

FLEX45A | RUBBER-LIKE RESIN

1. Product Overview

Flex45 is a rubber-like black UV-curable resin formulated for high-performance DLP and LCD 3D printers. With a Shore hardness of 45A, it delivers reliable elasticity, dimensional stability, and excellent rebound properties, even in thin-walled prints.

The cured material has a smooth, dry-touch surface that resists tackiness, improving handling and long-term usability. Its low shrinkage and consistent behaviour during printing make it particularly suited for producing sleeves, hubs, soft-touch grips, gaskets, dampers, and sound-absorbing components, as well as functional rubber prototypes where flexibility and form retention are essential.

2. Key Features & Benefits

- ✓ Finally a 3D printing resin with real rubber properties
- ✓ Ideal for parts requiring a Shore A hardness of 45
- ✓ Optimised layer curing for faster print times
- ✓ Dry-touch finish using nano-dispersed additives
- ✓ Ideal for flexible rubber-like parts and prototypes
- ✓ Compatible with both MSLA and DLP resin 3D printers

3. Applications

- ★ Prototyping soft-touch components and flexible parts
- ★ Creating custom seals, gaskets, and dampeners
- ★ Simulating rubber-like components for product development
- ★ Printing ergonomic grips, handles, and wearable components
- ★ Producing flexible hinges or snap-fit enclosures
- ★ Suitable for use in props, special effects, and artistic models

4. Physical Properties

Property	Value	Test Method
Appearance	Flowing black liquid	Visual
Odour	3. Low-Medium	VDA 270
Tensile Strength (MPa)	1.1	ASTM D638
Viscosity @ 25°C cP	4000–6000 cps	ASTM D2196
Density g/cm³	1.07–1.10	ASTM D792
Hardness (Shore A)	45	ASTM D2240
Flexural Modulus (MPa)	0.93	ASTM D638
Elongation at Break	165.5%	ASTM D638
Tear Strength (kN/m)	1.24 kN/m	ASTM D412

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

Tested with: Phrozen Sonic Mighty 4K / Mini 8K

- Layer Thickness: 50–150µm
Base Layer Exposure: 40 seconds
Normal Layer Exposure: 3-6 seconds
Lift Speed: 40 mm/s
Lift Height: 12 mm
Tip: Avoid unit supports



(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.
3. Dry the Model – Allow to air-dry or use compressed air.
4. Post-Cure – UV cure for 30-60 minutes.
5. Heat-Cure - 100°C for 60 minutes.
6. Final Finishing – Rinse with Fresh Water.

7. Health & Safety Information

- Not for intended for intraoral or direct food contact 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 (Coming Soon)

- **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