

zDental Model Gray V2

A fast-printing resin used for production of high-accuracy models, such as orthodontic models, implant analog models, Diagnostic models. It provides properties including excellent precision, long-term dimensional precision stability, high reliability and easily cleaning , delivering high-quality results on fast-paced timelines of restorative dentistry.

1. Suggested Printing Parameters

| | | |
|----------------------|--------------|---------------|
| For NBEE | | |
| Layer Thickness /mm | 0.1 | |
| Initial Layers | 3 | |
| Transition Layers | 7 | |
| | Normal Layer | Initial Layer |
| Exposure Time /s | 0.7 | 15 |
| Cool Down Time /s | 0.5 | 0.5 |
| Motor Speed / mm/min | 1500 | 1500 |
| Rise Height /mm | 8 | 15 |
| Shrink Internal /mm | 0 | |
| Shrink External /mm | 0 | |
| Offset X | 1.006 | |
| Offset Y | 1.006 | |
| LED Power | 100% | |

2. Properties Data

| Properties | Post-Cured | Method |
|---------------------------------|-------------|---------------|
| Tensile Strength | 23.67 Mpa | ASTM D 638-14 |
| Elongation at Break | 12.42% | ASTM D 638-14 |
| Tensile Modulus | 254.99 Mpa | ASTM D 638-14 |
| Flexural Strength | 39.55 Mpa | ASTM D 790-15 |
| Flexural modulus | 1056.91 Mpa | ASTM D 790-15 |
| Unnotched izod | 173.4 J/m | ASTM-D256 |
| Hardness Shore D | 86 D | |
| Heat Deflection Temp.(1.82 Mpa) | 39.6°C | ASTM D 648-16 |
| Heat Deflection Temp.(0.45 Mpa) | 50.9°C | ASTM D 648-16 |

The information and data stated herein are based upon tests in our lab and are considered to be reliable and accurate. Use by customers should be tested by themself firstly. This information and data are used for reference only, no warranty as a legal basis.

Dental Resin

Tested by NBEE printer, layer thickness is 100 um.

Accuracy results of models tested between zDental Model Gray V2 and a sample from other company.

| Resin Name | Accuracy result (Compared in range of $\pm 100\mu\text{m}$) | | | | | | |
|---------------------------|--|---------------------|----------------------|--------|---------|---------|----------|
| | Green | Post-cured for 5min | Post-cured for 20min | 1 day* | 4 days* | 7 days* | 10 days* |
| zDental Model Gray V2 | 97.25% | 97.65% | 98.81% | 98.85% | 98.49% | 98.60% | 98.89% |
| Sample from other company | 98.40% | 98.58% | 97.56% | 91.17% | 85.59% | 87.24% | 88.22% |

*stored after post-cured for 20min

3. Storage

Stored in dark place where avoid direct sunlight or any kind of UV light, environment temperature is suggested around 5 to 30°C, and environment humidity is less than 45%RH.

4. Precautions

- 1) Before use, shake the resin bottle well for 5-10 minutes to make the resin uniform. After the resin is poured into the resin tank, let stand still for 5 to 10 minutes before start a print job.
- 2) The good using temperature for this resin is 18-28°C. Use the resin away from direct sunlight or any kind of UV light.
- 3) After the model is printed, please take it out in time and wash it with 95% concentration alcohol. Using an ultrasonic cleaner, the cleaning time depends on the size and complexity of the model, but the time should not be too long, otherwise the structural performance of the model will be reduced, what is no more than 2 minutes is suggested.
- 4) After the model is cleaned, immediately blow it dry with an air gun and post cure the model with a UV light, the post-curing time is depended on the curing machine.
- 5) It's not recommended to leave the resin in the resin tank for over 12 hours. For better printing results, please restore the remaining resin in resin bottle. Shake well before next use.
- 6) Wear nitrile rubber gloves and a face mask when using this product. Keep the room ventilated. Swallowing such as eating and drinking is forbidden in the printing place.
- 7) If the user accidentally drops the resin on the skin, please wipe it away and then clean again with water. Use hand sanitizer or soap to assist in washing. If the users still feel uncomfortable, please see a doctor immediately. If the user accidentally splashes the resin in the eyes, flush with plenty of water and seek medical attention immediately. More safety details please refer MSDS of this resin.

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