LIQCREATE

PRODUCT CATALOG

Advanced Liquid Technology

Resins for SLA, DLP & LCD 3D-printing.

POSITRON ADDITIVE

OUR COMPANY

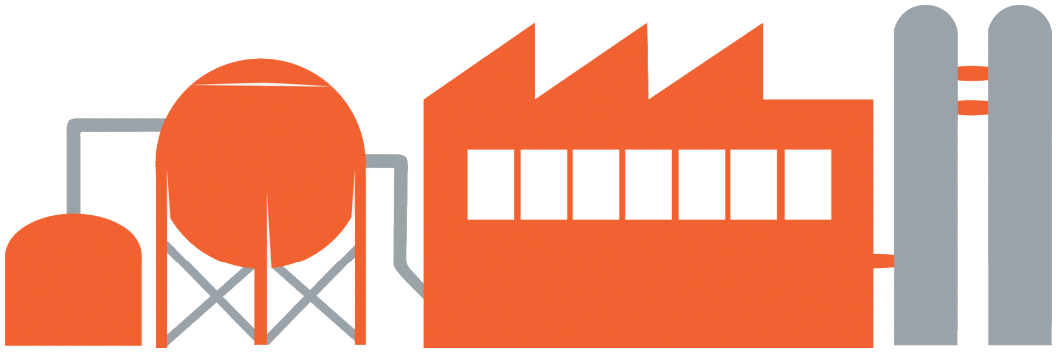
Liqcreate is a company specialized in developing and manufacturing premium photopolymers for SLA, DLP and LCD technologies. Our high-end polymers are suitable for a wide range of industries including prototyping, industrial, entertainment, consumer goods, healthcare and automotive.

Endless Possibilities

We offer solutions to re-brand our current product portfolio into any shape. This could be a turn-key solution to simply attach your own label on our products or we can provide our photopolymers in bulk volumes.

Unique Product Development

We offer several possibilities to develop custom made 3D resins. Our chemists can create photopolymers with different colors and different polymeric properties. In addition, we offer support to 3D-printer manufacturers with the development of photopolymers with specific polymerization kinetics in order to work on any 3D-printer.



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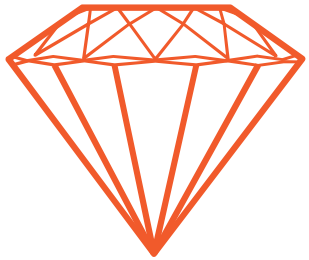
WhAT WE STAND FOR



Quality

One of our main goals is to supply high quality products.
All our products are thoroughly tested for their specific features and print quality.

Knowledge

Our team consists of experts with extended knowledge in photopolymers and 3D-printing techniques. We are looking forward to support your 3D-print projects.

Variety

We offer a wide range of products which are easy to use. In addition, we are constantly developing new resins to support even the highest demanding applications.

Genuine

We believe in open and honest communication to establish long-term partnerships. We support this by our knowledge, products and clear documentation.

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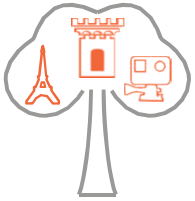
cATEGORIES



General Purpose

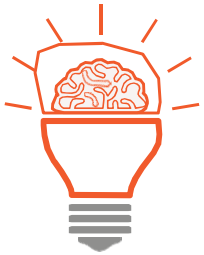
Our range of general purpose resins are ideal for prototyping, entertainment and consumer applications. All resins are easy to use and have the best costs/quality performance in the market.

Premium

Liqcreate Premium resins are uniquely formulated opaque, low odor and low shrinkage resins, ideal for LCD and low-power DLP 3D-printers. These resins enable fast printing on these type of printers due to their high reactivity.

Engineering

Liqcreate Engineering resins are ideal for applications that require specific mechanical properties. This group contains our most advanced photopolymers, from high impact materials to the strongest polymers in the market.



Creative

Need a 4th dimension in your 3D-print?
Our range of creative resins is ideal to create this extra dimension. Think about the endless options when you can add visual effects, scent, texture or sound to your 3D-print!

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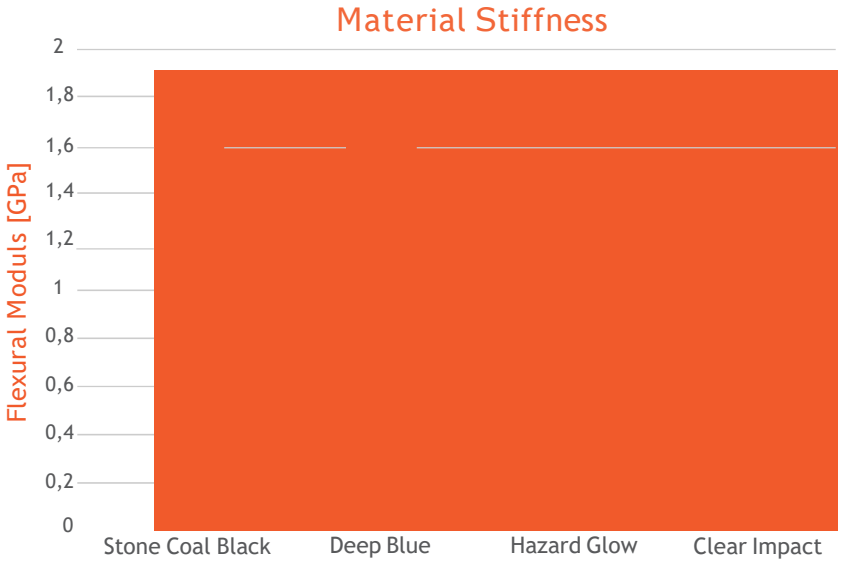
LIQCREATE

