

Confidential

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PRODUCT DESCRIPTION

Loctite® 3D 3820 is a clear light curing acrylic resin that may be used for prototyping via stereo-lithography. Loctite® 3D 3820 cures with very short exposure to monochromatic light sources such as LED or Laser. Printed articles made from Loctite® 3D 3820 exhibit good print resolution and high optical clarity. Loctite® 3D 3820 is a low viscosity liquid that is printable at room temperature across various Laser SLA and DLP Platforms.

Technology	Stereolithography Resin
Appearance	Clear liquid
Chemistry Type	Acrylic
Odor	Mild
Cure	Ultraviolet / Visible Light
Viscosity	800-900 mPas at 25°C
Flow Characteristic	Self-leveling, Newtonian fluid
Application	Prototyping
Specific Benefits	<ul style="list-style-type: none">• Good print resolution• Short exposure times• High Clarity

TYPICAL PROPERTIES OF UNCURED MATERIAL

Appearance: Clear Liquid with light blue hue
Density: 1.10
Viscosity mPa.s 800-1000
Haake Cone & Plate
RV1, C60 1 TiL, 200 s⁻¹ @ 25°C

TYPICAL PRINTER SETTINGS

The following table represents tested settings optimised for the Loctite® PR10 Printer. These settings are applicable to small test prints. Print parameters may need to be adjusted for large prints or the addition of support structures and the orientation of objects.

Print Layer	Initial Build Layer (2)	Default Build Layers
Layer Thickness (mm)	0.100	0.050
Rehab Time	2	2
Cure Time (s)	50	8.0
Retraction Height	7	7
Retraction Speed up	100	100
Time at Top	1	1
Retraction Speed Down	200	200
Light Intensity (%)	65	65

TYPICAL MATERIAL PROPERTIES OF PRINTED PARTS*

Test	Method	Results
IZOD Impact	ASTM D-256	35 J/m
Tensile Strength	ASTM D638	20-40 MPa
Elongation @ Break	ASTM D638	10-20%
Modulus	ASTM D638	800 -1200MPa

The appearance of the printed part can be improved by cleaning with a fluid such as isopropanol.

*If desired by the end user, the hardness of the printed part can be improved by additional exposure to 405 nm light source.