

Basic CP

QTS Basic-CP is a liquid UV-curable photosensitive resin, which is suitable for 3D molding equipment with a wavelength of 395~405nm. This material has high resolution and can perfectly present the details, holes, and surface texture of high-density image files. It is especially suitable for various desktop models with new high-intensity 4K LCD and DLP. It has low shrinkage with excellent strength and high accuracy. It prints parts with low viscosity in details and enable easy cleaning. It can be used under fast curing speed along with flexible range of printing parameter to reduce production time. Especially suitable for the development of models for printing high-resolution cartoon characters. It is a super cost-effective 3D resin.

Application

- > Avocation models
- > High-resolution sculptures
- > Getting started, learn, and use

Resin Physical Properties:

Color	White, Grey, Black
Density	1.12 g / cm ³
Viscosity	240 ~ 300 cps @ 25 °C

Product Specifications

Package Size	1 kg
Country of Origin	Taiwan

Characteristics

- > Low viscosity and detailed prints.
- > Fast curing speed, adaptable printing parameters, and efficient printing time.
- > Easy to clean.
- > Holes and surface textures are presented as the design.
- > Applied nano-grade materials to mitigate sedimentation.
- > Great adhesion to the build plate.

Post-Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore Hardness	D2240		77D
Tensile Strength	D638	65 MPa	9.43 ksi
Young' s Modulus	D638	2.925 GPa	424 ksi
Elongation	D638		23 %
Notched Impact Strength	D256	25 J/m	0.468 ft-lb/in
Glass Transition Temperature	DSC	60 °C	140 °F
Heat Deflection Temperature	D648 @0.46MPa	60 °C	140 °F



Basic-CP Recommended Parameters(@50µm)

	Anycubic Mono(2K)	Anycubic Mono X(4K)	Phrozen Mighty
Bottom Layer	3 Layer* 30 S	2 Layer* 20 S	3 Layer* 30 S
Layers	2.0 S	1.5 S	3.2 S
Light off delay	3 S	3 S	13 S
Light power	100%	85%	85%

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

Basic

QTS Basics resin is compatible with 395 ~ 405 nm resin 3D printers, including DLP, LCD, and SLA models. It has low shrinkage with excellent strength and high accuracy. It prints ABS-like parts with low viscosity in details and enable easy cleaning. It can be used under fast curing speed along with flexible range of printing parameter to reduce production time.

Application

- > Product development prototyping
- > Entertainment and consumer design
- > Electronic hardware

Resin Physical Properties:

Color	White, Matte Black, Grey, Pink, Orange, Yellow, Green, Blue, Purple
Density	1.12 ~ 1.15 g / cm ³
Viscosity	70 ~ 100 cps @ 25 °C

Post Processing

This printed part requires post curing to achieve its ideal hardness and toughness.

- > Expose the printed parts in 365 ~ 405 nm UV for 10 minutes to an hour.
The time varies based on the thickness of the parts.



Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan

Post Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore Hardness	D2240		80D
Tensile Strength	D638	34.5 MPa	5.0 ksi
Young's Modulus	D638	2.37 GPa	343.7 ksi
Elongation	D638		4.5 %
Notched Impact Strength	D256	31.1 J/m	0.58 ft-lb/in
Glass Transition Temperature	DSC	60 °C	140 °F
Heat Deflection Temperature	D648 @0.46MPa	65 °C	149 °F

Description	Phrozen Sonic Mini mono-LCD	Phrozen XL Color-LCD	Miicraft 125 DLP
Bottom Layer	15~25 sec@50µm	30~40 sec@50µm	8~10 sec@50µm
Layers	3~4.5 sec@50µm	8~10 sec@50µm	0.9~1.1 sec@50µm

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

Basic Clear

QTS Basic Clear resin generates highly transparent 3D printed models. You can print optical prototypes without yellowing effect during post-processing. With low shrinkage, the prints maintain high precision and durability.

Application

- > Optical Components
- > Electronic Hardware
- > Flow Apparatus

Resin Physical Properties:

Color	Clear
Density	1.1g / cm ³
Viscosity	100 ~ 210 cps @ 25 °C

Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan

Post Processing

This printed part requires post curing to achieve its ideal hardness and toughness.

- > Expose the printed parts in 365 ~ 405 nm UV for 10 minutes to an hour.
The time varies based on the thickness of the parts.