STONE COAL BLAcK

Liqcreate Stone Coal Black is an opaque high resolution general purpose photopolymer for SLA and DLP technologies in the range of 385 – 405nm. Printed parts have an incredibly smooth surface finish which highlights the smallest details.

Its rigid character makes this material perfectly suitable for rapid prototyping and product development in a wide variety of industries.



Key Benefits

- Smooth surface finish
- High accuracy
- Low odor
- Low shrinkage
- Opaque resin

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POLYMER PROPERTIES STONE COAL BLAcK

Liqcreate Stone Coal Black is a rigid polymer, ideal for a wide variety of applications. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Tensile Strength	D638M	62 MPa	9.0 ksi
Tensile Modulus	D638M	2.2 GPa	319 ksi
Elongation at break	D638M	4%	4%
Flexural Strength	D790M	75 MPa	10.9 ksi
Flexural modulus	D2240	1.9 GPa	276 ksi
IZOD Impact (notched)	D256A	15 J/m	0.28 ft-lb/in
Shore D Hardness	D2240	80	80
Water sorption	D570-98	0.30%	0.30%
Tg	D7028	54°C	130°F

[1] Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

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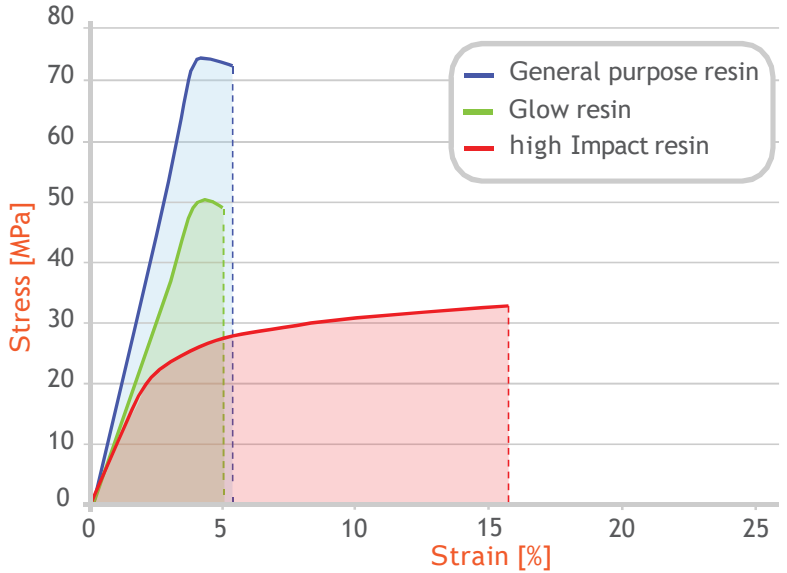
DEEP BLUE

Liqcreate Deep Blue is a general purpose photopolymer. Parts created with Liqcreate Deep Blue have a rigid character and its low shrinkage and high shape retention make this material perfect for the production of functional prototypes.

The aestheticaly pleasing blue color, low odor and overall properties results in a material perfect for rapid manufacturing and prototyping in the prosumer market.

Stress - Strain Curve



Key Benefits

- Smooth surface finish
- High accuracy
- Low odor
- Low shrinkage
- Translucent resin

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POLYMER PROPERTIES DEEP BLUE

Liqcreate Deep Blue is a rigid polymer, ideal for a wide variety of applications. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Tensile Strength	D638M	73 MPa	10.6 ksi
Tensile Modulus	D638M	2.6 GPa	377 ksi
Elongation at break	D638M	5%	5%
Flexural Strength	D790M	82 MPa	11.9 ksi
Flexural modulus	D2240	1.9 GPa	276 ksi
IZOD Impact (notched)	D256A	22 J/m	0.41 ft-lb/in
Shore D Hardness	D2240	81	81
Water sorption	D570-98	0.26%	0.26%
Tg	D7028	55°C	131°F

