

THERMO HEAT RESISTANT RESIN

1. Product Overview

THERMO™ Heat Resistant Resin is engineered for dental pressure and vacuum forming applications. It delivers superior thermal stability and dimensional precision, ideal for creating accurate and durable dental models. The resin withstands high temperatures during thermoforming processes without warping or cracking. Compatible with both MSLA and DLP 3D printers for consistent, high-quality results.

2. Key Features & Benefits

- ✓ High heat resistance up to 130°C
- ✓ Easy-release surface for thermoformed part removal
- ✓ High precision and dimensional accuracy
- ✓ Durable and stable under pressure and vacuum forming
- ✓ Low shrinkage and smooth surface finish
- ✓ Compatible with MSLA and DLP printers

3. Applications

- Dental pressure and vacuum forming models
- Orthodontic aligner and mouthguard model production
- Thermoforming templates and splint bases
- High-accuracy dental model fabrication

4. Physical Properties

Property	Value	Test Method
Appearance	Solid Almond / Grey	Visual
Odour	1. Low	VDA 270
Tensile Strength (MPa)	47	ASTM D638
Viscosity @ 25°C cP	700	ASTM D2196
Density g/cm³	1.1	ASTM D792
Hardness (Shore D)	84	ASTM D2240
Flexural Stress (MPa)	120	ASTM D790
Elongation at Break	3.0%	ASTM D638
Heat Deflection Temp	130°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: 50–150µm
Base Layer Exposure: 30 seconds
Normal Layer Exposure: 2-3 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. OTTOFLASH G171: 2,000 flashes (recommended)
5. Final Finishing – Rinse with Fresh Water.

7. Health & Safety Information

- Not approved for intraoral use.
- Use in a 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

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 | www.monocure3d.com.au