Post-Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore D Hardness	D2240		80D
Tensile Strength	D638	12 MPa	1.74 ksi
Young's Modulus	D638	610 MPa	88.5 ksi
Elongation	D638		18 %
Notched Impact Strength	D256	2.87 J/m	0.054 ft-lb/in
Glass Transition Temperature	DSC	60 °C	140 °F
Heat Deflection Temperature	D648 @0.46MPa	60 °C	140 °F

Description	Phrozen Sonic Mini mono-LCD	Phrozen XL Color-LCD	Miicraft 125 DLP
Bottom Layer	25 sec@50µm	50 sec@50µm	1 sec@50µm
Layers	10 sec@50µm	20 sec@50µm	2 sec@50µm

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

Model

QTS Model Series is compatible with 395 ~ 405 nm resin 3D printers, including DLP, LCD, and SLA models. It can be printed with fast curing speed and has flexible printing parameters to reduce production time. It has low shrinkage with excellent durability and high accuracy. It is suitable for wearables or miniatures with its rubber-like characteristic to reduce deformation upon impact. It can also be colored easily with acrylic paint. The smooth surface finish after post processing is comparable to that of molding.

Application

- > Product development prototyping
- > Electronics and sports wearables
- > Motion camera protection casing
- > Miniatures creation

Resin Physical Properties:

Color	White, Grey, Red, Yellow, Blue, and Black
Density	1.12 ~ 1.16 g / cm ³
Viscosity	300 ~ 330 cps @ 25 °C

Post Processing

This printed part requires post curing to achieve its ideal hardness and toughness.

- > Expose the printed parts in 365 ~ 405 nm UV for 10 minutes to an hour.
The time varies based on the thickness of the parts.

Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan



Post-Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore Hardness	D2240		75~77D
Tensile Strength	D638	36 MPa	5.2 ksi
Young's Modulus	D638	1.73 GPa	250.9 ksi
Elongation	D638		75~80 %
Notched Impact Strength	D256	45~55 J/m	0.84~1.03 ft-lb/in
Glass Transition Temperature	DSC	60 °C	140 °F
Heat Deflection Temperature	D648 @0.46MPa	65 °C	149 °F

Description	Phrozen Make Color-LCD	Phrozen Sonic mini-LCD	Miicraft 125 DLP
Bottom Layer	20~25 sec@50µm	10~12 sec@50µm	8~10 sec@50µm
Layers	6~8 sec@50µm	3~3.5 sec@50µm	0.9~1.1 sec@50µm

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

Dental Model

Dental Model is a UV-Curable resin that is compatible with 395 ~ 405 nm resin 3D printers. DLP, LCD, and SLA desktop models are applicable. It has low shrinkage with excellent strength and high accuracy. It enables accurate mating and it's perfect for dental printed parts.

Key Features

- > Low viscosity with great fluidity allows printing with high details.
- > Fast curing speed and easy to clean remaining resin on the printed parts.
- > The printed parts will have high accuracy and low shrinkage.
- > Great adhesion to the print bed and easy to remove.
- > The resin has great hardness and toughness to sustain impact.
- > Parts can be easily mated.

Application

- > Dentures Models
- > Braces
- > Orthodontics research models

Resin Physical Properties:

Color	White
Density	1.12 ~ 1.16 g / cm ³
Viscosity	150 ~ 250 cps @ 25 °C

Post Processing

This printed part requires post curing to achieve its ideal hardness and toughness.

- > Expose the printed parts in 365 ~ 405 nm UV for 10 minutes to an hour. The time varies based on the thickness of the parts.

Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan



Post-Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore Hardness	D2240		84~85
Tensile Strength	D638	29.75 MPa	4.31 ksi
Young's Modulus	D638	1.48 GPa	214.65 ksi
Elongation	D638		41.73 %
Notched Impact Strength	D256	36 J/m	0.674 ft-lb/in
Glass Transition Temperature	DSC	60 °C	140 °F
Heat Deflection Temperature	D648 @0.46MPa	65 °C	149 °F

Description	Phrozen Make Color-LCD	Phrozen Sonic mini-LCD	Miicraft 125 DLP
Bottom Layer	30~40 sec@50µm	15~25 sec@50µm	8~10 sec@50µm
Layers	8~10 sec@50µm	3~4.5 sec@50µm	0.9~1.1 sec@50µm

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

ENGR Strong

Engineering Strong creates high precision, tough, and low shrinkage parts to be suitable for various applications. It has low viscosity and could be printed with different combination of parameters to minimize production time. The designed mechanical properties can be achieved after curing process.

Application

- > Fasteners
- > Hand tools product development
- > Automobile interior parts
- > Cycling accessories
- > Props, miniature, and prototyping

Resin Physical Properties:

Color	White, Grey
Density	1.12 ~ 1.16 g / cm ³
Viscosity	150 ~ 250 cps @ 25 °C

Post Processing

This printed part requires post curing to achieve its ideal hardness and toughness.

- > Expose the printed parts in 365 ~ 405 nm UV for 10 minutes to an hour.
The time varies based on the thickness of the parts.
- > After curing, the color of the parts would dim. Leaving the parts in 70 °C oven for another hour to finish the curing.
The process is completed when the color is restored.

Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan



Post-Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore Hardness	D2240		85D
Tensile Strength	D638	57.21 MPa	8.3 ksi
Young' s Modulus	D638	2.75 GPa	398.85 ksi
Elongation	D638		23 %
Notched Impact Strength	D256	36 J/m	0.674 ft-lb/in
Glass Transition Temperature	DSC	60 °C	140 °F
Heat Deflection Temperature	D648 @0.46MPa	65 °C	149 °F

Description	Phrozen Make Color-LCD	Phrozen Sonic mini Mono-LCD	Miicraft 125 DLP
Bottom Layer	30~40 sec@50µm	15~25 sec@50µm	8~10 sec@50µm
Layers	8~10 sec@50µm	3~4.5 sec@50µm	0.9~1.1 sec@50µm

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

ENGR High Temp

Engineering High Temp creates high precision and rigid parts that can sustain up to 270 °C (518 °F) without deformation under external force. It has low shrinkage and excellent mechanical properties after post processing. It is perfect for various engineering application in high temperature environment.

Application

- > Reflow oven fixture for parts
- > Hand tools product development
- > High temp flow applications
- > Injection molds

Resin Physical Properties:

Color	Clear (Translucent Light Yellow)
Density	1.10 ~ 1.15 g / cm ³
Viscosity	230 ~ 270 cps @ 25 °C

Post Processing

This model requires post curing to achieve its ideal properties.

- > Expose the printed parts in 365 ~ 405 nm UV at 60 °C (140 °F) for an hour.
The printed parts would change its color from translucent light yellow to dark green.
- > Then, the parts need to be heat treated at 160 °C (320 °F) for two hours.
The color would return to translucent light yellow.
- > Once the entire parts return to its original color, the post processing (UV cure and thermal cure) is completed.

* Each post process duration varies based on the thickness of the object. Please adjust the curing time accordingly!

Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan



Post-Curing Mechanical Properties

Description	ASTM Method	UV Cure		UV Cure and Thermal Cure	
		Metric	Imperial	Metric	Imperial
Shore Hardness	D2240		82~84D		89~90D
Tensile Strength	D638	32.2 MPa	4.67 ksi	70.5 MPa	10.22 ksi
Young's Modulus	D638	1.545 GPa	224 ksi	3.38 GPa	490 ksi
Elongation	D638		2~3 %		6 %
Notched Impact Strength	D256	15.5 J/m	0.29 ft-lb/in	23.4 J/m	0.438 ft-lb/in
Glass Transition Temperature	DSC	75 °C	167 °F	245 °C	473 °F
Heat Deflection Temperature	D648 @0.46MPa	89 °C	192 °F	270 °C	518 °F

Description	Phrozen Make Color-LCD	Phrozen Sonic mini Mono-LCD	Miicraft 125 DLP
Bottom Layer	30~40 sec@50µm	15~25 sec@50µm	8~10 sec@50µm
Layers	8~10 sec@50µm	6 sec@50µm	0.9~1.1 sec@50µm

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

HD 4K

QTS HD 4K resin is a high-resolution UV curable resin for 3D printing. It is recommended to be used with 395 ~ 405 nm wavelength 3D printers. DLP, LCD, SLA printers are compatible. The resin enables high resolution printing. It can present detailed and smooth surface finishes and print small holes or fine surface texture. This resin has minimal shrinkage and can be cleaned easily with Magic Wash or IPA. High resolution miniatures are well suited for HD 4K resin.

Key Features

- > Low viscosity with detailed print result.
- > Low exposure time and can work with a wide range of printing parameters to save time.
- > Created with nano-disperse technology to reduce particle settlement and color flooding.
- > Great adhesion to the print bed and easy to remove.
- > Create great results with high resolution files. Pictures can be presented exceptionally.

Application

- > Avocation models
- > Intricate designs

Resin Physical Properties:

Color	Red, Grey
Density	1.1 ~ 1.15 g / cm ³
Viscosity	170 ~ 200 cps @ 25 °C

Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan

Post Processing

This printed part requires post curing to achieve its ideal hardness and toughness.

- > Expose the printed parts in 365 ~ 405 nm UV for 10 minutes to an hour.
The time varies based on the thickness of the parts.



Post-Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore Hardness	D2240		83D
Tensile Strength	D638	35.1 MPa	5.09 ksi
Young's Modulus	D638	1.58 GPa	229.16 ksi
Elongation	D638		13.8 %
Notched Impact Strength	D256	21.26 J/m	0.84~1.03 ft-lb/in
Glass Transition Temperature	DSC	71 °C	159.8 °F
Heat Deflection Temperature	D648 @0.46MPa	70 °C	158 °F

Description	Phrozen Make Color-LCD	Phrozen Sonic mini Mono-LCD	Miicraft 125 DLP
Bottom Layer	30~40 sec@50µm	15~25 sec@50µm	8~10 sec@50µm
Layers	8~10 sec@50µm	3~4.5 sec@50µm	0.9~1.1 sec@50µm

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

HD 8K

QTS 8K is a liquid UV-curable photosensitive resin, which is suitable for 3D molding equipment with a wavelength of 395~405nm, including DLP, LCD, and SLA desktop models. This material has ultra-high resolution, low shrinkage, No deformation, no warping and other characteristics, suitable for printing high-definition objects.