[1]Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

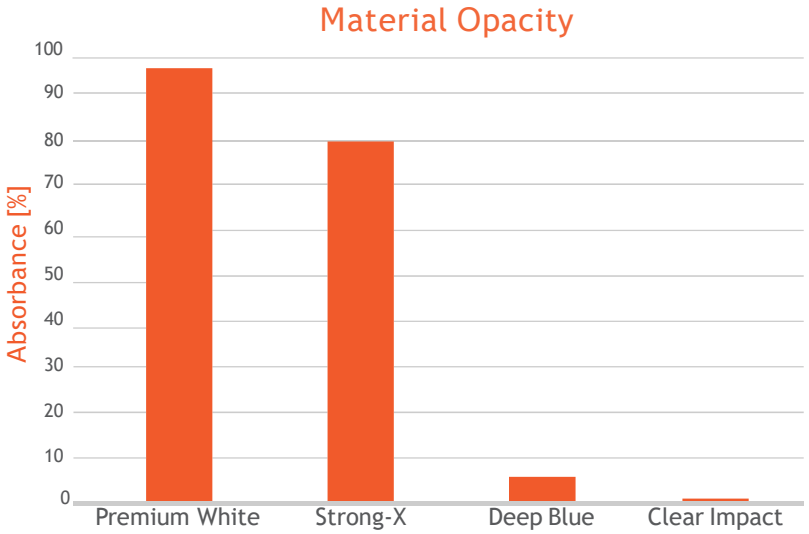
POSITRON ADDITIVE

LIQCREATE

PREMIUM WhITE

Liqcreate Premium White is an opaque white photopolymer with excellent UV-stability, which is ideal for medical and architectural scale models. Printed parts do not discolor and stay white, even after long-term UV exposure. Liqcreate Premium White is easy to use on all open source LCD and DLP 3D-printers in the range of 385 – 420nm.

All Liqcreate resins do not emit unpleasant odor, which enables in-office production.



Key Benefits

- Fast printing with LCD/DLP
- Opaque white color
- Non-yellowing
- Low odor

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POLYMER PROPERTIES PREMIUM WhITE

Liqcreate Premium White is a rigid polymer, ideal for a wide variety of applications and designed for LCD and DLP 3D-printers. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Tensile Strength	D638M	45 MPa	6.5 ksi
Tensile Modulus	D638M	1.0 GPa	145 ksi
Elongation at break	D638M	8%	8%
Flexural Strength	D790M	66 MPa	9.6 ksi
Flexural modulus	D2240	1.8 GPa	261 ksi
IZOD Impact (notched)	D256A	18 J/m	0.30 ft-lb/in
Shore D Hardness	D2240	82	82
Water sorption	D570-98	0.40%	0.40%
Tg	D7028	51°C	124°F

[1]Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

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LIQCREATE

PREMIUM MODEL

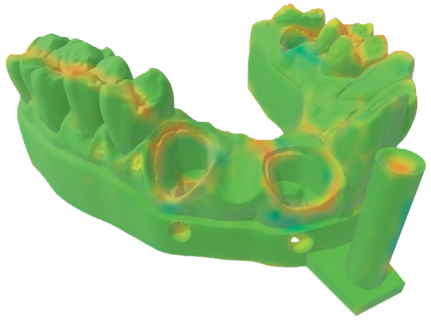
Liqcreate Premium Model is a matte, opaque skin/peach colored photopolymer. Its matte color accentuates depth and detail in your dental models, which accommodates a perfect view on undercuts in 3D-printed models.

3D-printed parts from this material have exceptional dimensional stability and low shrinkage during printing. Liqcreate Premium Model is easy to use on all open source LCD and DLP 3D-printers in the range of 385 – 420nm.

Accuracy Evaluation
The accuracy evalution demonstrates that the tolerances of the tested model were 89% within 50 microns.

Accuracy of print to 3D model file

- +/- 50 microns
- +/- 75 microns
- +/- 100 microns



Key Benefits

- Fast printing with LCD/DLP
- Excellent dimensional stability
- Low shrinkage & high accuracy
- Temperature resistant for aligner production

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POLYMER PROPERTIES PREMIUM MODEL

Liqcreate Premium Model is a rigid polymer, ideal for dental and medical model applications and designed for LCD and DLP 3D-printers. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Tensile Strength	D638M	46 MPa	6.7 ksi
Tensile Modulus	D638M	1.1 GPa	160 ksi
Elongation at break	D638M	8%	8%
Flexural Strength	D790M	68 MPa	9.9 ksi
Flexural modulus	D2240	1.9 GPa	276 ksi
IZOD Impact (notched)	D256A	17 J/m	0.29 ft-lb/in
Shore D Hardness	D2240	83	83
Water sorption	D570-98	0.40%	0.40%
Tg	D7028	61°C	141°F

[1]Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

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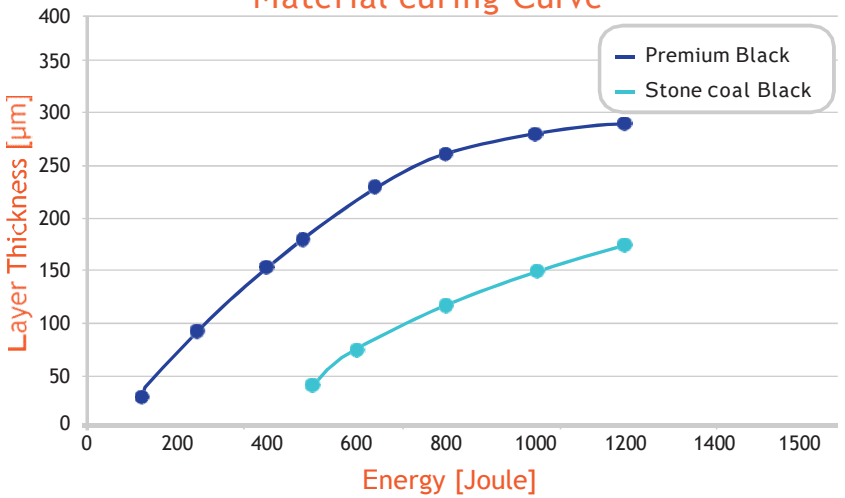
LIQCREATE

