



## Liqcreate Rigid Pro

A high strength and rigid 3D-printing resin for Digital Light Processing (DLP), Liquid Crystal Display (LCD) and laser based 3D-printers. Liqcreate Rigid Pro is perfect for industrial applications requiring high strength, low shrinkage and rigidity.

### Product description

Liqcreate Rigid Pro is a rigid black photopolymer resin and can be processed on most open DLP, MSLA and laser based 3D-printers operating at a wavelength of 385-405nm. 3D-printed parts from this material exhibit high strength and rigidity. Liqcreate Rigid Pro only requires UV post-curing with heat to reach its optimal strength. This material has excellent features like: high stiffness, durability, high strength and good temperature resistance which makes it ideal for molding, and industrial applications like pulleys, automotive connectors, covers, brackets, housings and demanding engineering parts.

### Key benefits

- High strength
- Dimensional stable
- Good chemical stability
- Good temperature resistance

### 3D-Printer compatibility

- Asiga & Nexa3D series
- Elegoo & Anycubic series
- Phrozen & Creality series
- [Open 385 - 420nm DLP, LCD and SLA 3D-printers](#)

### Order information

Order directly at the [Liqcreate store](#) or send your inquiry to [order@liqcreate.com](mailto:order@liqcreate.com) with the following order numbers.

Liqcreate Rigid Pro

1 kg

Order number LRPB01000





## Liqcreate Rigid Pro Technical Data

| Liquid properties |                        |            |                         |
|-------------------|------------------------|------------|-------------------------|
| Appearance        | Opaque Black liquid    | Ec (405nm) | 8.76 mJ/cm <sup>2</sup> |
| Viscosity         | 290 mPa·s at 25° C     | Dp (405nm) | 0.23 mm                 |
| Density           | 1.12 g/cm <sup>2</sup> | Ec (385nm) | 3.43 mJ/cm <sup>2</sup> |
|                   |                        | Dp (385nm) | 0.09 mm                 |

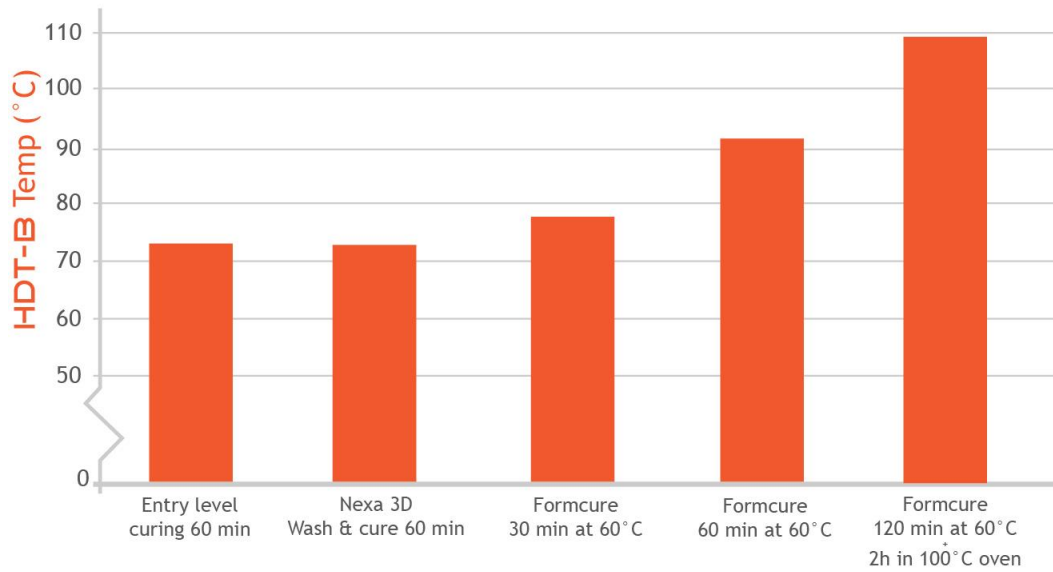
| Polymer properties  |                   |                                                          |                                                           |
|---------------------|-------------------|----------------------------------------------------------|-----------------------------------------------------------|
| Description         | ASTM / ISO Method | High power LED curing 30 minutes at 60° C <sup>[1]</sup> | High power LED curing 120 minutes at 60° C <sup>[1]</sup> |
| Tensile strength    | D638M             | 52 - 70 MPa                                              | 60 - 84 MPa                                               |
| Elongation at break | D638M             | 4 - 8 %                                                  | 3 - 6 %                                                   |
| Tensile modulus     | D638M             | 2.6 - 2.8 GPa                                            | 3.0 - 3.2 GPa                                             |
| Flexural strength   | D790              | 100 - 110 MPa                                            | 110 - 130 MPa                                             |
| Flexural modulus    | D790              | 2.8 - 3.0 GPa                                            | 3.0 - 3.3 GPa                                             |
| IZOD Impact notched | ISO 180           | 2.5 kJ/m <sup>2</sup>                                    | 2.3 kJ/m <sup>2</sup>                                     |
| IZOD Impact notched | D256              | 21 J/m                                                   | 18 J/m                                                    |
| Water sorption      | D570-98           | 0.46 %                                                   | 0.40 %                                                    |
| HDT-B 0.45 MPa      | ISO75             | 77° C                                                    | 91° C                                                     |
| HDT-A 1.80 MPa      | ISO75             | 65° C                                                    | 75° C                                                     |
| Shore D Hardness    | D2240             | 87                                                       | 90                                                        |

