast oven for one hour:



Storage and Transportation:

Fully cured printed objects must be stored at room temperature and away from strong light sources.

Storage conditions for liquid resin materials: Please store the liquid photosensitive resin in a sealed, light-proof bottle at a temperature of 15°C-28°C.



Waste Disposal Advice:

Solidified separation materials (base plate, support structure) cannot be used again. Solidified materials can be disposed of as domestic waste.

Liquid waste should be collected in special containers and disposed of in accordance with local laws.

First Aid Measures:

If liquid resin accidentally enters eyes or other mucous membranes, please rinse with clean water immediately and seek medical attention immediately. For other precautions, please refer to the MSDS document.

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