PREMIUM BLAcK

Liqcreate Premium Black is an opaque black photopolymer with excellent color stability. 3D-printed parts from this material have exceptional dimensional stability and low shrinkage during printing. Liqcreate Premium Black is easy to use on all open source LCD and DLP 3D-printers in the range of 385 – 420nm.

This material has excellent properties like low shrinkage and low odor, which makes it ideal for applications that require an opaque, deep black surface finish.

Material curing Curve



Key Benefits

- Fast printing with LCD/DLP
- Opaque black color
- Low shrinkage
- Low odor

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POLYMER PROPERTIES PREMIUM BLAcK

Liqcreate Premium Black is a rigid polymer, ideal for a wide variety of applications and designed for LCD and DLP 3D-printers. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Tensile Strength	D638M	46 MPa	6.7 ksi
Tensile Modulus	D638M	1.1 GPa	160 ksi
Elongation at break	D638M	8%	8%
Flexural Strength	D790M	68 MPa	9.9 ksi
Flexural modulus	D2240	1.8 GPa	276 ksi
IZOD Impact (notched)	D256A	17 J/m	0.29 ft-lb/in
Shore D Hardness	D2240	83	83
Water sorption	D570-98	0.40%	0.40%
Tg	D7028	51°C	124°F

[1]Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

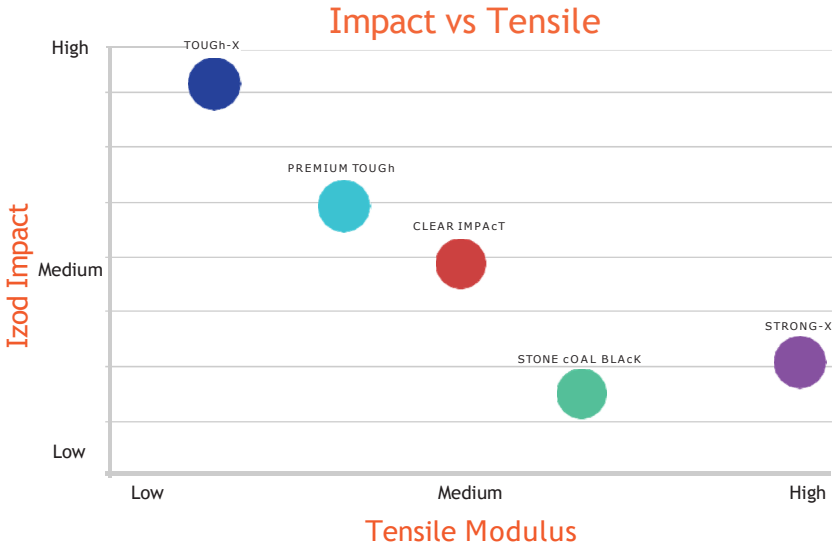
POSITRON ADDITIVE

LIQCREATE

PREMIUM TOUGh

Liqcreate Premium Tough is a transparent resin which turns into a beautiful milky white polymer during polymerization. 3D-printed parts from this material are durable. Liqcreate Premium Tough is easy to use on all open source DLP and LCD 3D-printers in the range of 385 – 420nm.

The high impact strength and scratch resistance of Liqcreate Premium Tough makes it perfect for the functional prototypes.



Key Benefits

- High impact strength
- Exceptional scratch resistance
- Durable
- MSLA Compatible

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POLYMER PROPERTIES PREMIUM TOUGh

Liqcreate Premium Tough is a high impact polymer, ideal for the production of functional parts which are exposed to stress. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Tensile Strength	D638M	28 MPa	4.0 ksi
Tensile Modulus	D638M	1.0 GPa	145 ksi
Elongation at break	D638M	15-25%	15-25%
Flexural Strength	D790M	38 MPa (no break)	5.5 ksi (no break)
Flexural modulus	D2240	1.0 GPa	145 ksi
IZOD Impact (notched)	D256A	40 J/m	0.81 ft-lb/in
Shore D Hardness	D2240	69	69
Water sorption	D570-98	0.60%	0.60%

