

SilSo Replicate 16071

Characterization	High-performance UV-curable polyurethane-acrylate hybrid resin for precision stereolithography (SLA), LCD and DLP additive manufacturing.
Chemical Structure	Polyurethane-acrylate hybrid resin
Appearance	Clear, low-yellow liquid
Ionic character	Nonionic
Operating Wavelength	385-405 nm
Viscosity at 20°C	< 1000 mPa
Volumetric Shrinkage	≤3.5 %
Storage	Store in tightly closed original containers. The recommended storage temperature is between 20–25°C. Protect from UV light, direct sunlight, and heat.

Properties

SilSo Replicate 16071 is a high-performance polyurethane-acrylate hybrid resin developed for demanding SLA applications requiring outstanding dimensional precision and surface quality.

The product offers the following advantages:

- Excellent feature resolution
- Low cure shrinkage
- Outstanding dimensional stability
- Smooth surface finish
- Balanced stiffness and toughness
- High mechanical strength
- Excellent layer adhesion
- Fast curing
- Broad compatibility with 385–405 nm LCD, DLP and SLA printers

Mechanical Properties

Property	Typical Value
Tensile Strength	46–50 MPa
Tensile Modulus	450–750 MPa
Elongation at Break	20–25 %
Flexural Strength	55–85 MPa
Flexural Modulus	700–1200 MPa
Shore Hardness	60–75 D
Impact Strength	≥40 J/m

Printing Performance

Property	Typical Value
Feature Resolution	≤120 μm
Gel Time	≤6 s
Oxygen Inhibition	Low
Warping	None visible
Surface Tack	None after full cure
Water Absorption	≤0.8 %
UV Yellowing	ΔE ≤4

Application Technique

SilSo Replicate 16071 is suitable for:

- SLA printers
- LCD printers
- DLP printers

Recommended wavelength: 385–405 nm

Recommended IPA washing: ≤5 min

Recommended post curing: 405 nm, 30–45 minutes

Typical Applications

- Precision Prototyping
- Functional Engineering Parts
- Dental Models
- Jewelry Models
- Investment Casting Patterns
- Industrial Components

Recommendation for Use

Printing parameters should be optimized according to printer type, exposure intensity, layer thickness and required mechanical performance.

For maximum dimensional accuracy, complete post-curing is recommended after printing.

We reserve the right to modify the product and technical leaflet.

Our department for applied technique is always at your service for further information and advice.

Our technical advice and recommendations given verbally, in writing or by trials are believed to be correct. They are neither binding with regard to possible rights of third parties nor do they exempt you from your task of examining the suitability of our products for the intended use. We cannot accept any responsibility for application and processing methods which are beyond our control.

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