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Liqcreate ESD

An ESD-safe resin for Digital Light Processing (DLP), Liquid Crystal Display (LCD) and laser based 3D-printers. Liqcreate ESD is perfect to improve your electronics manufacturing workflows and produce parts for ESD-safe workplaces (EPA).

Product description

Liqcreate ESD is an opaque black photopolymer resin and can be processed on most resin based 3D-printers. 3D-printed parts from this material exhibit electrostatic discharge properties needed for electronic manufacturing and parts for ESD-safe workplaces (EPA). Liqcreate ESD can be used on open DLP, LCD and SLA 3D-printers in the range of 385 - 420nm. Due to the isotropic electrostatic dissipative properties, it is suitable for electronic devices and components that require ESD. Reduce risk and increase manufacturing capabilities by printing custom jigs, fixtures and tools to protect critical electronics components from static discharge.

Key benefits

- Isotropic ESD properties
- Well balanced rigidity and impact
- Antistatic properties
- Easy to print

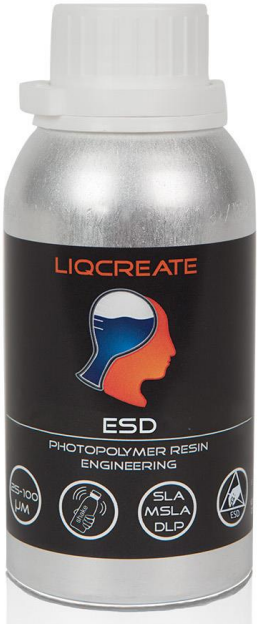
3D-Printer compatibility

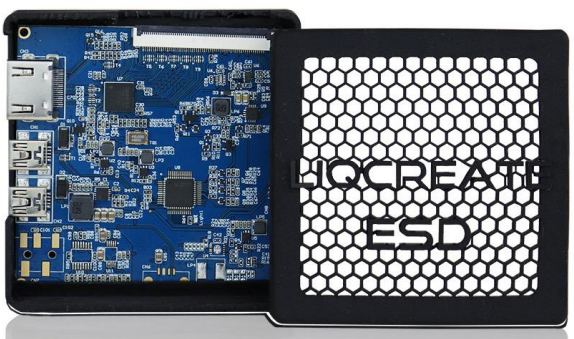
- Asiga UV series
- Elegoo & Anycubic series
- Phrozen series
- Open 385 - 420nm DLP, LCD and SLA 3D-printers

Order information

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

Liqcreate ESD	250gram	Order number LESD00250
Liqcreate ESD	1 kg	Order number LESD01000





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Liqcreate ESD Technical Data

Liquid properties

Appearance	Black opaque liquid
Viscosity	1150 mPa·s at 25°C
Density	1.18 g/cm^3

Ec $_{(405nm)}$	3.85 mJ/cm^2
D_p $_{(405nm)}$	0.10 mm
Ec $_{(385nm)}$	5.77 mJ/cm^2
D_p $_{(385nm)}$	0.10 mm

Polymer properties

Description	Method	Metric[1]	Imperial[1]
Tensile strength	D638M	37 MPa	5.37 ksi
Elongation at break	D638M	5 - 10 %	5 - 10 %
Tensile modulus	D638M	1.9 GPa	276 ksi
Flexural strength	D790	83 MPa	12.04 ksi
Flexural modulus	D790	2.1 GPa	305 ksi
IZOD Impact notched	ISO 180	3.30 kJ/m^2	1.57 ft-lb/in^2
IZOD Impact notched	D256	30 J/m	0.56 ft-lb/in
Water sorption	D570-98	3.84%	3.84%
Degradation temperature	Internal method	> 250°C[2]	> 482°F[2]
HDT-B 0.45 MPa	ISO75	51°C	124°F
HDT-A 1.80 MPa	ISO75	43°C	109°F
Surface resistivity	AE30-ANSI	10^5 - 10^7 Ω/sq	10^5 - 10^7 Ω/sq
Volume resistivity	AE30-ANSI	10^5 - 10^7 Ω-cm	10^5 - 10^7 Ω-cm
Shore D Hardness	D2240	82	82

[1]Post-cured 30 minutes with high power LED curing at 60°C in the Wicked Engineering curebox. These values may vary and depend on individual machine processing and post-curing. [2]Material will soften above HDT value but not break/crack up to 250°C without force on the part.

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Liqcreate ESD Electrical properties

Polymer properties			
Description	Method	XY orientation[1]	Z orientation[1]
Surface resistivity	AE30-ANSI - 10V	2.89E+06 Ω/sq	6.01E+06 Ω/sq
	AE30-ANSI - 100V	9.64E+05 Ω/sq	1.31E+06 Ω/sq
	SRM 200	4.32E+06 Ω/sq	5.76E+05 Ω/sq
Volume resistivity	AE30-ANSI - 10V	1.25E+06 Ω-cm	2.33E+06 Ω-cm
	AE30-ANSI - 100V	< 1.36E+06 Ω-cm	< 1.36E+06 Ω-cm

[1]*Post-cured 30 minutes with high power LED curing at 60°C in the Wicked Engineering curebox. These values may vary and depend on individual machine processing and post-curing. Parts measured in XY orientation were measured parallel to the build plate and parts in Z orientation perpendicular to the build plate.*

Visit www.liqcreate.com for more information about this product.