[1]Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

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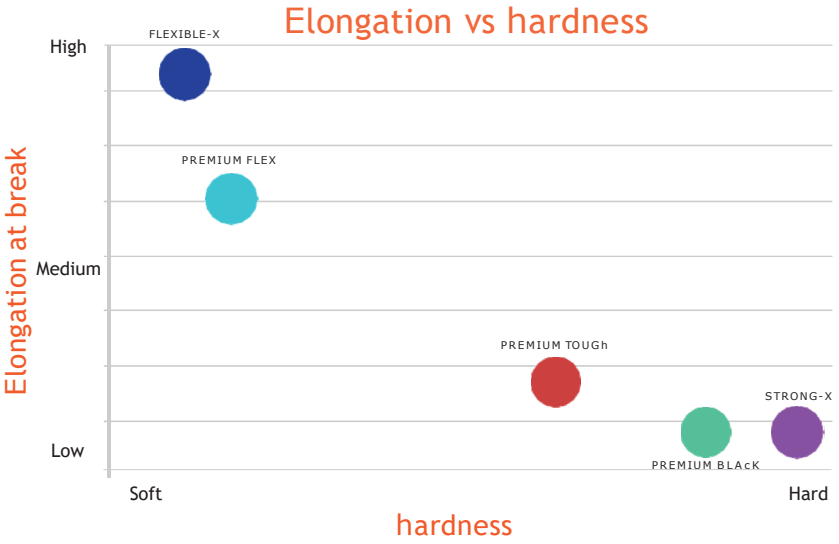
LIQCREATE

PREMIUM FLEX

Liqcreate Premium Flex is a translucent turquoise blue photopolymer with great processability and print speed on MSLA and DLP based 3D-printers. 3D-printed parts from this material have excellent flexibility and low surface hardness of 63 Shore A. Liqcreate Premium Flex is easy to use on all open source DLP and LCD 3D-printers in the range of 385 – 420nm.

Its high elongation and low Shore A hardness makes it perfect for diversity of soft touch and elastic prototypes.



Key Benefits

- High flexibility
- Soft touch
- Easy to print
- MSLA Compatible

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POLYMER PROPERTIES PREMIUM FLEX

Liqcreate Premium Flex is a flexible and soft polymer, ideal for elastic prototypes. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Tensile Strength	D638M	1.7 MPa	0.25 ksi
Tear strength	D624	4.3 kN/m	25 lbf/in
Elongation at break	D638M	50-80%	50-80%
Shore A Hardness	D2240	63	63
Water sorption	D570-98	1.6%	1.6%

[1]Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

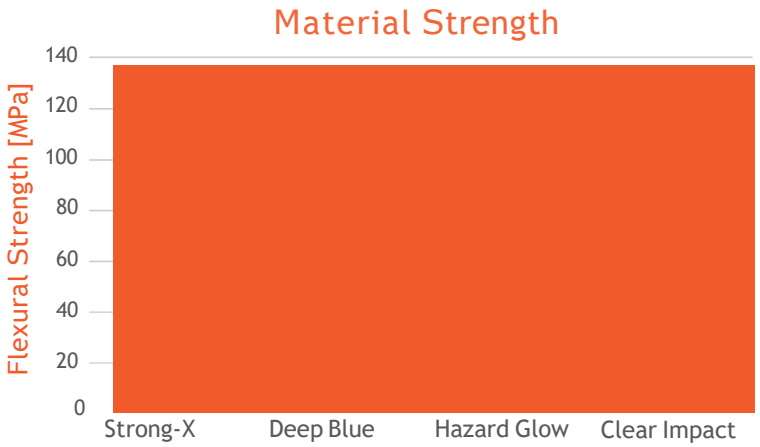
POSITRON ADDITIVE

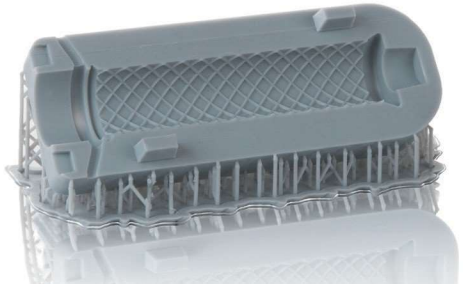
LIQCREATE

STRONG-X

Liqcreate Strong-X is one of the strongest materials available in the market. Its flexural strength of 135MPa is comparable to industry's leading dual-cure cyanate ester resins, which makes it excellent for heavy duty applications.

Strong-X is easy to use on all open source SLA and DLP 3D-printers in the range of 385 – 405nm and only requires UV post-curing. This material has the characteristics of high strength, high stiffness and high temperature resistance which makes it suitable for injection molding and engineering parts.





Key Benefits

- High strength
- High temperature resistance
- Low shrinkage
- Low odor

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POLYMER PROPERTIES STRONG-X

Liqcreate Strong-X is an extremely strong polymer ideal for heavy duty, injection molding and engineering applications. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Tensile Strength	D638M	91 MPa	13.2 ksi
Tensile Modulus	D638M	2.5 GPa	363 ksi
Elongation at break	D638M	8%	8%
Flexural Strength	D790M	135 MPa	19.6 ksi
Flexural modulus	D2240	3.25 GPa	471 ksi
IZOD Impact (notched)	D256A	20 J/m	0.33 ft-lb/in
Shore D Hardness	D2240	87	87
Water sorption	D570-98	0.45%	0.45%
Tg	D7028	128°C	262°F

