

1. Product Overview

GUIDE is a transparent, **Class I biocompatible resin** engineered for 3D printing precise surgical guides used in implant dentistry. It delivers **high accuracy, strength, and clarity** for optimal visualisation during guided procedures. The resin is **odourless, tasteless**, and designed for **safe temporary intraoral use**. Once fully post-cured, it withstands autoclave sterilisation **without deformation, warping or cracking**.

Available in **two formulas for both MSLA and DLP** 3D printer systems, ensuring optimal performance and compatibility.

2. Key Features & Benefits

- ✓ Biocompatible (Class I) registered for intraoral use
- ✓ Exceptional clarity and accuracy for guided surgery
- ✓ High-heat resistance, autoclavable after post-curing
- ✓ Odourless and tasteless formulation
- ✓ Strong and dimensionally stable
- ✓ Available in two formulas for both MSLA & DLP Printers
- ✓ UV wavelength range 365–405 nm

3. Applications

- ★ Dental surgical guides for implant placement
- ★ Pilot and sleeve-guided surgical templates
- ★ Endodontic and periodontal guide fabrication
- ★ Chairside and laboratory surgical planning models

4. Physical Properties

Property	Value	Test Method
Appearance	Clear / Transparent	Visual
Viscosity @ 25°C cP	500-700	ASTM D2196
Odour (Range 1-5)	1. Low	VDA 270
Tensile Strength (MPa)	47	ASTM D638
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

i) Printing Parameters

Layer Thickness: 50um
Base Layer Exposure: 30 seconds
Normal Layer Exposure: 2-3 seconds
Lift Speed: 80 mm/s
Lift Height: 10 mm



(Scan for 3D printer settings)

ii) 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.

NB: For full sterilisation procedures, please refer to page 2 of this document.

7. Health & Safety Information

- Biocompatible Class I (not for **permanent** 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

GUIDE BIOCOMPATIBLE RESIN

ARTG: No. 398012

1 Sterilisation Validation Procedures

GUIDE Bio-Compatible Resin is designed for 3D printing medical appliances tailored to individual patients. It is intended exclusively for use in intraoral, guided dental implant procedures performed by qualified dental professionals. Prior to clinical use, all printed guides must be fully post-cured and sterilised using validated steam autoclave procedures. Detailed sterilisation instructions are provided in the section below to ensure patient safety and optimal device performance.

2 Pre-Sterilisation Steps

i) Cleaning

Remove visible contaminants from the surface using alcohol. Ensure that no visible impurities are left and that the surface feels smooth to touch.

ii) Drying

Dry the item, particularly in complex geometries. Compressed air is acceptable for this step.

iii) Inspection

After drying, inspect for damages or cracks. Replace if necessary.

iv) Packaging

Use sterilisation pouches that meet DIN EN ISO 11607/ANSI/AAMI ST79/AAMI TIR12:2010 standards. Follow packaging guidelines from the manufacturer and ensure that the seal is free from defects.



3 Sterilisation Parameters

Steriliser Type: Prevacuum

Pulses: 4

Temperature: 134°C

Full Cycle Time: 4 minutes

Dry Time: 20 minutes

Configuration: Double pouches,
140mm x 330mm &
190mm x 330mm

4 Post-Sterilisation

Allow devices to cool undisturbed. Minimum drying time post sterilisation is 30 minutes; longer may be necessary depending on various

5 Storage

Store the sterilised product at room temperature (18–25°C), in a dry place, within the sterile bag's time limit.

6 Warnings

Single-use device. Do not attempt to reprocess or re-sterilise after use. Re-sterilisation may compromise material integrity and patient safety.

7 Disclaimer

These sterilisation procedures are intended for use by certified dental professionals. Always verify that your autoclave and process meet local regulatory requirements before intraoral use.