# LIQCREATE

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### Liqcreate Flame Retardant HDT

A flame retardant 3D-printing resin with a high HDT for Digital Light Processing (DLP), Liquid Crystal Display (LCD) and laser based 3D-printers. Liqcreate Flame Retardant HDT is self-extinguishing and passes UL94 V0 test standards. This makes it perfect for applications in electronics, aviation, automobile, and the railway industry.

#### **Product description**

Liqcreate Flame Retardant HDT is a rigid off-white photopolymer resin that can be processed on most open resin based 3D-printers. 3D-printed parts from this material can withstand high temperatures without posing a fire hazard due to its self-extinguishing capabilities. This material is perfect for creating parts that need to comply with UL94 V0 test standards. For example: interior parts in cars, airplanes, trains and electronic devices. In addition, it can be excellent for tooling manufacturing aids, connector housings and covers.

#### Key benefits

- Self-extinguishing, UL94 V0
- High temperature resistance
- Extremely rigid
- Fast printing

#### 3D-Printer compatibility

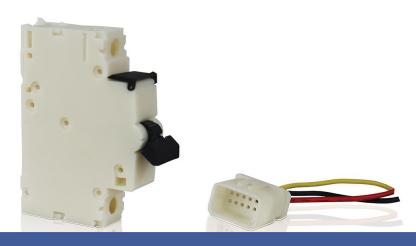
- Asiga UV series
- Nexa3D XiP (open license)
- Elegoo & Anycubic series
- Phrozen series
- Open 385 420nm DLP, LCD and SLA 3D-printers

#### Order information

Order directly at the <u>Liqcreate store</u> or send your inquiry to <u>order@liqcreate.com</u> with the following order numbers.

Liqcreate Flame Retardant HDT Liqcreate Flame Retardant HDT 250gram 1 kg Order number LFRH00250 Order number LFRH01000







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## Liqcreate Flame Retardant HDT Technical Data

Liquid properties					
Appearance	White liquid		Ec (405nm)	6,25 mJ/cm <sup>2</sup>	
Viscosity	2800 mPas.s at 25°C		<b>D</b> <sub>p (405nm)</sub>	0,234 mm	
Density	1,18 g/cm <sup>2</sup>		Ec (385nm)	3,11 mJ/cm <sup>2</sup>	
			<b>D</b> <sub>p</sub> (385pm)	0,095 mm	

Polymer properties					
Description	ASTM / ISO Method	UV Curing 60 minutes at 60°C <sup>[1]</sup>	UV Curing 120 minutes at 60°C <sup>[1]</sup>		
Tensile strength	D638M	41 MPa	43 MPa		
Elongation at break	D638M	1 - 3 %	1 - 3 %		
Tensile modulus	D638M	4,2 GPa	4,2 GPa		
Flexural strength	D790	73 MPa	67 MPa		
Flexural modulus	D790	4,3 GPa	4,4 GPa		
IZOD Impact notched	ISO 180	1,74 kJ/m <sup>2</sup>	1,85 kJ/m <sup>2</sup>		
IZOD Impact notched	D256	13 J/m	13 J/m		
Water sorption	D570-98	0,41%	0,41%		
Degradation temperature	Internal method	> 250°C <sup>[2]</sup> /482°F <sup>[2]</sup>	> 250°C <sup>[2]</sup> /482°F <sup>[2]</sup>		
HDT-B 0.45 MPa	ISO75	237°C / 459°F	257°C / 495°F		
HDT-A 1.80 MPa	ISO75	137°C / 279°F	145°C / 293°F		
Shore D Hardness	D2240	88	89		
Flammability	UL94 V0	3.0 mm			
FAR 25.853 Appendix F, Part I (a) (1) (ii)12 seconds Vertical Burn	Internal method	1.5 mm			

<sup>[1]</sup>Post-cured 60 minutes and 120 minutes with high power LED curing at 60°C in the Wicked Engineering curebox. Values and material properties may vary and depend on individual machine processing, part geometry, print orientation, print settings and post-curing settings. <sup>[2]</sup>Discoloration Above 200°C.