[1]Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

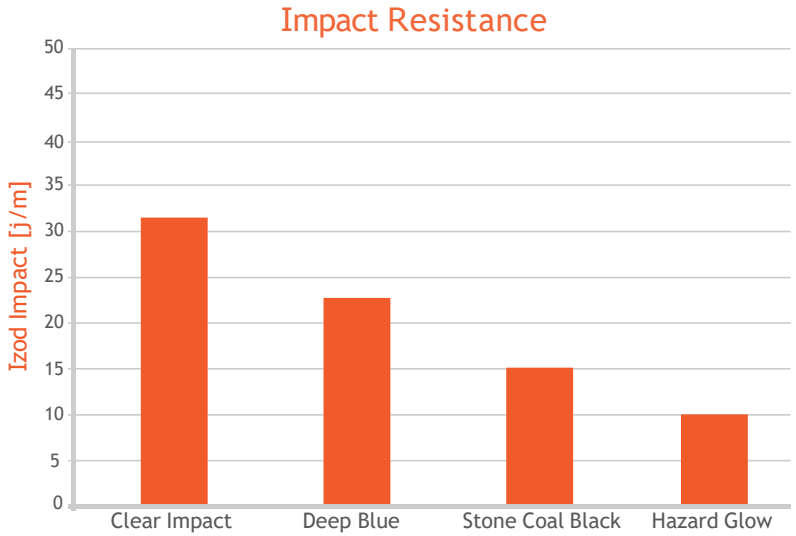
POSITRON ADDITIVE

LIQCREATE

CLEAR IMPAcT

Liqcreate Clear Impact is an optically clear photopolymer for SLA and DLP technologies in the range of 385 – 405nm. Parts created with Liqcreate Clear Impact are perfectly transparent, slightly flexible and have an excellent impact resistance.

The high toughness of the material makes it ideal for the production of functional parts which are repeatedly exposed to stress. Low water absorption and weather resistance makes it perfect for outdoor applications.



Key Benefits

- Optically clear
- Excellent impact resistance
- Good water and chemical resistance
- Low discoloration

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POLYMER PROPERTIES CLEAR IMPACT

Liqcreate Clear Impact is a high impact polymer, ideal for the production of functional parts which are repeatedly exposed to stress. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Tensile Strength	D638M	45 MPa	6.5 ksi
Tensile Modulus	D638M	1.4 GPa	203 ksi
Elongation at break	D638M	16%	16%
Flexural Strength	D790M	35 MPa	5.1 ksi
Flexural modulus	D2240	900 MPa	131 ksi
IZOD Impact (notched)	D256A	31 J/m	0.54 ft-lb/in
Shore D Hardness	D2240	68	68
Water sorption	D570-98	0.50%	0.50%
Tg	D7028	32°C	90°F

[1]Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

POSITRON ADDITIVE

LIQCREATE

TOUGh-X

Liqcreate Tough-X is an opaque black photopolymer. 3D-printed parts from this material have exceptional impact strength. Liqcreate Tough-X is easy to use on all open source DLP, LCD and SLA 3D-printers in the range of 385 – 420nm.

This material has excellent properties like high impact strength and up to 150% elongation, making it perfect for the production of industrial spare parts and functional ABS type products.

Key Benefits

- ABS like
- Extreme impact resistance
- Durable
- Heavy duty parts

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POLYMER PROPERTIES TOUGh-X

Liqcreate Tough-X is a functional high impact polymer, ideal for the production of heavy duty functional parts which are repeatedly exposed to stress. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Tensile Strength	D638M	15 MPa	2.2 ksi
Tensile Modulus	D638M	n/a	n/a
Elongation at break	D638M	100-150%	100-150%
IZOD Impact (notched)	D256A	72 J/m	1.35 ft-lb/in
Shore A Hardness	D2240	95	95
Shore D Hardness	D2240	60	60
Yield Strength	D638M	8 MPa	1.2 ksi
Water sorption	D570-98	2.1%	2.1%
Tg	D7028	n/a	n/a

[1]Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

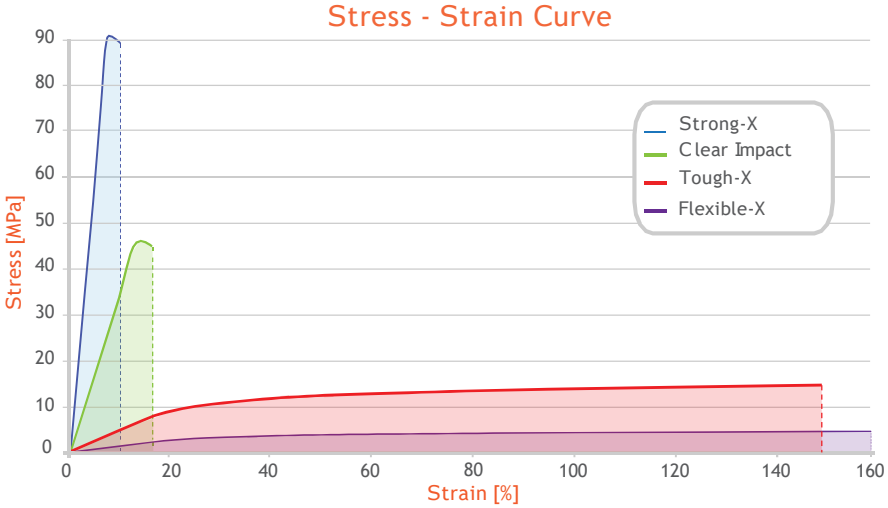
POSITRON ADDITIVE

LIQCREATE

FLEXIBLE-X

Liqcreate Flexible-X is an opaque black photopolymer with great processability and print speed on MSLA, DLP and laser based 3D-printers. 3D-printed parts from this material have exceptional flexibility and great rebound properties.

