

## TECHNICAL DATA SHEET

MAY 2020

### PRODUCT DESCRIPTION

SureHold's SH-DLP-405 CLEAR Resin is a UV Curable 3D Printing Compound. Specifically formulated for 405nm DLP printing to give excellent precision down to 50 microns.

### TYPICAL APPLICATIONS

SureHold's SH-DLP-405 CLEAR Resin is particularly suitable for 3D printing on DLP type printers. The strength and flexibility of SH-DLP Resin makes it suitable for printing structural and semi-structural parts. SH-DLP Resin is particularly suited for printing of hard earmolds and IE shells.

### TECHNICAL FEATURES

Chemical Type	Acrylic
Viscosity @ 25°C	650-950 cP
Specific Gravity	1.12

### INSTRUCTIONS FOR USE

Minimize exposure to ambient light when transferring SH-DLP Resin to the resin vat as ambient light may initiate some polymerization of resin.

### PERFORMANCE OF CURED MATERIAL

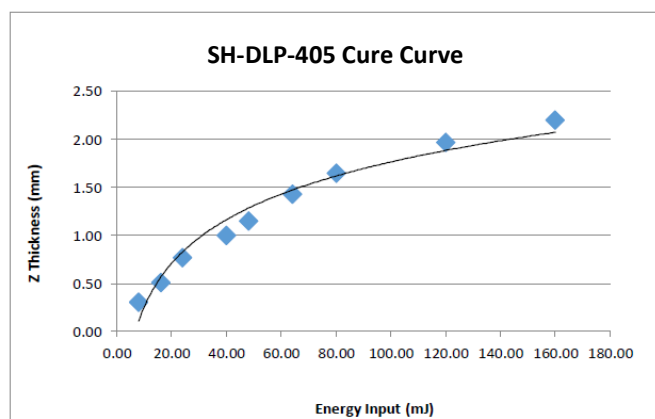
Typical Values	
Tensile Strength	2800 psi
Modulus	290,000 psi
Elongation	7%
Flexural Strength (0.15 x 0.16 in with 2 in span)	9000 psi

### Curing Performance

Typical energy profile for 405nm LED for SH-DLP Clear:

Time (sec)	Energy (mJ)	Z thickness (mm)
1	8.00	0.31
2	16.00	0.51
3	24.00	0.77
5	40.00	1.00
6	48.00	1.15
8	64.00	1.43
10	80.00	1.65
15	120.00	1.97
20	160.00	2.20
25	200.00	2.65

Note: Energy requirements will vary by color. An energy profile specific to the material should be established by the user prior to use for 3D printing.



## TECHNICAL DATA SHEET

MAY 2020

to change without notice.

### Guidelines for 3D Printing

#### 0.05 mm (50 micron) build layer

- Light Intensity – 3.84 mW/cm<sup>2</sup>
- Z Compensation – 0.100 mm
- XY Compensation – 0.000 mm
- Burn In
  - 1 Layer
  - Exposure Time – 3.021 sec.
- Normal Exposure Time – 0.417 sec/layer

#### 0.100 mm (100 micron) build layer

- Light Intensity – 3.84 mW/cm<sup>2</sup>
- Z Compensation – 0.100 mm
- XY Compensation – 0.000 mm
- Burn In
  - 1 Layer
  - Exposure Time 3.021 sec
- Normal Exposure Time – 0.937 sec/layer

Note: These are meant to be used as guidelines for utilizing SH-DLP-405 in 3D printing applications. It is highly recommended that each user reference this information as a starting point only. Print parameters will need to be optimized for each 3D printer and application.

## GENERAL INFORMATION

### SAFE HANDLING AND STORAGE

Store unused SH-DLP Resin in the original container in a cool, dry location. Be sure applicator cap is firmly sealed after use.

### Shelf Life

12 months from date of manufacture.

### **Part No. 00960, 00965**

Warranty/Disclaimer: The performance characteristics of these products may vary according to product application, operating conditions, or with end use. Barristo Enterprises, Inc. makes no warranties of any type, express or implied, including, but not limited to, the warranties of merchantability or fitness for a particular use. It is recommended that the product be tested in the application for which it is to be used.

© 2020 by Barristo Enterprises, Inc. All rights reserved. Specifications subject