

## STUDY DENTAL MODEL RESIN

### 1. Product Overview

**STUDY™ Dental Model Resin** is a high-precision **model resin** designed for **3D-printed dental applications**, including diagnostic models, case planning, and orthodontic study casts. Engineered for **dimensional accuracy, smooth surface finish, and durability**, it ensures high-quality results in **MSLA and DLP resin 3D printers**.

### 2. Key Features & Benefits

- ✓ High Precision & Accuracy
- ✓ Smooth Surface Finish
- ✓ Easy to Print & Post-Process
- ✓ Optimised for MSLA & DLP Printers
- ✓ Durable & Hard – Resistant to chipping and breakage

### 3. Applications

- Diagnostic Models & Study Casts
- Orthodontic & Restorative Planning
- Visual Case Presentations
- Prosthetic & Crown Preparation Models
- Patient Demonstrations

### 4. Physical Properties

| Property                  | Value          | Test Method |
|---------------------------|----------------|-------------|
| Appearance                | Opaque Grey    | Visual      |
| Odour                     | 2. Negligible  | VDA 270     |
| Tensile Strength (MPa)    | 47             | ASTM D638   |
| Viscosity @ 25°C cP       | 400-600        | ASTM D2196  |
| Density g/cm <sup>3</sup> | 1.1            | ASTM D792   |
| Hardness (Shore D)        | 75             | ASTM D2240  |
| Flexural Stress (MPa)     | 124            | ASTM D790   |
| Elongation at Break       | 3.0%           | ASTM D638   |
| Heat Deflection Temp      | 55°C @ 0.45MPa | ASTM E1356  |

### 5. Printer Compatibility

- Compatible with MSLA & DLP 3D Printers
- Asiga, SprintRay, Phrozen, Anycubic, Elegoo, and more
- Curing wavelength: 365–405nm UV

### 10. Disclaimer

The information provided in this Technical Data Sheet is based on laboratory testing and intended as a general guideline. Actual results may vary depending on printing conditions, curing methods, and environmental factors. Monocure3D assumes no liability for improper use of this product.

### 6. Printing & Post-Processing Guidelines

#### Printing Parameters

Layer Thickness: 50–100µm  
 Base Layer Exposure: 30 seconds  
 Normal Layer Exposure: 2 seconds  
 Lift Speed: 80 mm/s  
 Lift Height: 10 mm



(Refer to printer settings database)

#### Post-Processing Steps

1. Pre-wash in ResinAway® & brush to remove excess resin
2. Submerge in ResinAway® in Ultrasonic for 5-10 minutes.
2. Dry the Model – Allow to air-dry or use compressed air.
3. Post-Cure – UV cure for 30-60 minutes.
4. Final Finishing – Rinse with Fresh Water.

### 7. Health & Safety Information

- Not approved for intraoral use.
- Use in a well-ventilated area. Avoid skin & eye contact.
- If contact occurs, wash thoroughly with soap and water.
- Refer to SDS (Safety Data Sheet) for complete handling guidelines [www.monocure3d.com.au](http://www.monocure3d.com.au)

### 8. Storage & Handling

- **Storage Temperature:** 10–30°C (Avoid direct sunlight)
- **Shelf Life:** 36 months
- **Handling:** Use recommend red PPE eg. **gloves & safety goggles** when handling liquid resin
- **Disposal:** Follow **local hazardous waste disposal regulations**.

### 9. Ordering Information

- **Available Sizes:** 1L & 5L UV-safe bottles
- **Where to Buy:** Available through Monocure3D resellers
- For technical support or bulk orders, contact:  
[support@monocure3d.com.au](mailto:support@monocure3d.com.au) | [www.monocure3d.com.au](http://www.monocure3d.com.au)