This material is easy to use on all open source DLP, LCD and SLA 3D-printers in the range of 385 – 420nm. Its low hardness of 55 Shore A and elongation up to 160% makes it perfect for the production of a diversity of industrial applications.



Key Benefits

- High elongation
- Durable soft touch
- Excellent rebound
- Good tear strength

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POLYMER PROPERTIES FLEXIBLE-X

Liqcreate Flexible-X is an extremely flexible and soft polymer, ideal for functional applications. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Tensile Strength	D638M	2.4 MPa	0.35 ksi
Tear strength	D624	14.9 kN/m	85 lbf/in
Elongation at break	D638M	120-160%	120-160%
Compression set 24 hours at 22˚C	D395	2%	2%
Shore A Hardness	D2240	55	55
Water sorption	D570-98	3.3%	3.3%

[1]Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

POSITRON ADDITIVE

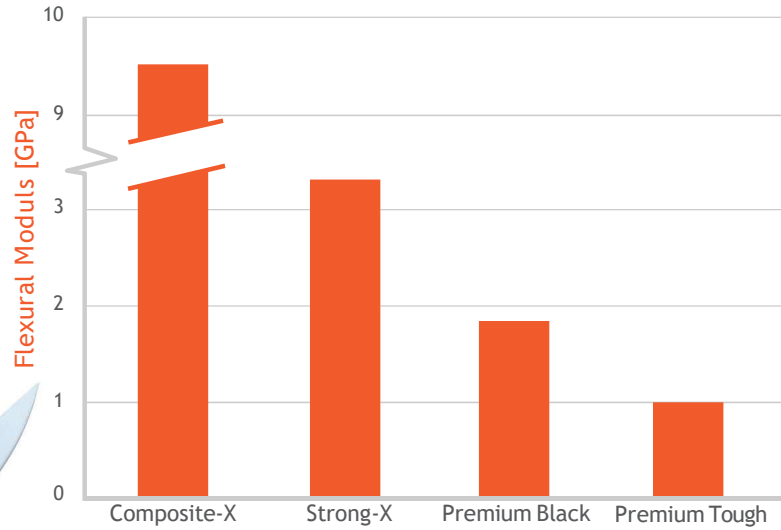
LIQCREATE

COMPOSITE-X

Liqcreate Composite-X is one of the stiffest and strongest material available in the market. With a flexural modulus of over 9000 MPa and a flexural strength of 150 – 170 MPa it is superior to almost all photopolymer resins currently available. Liqcreate Composite-X is easy to use on all open SLA, DLP and MSLA 3D-printers in the range of 385 – 405nm.

The material can be used after UV-post curing, or the properties can be boosted with a thermal cure. This material has features like excellent chemical resistance, high strength and high stiffness which makes it ideal for wind tunnel testing, fluid flow components, automotive and heavy duty industrial applications.

Material Stiffness



Key Benefits

- High rigidity
- High strength
- Good chemical resistance
- Extremely low shrinkage

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POLYMER PROPERTIES cOMPOSITE-X

Liqcreate an extremely rigid and high performance reinforced nano-micro composite resin. The following table contains information about the properties of this specific resin.

Description	ASTM Method	UV Curing 60 minutes at 60°C[1]	Thermal curing 2 hours at 100°C[1]
Tensile Strength	D638M	50 - 75 MPa	70 - 85 MPa
Tensile Modulus	D638M	7.5 - 8.5 GPa	8.5 - 9.5 GPa
Elongation at break	D638M	1%	1%
Flexural Strength	D790M	140 - 150 MPa	150 - 170 MPa
Flexural modulus	D2240	7.5 - 8.5 GPa	8.5 - 9.5 GPa
IZOD Impact (notched)	D256A	19 J/m	18 J/m
Shore D Hardness	D2240	93	94
Water sorption	D570-98	0.67%	0.59%
Linear Shrinkage during printing	Internal method	<0.1%	<0.1%
Linear Shrinkage UV-curing	Internal method	0.5%	0.5%
Linear Shrinkage thermal cure	Internal method	0.1%	0.1%
Compression strength	D695	155 MPa	160 MPa
Density solid	Internal method	1.62 g/cm^3	1.62 g/cm^3

[1]Parts were post-cured in a Wicked Engineering Curebox for 60 minutes at 60°C prior to testing. Thermal cured parts were cured for 2 hours at 100°C in an conventional oven after being UV-curing. Material properties can vary with part geometry, print orientation, print settings and postcuring settings. Parts were post-cured in a Wicked Engineering Curebox for 60 minutes at 60°C prior to testing. Thermal cured parts were cured for 2 hours at 100°C in an conventional oven after being UV-curing.