<sup>1</sup>Post-cured in the Formlabs Form Cure. These values may vary and depend on individual machine processing and post-curing.

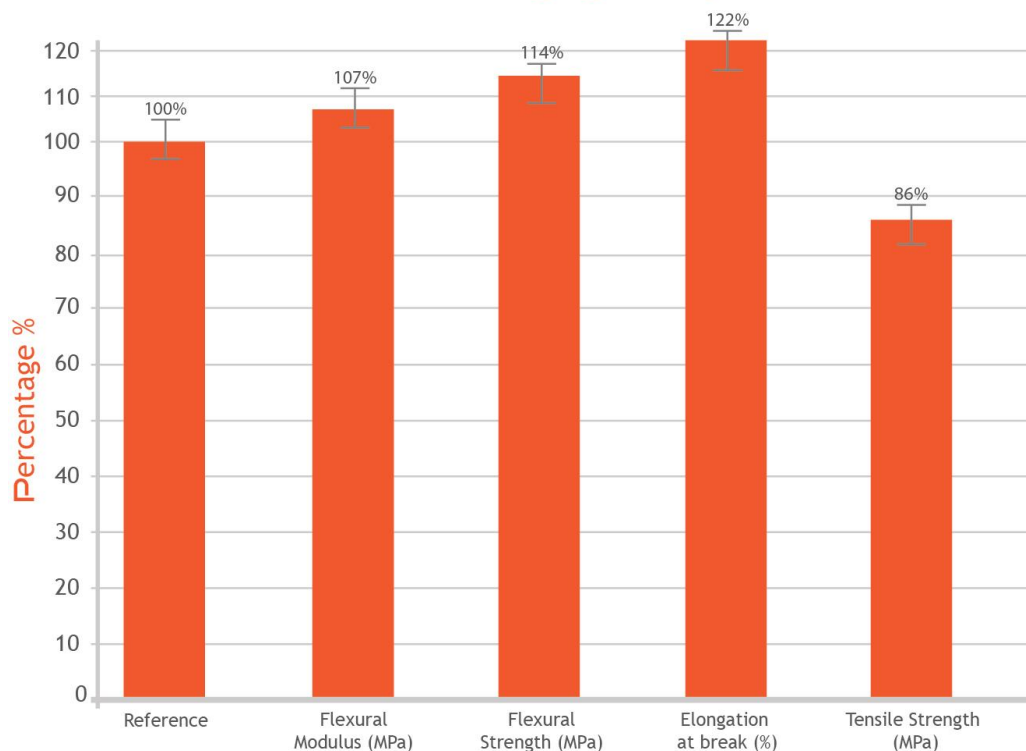


## Liqcreate Rigid Pro thermal analysis data

### HDT-B



## RIGID PRO Thermal Aging 28 days at 80°C / 176°F





## Liqcreate Rigid Pro chemical compatibility