POSITRON ADDITIVE

LIQCREATE

WAX CASTABLE

Liqcreate Wax Castable is a blue wax-based photopolymer with reliable processability and accuracy on LCD/MSLA, DLP and laser based 3D-printers. 3D-printed parts from this material captures intricate features and show crisp details. This wax-based material offers smooth surfaces with clean burnout for a reliable casting process.

Create custom made elegant organic geometries with positive and negative engravings according to your preferences. Liqcreate Wax Castable creates perfect casting patterns for jewelry, dental and industrial parts.

Key Benefits

- High precision
- Wax-based
- Clean & ash free burnout
- Excellent casting of engravings

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POLYMER PROPERTIES WAX CASTABLE

Liqcreate Wax Castable is a wax-based polymer, ideal for casting applications. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Shore D Hardness	D2240	77	77
Flexural Strength	D790M	33 MPa	4.8 ksi
Flexural modulus	D2240	1.1 GPa	160 ksi
Water sorption	D570-98	0.28%	0.28%

[1]Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

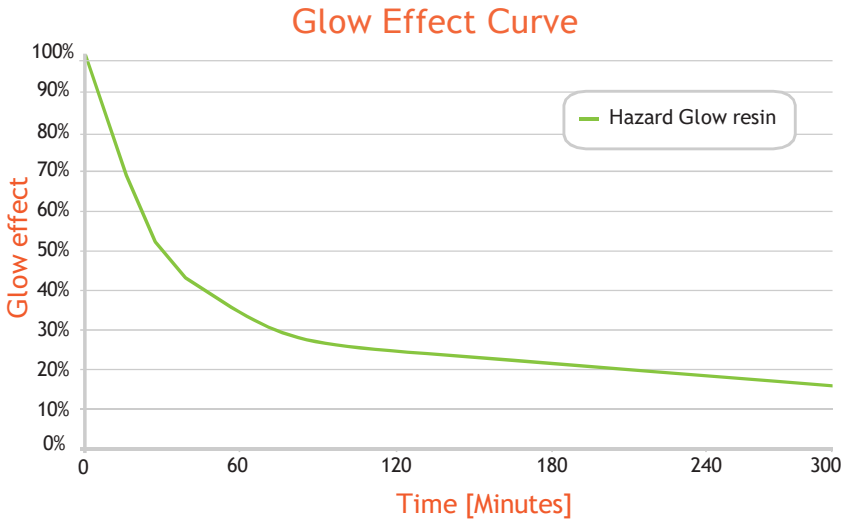
POSITRON ADDITIVE

LIQCREATE

HAZARD GLOW

Liqcreate Hazard Glow is the first ever glow-in-the-dark material for SLA and DLP technologies in a range of 385 – 405nm. This material is optimized in having the highest possible glow-effect while remaining easy processable in DLP and SLA 3D-printers.

Its beautiful glowing effects makes this material perfectly suitable to 3D-print a high variety of creations that deserve to be seen when darkness strikes.



Key Benefits

- Up to 4 hours glow effect
- Rechargeable in sun or artificial light
- Ideal for dark environments
- Smooth surface finish

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POLYMER PROPERTIES HAZARD GLOW

Liqcreate Hazard Glow is a glow-in-the-dark polymer, ideal for creative applications. The following table contains information about the properties of this specific resin.

Description	ASTM Method	Metric[1]	Imperial[1]
Tensile Strength	D638M	49 MPa	7.1 ksi
Tensile Modulus	D638M	1.6 GPa	232 ksi
Elongation at break	D638M	5%	5%
Flexural Strength	D790M	48 MPa	7.0 ksi
Flexural modulus	D2240	1.4 GPa	203 ksi
IZOD Impact (notched)	D256A	10 J/m	0.19 ft-lb/in
Shore D Hardness	D2240	77	77
Water sorption	D570-98	0.30%	0.30%
Tg	D7028	51°C	124°F

[1]Material properties can vary with part geometry, print orientation, print settings and postcuring settings.

POSITRON ADDITIVE

LIQCREATE

OPTIMIZATION 3D-PRINTER WITh RESIN

Are you a 3D-printer manufacturer or print center and searching for a resin that works well on your 3D-printer? Our experienced engineers can create printing parameters on any 3D-printer to ensure compatibility with our resins.

How does it work?

1. Select the desired Liqcreate resin(s) and send us an email: hello@positronadditive.com
2. One of our engineers will get in touch with you to verify the compatibility with your 3D-printer and application.
3. Our engineers will align the 3D-printer with the chosen resin(s). This can be established on-site or at our facility.
4. After the alignment we will save the parameters and you can start printing with the desired resin(s).

Liqcreate resins work on multiple 3D-printers and we increase the number of compatible 3D-printers on a frequent basis. Please consult our website for the most recent parameters.

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