Characteristics

- > Moderate viscosity, good fluidity and ultra-high resolution.
- > Fast curing speed, wide printing parameters, saving printing time.
- > The resin is easy to clean and does not remain on the surface of the object, with clear holes and surface texture.
- > Add nano-meter materials to reduce the problems of sedimentation and floating separation.
- > With ultra-high resolution, it is suitable for printing composite objects with small size variation and extremely low shrinkage.
- > Great adhesion to the build plate.
- > After curing, the finished object can show excellent mechanical properties and the object is not easy to be damaged.
- > The surface of the printed object is in a matte state, and it can show perfect details when taking pictures with a camera.

Application

- > Ultra-high-resolution facial details
- > Anime character model
- > Product design and development appearance samples
- > Jewelry Seiko Objects

Post Processing

- > This material must undergo sufficient post-curing treatment after molding to achieve the best mechanical properties and surface dry anproperties.
- > UV post-curing in the 365~405nm light box for 10~60 minutes (depending on the color and thickness of the material, the thicker the thickness, the longer the post-curing time is required). It is not enough to use sunlight as the post-curing.

Post-Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore Hardness	D2240		85D
Tensile Strength	D638	56.84 MPa	8.24 ksi
Young's Modulus	D638	2.72 GPa	395 ksi
Elongation	D638		21.74 %
Notched Impact Strength	D256	14.79 J/m	0.277 ft-lb/in
Glass Transition Temperature	DSC	79 °C	174 °F
Heat Deflection Temperature	D648 @0.46MPa	77 °C	171 °F

Resin Physical Properties:

Color	Brown
Density	1.1 g / cm ³
Viscosity	350 ~ 360 cps @ 25 °C

Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan



* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

Flex 52D

QTS Flex 52D creates rubber-like parts with high elongation to produce any prototypes that require flexibility. Flex 52D can be used on DLP, LCD, and SLA printers with 395 ~ 405 nm wavelength. It cures with minimal yellowing after post processing to allow effective handling of the parts. It is durable and stretches well to allows its application on repeated motion.

Key Feature

- > Low viscosity with great fluidity allows printing with high details.
- > Fast curing speed and easy to clean remaining resin on the printed parts.
- > The printed parts will have high accuracy and low shrinkage.
- > Great adhesion to the print bed and easy to remove.
- > The resin has great hardness and toughness to sustain impact.
- > Parts can be easily mated.

Application

- > Soft and flexible parts
- > Gaskets and seals
- > Wearables electronics
- > Anatomical and medical models
- > Props and prototyping

Resin Physical Properties:

Color	Clear (Translucent Light Yellow)
Density	1.2 ~ 1.16 g / cm ³
Viscosity	140 ~ 180 cps @ 25 °C

Post Processing

This printed part requires post curing to achieve its ideal hardness and toughness.

- > Expose the printed parts in 365 ~ 405 nm UV for 10 minutes to an hour.
The time varies based on the thickness of the parts.

Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan

Post-Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore Hardness	D2240		52D
Tensile Strength	D638	2.7 MPa	0.392 ksi
Young' s Modulus	D638	2.6 MPa	0.377 ksi
Elongation	D638		>100 %
Energy Return	Internal		40-50 %
Glass Transition Temperature	DSC	60 °C	140 °F
Heat Deflection Temperature	D648 @0.46MPa	60 °C	140 °F



Description	Phrozen Make Color-LCD	Phrozen Sonic mini Mono-LCD	Miicraft 125 DLP
Bottom Layer	60 sec@50µm	25~30 sec@50µm	10~12 sec@50µm
Layers	16 sec@50µm	8~10 sec@50µm	1.6~1.7 sec@50µm

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

Flex 57A

QTS Flex 57A creates rubber and TPU-like parts with high resilience and low odor to meet requirement on excellent elasticity. This resin can be used on DLP, LCD, and SLA printers with 395 ~ 405 nm wavelength. It is suited for applications like shoe sole or elastic parts.

Application

- > Soft and flexible parts
- > Gaskets and seals
- > Wearables electronics
- > Anatomical and medical models
- > Props and prototyping

Resin Physical Properties:

Color	Clear (Translucent Light Yellow)
Density	1.2 ~ 1.16 g / cm ³
Viscosity	500 ~ 750 cps @ 25 °C

Post Processing

This printed part requires post curing to achieve its ideal hardness and toughness.

- > Expose the printed parts in 365 ~ 405 nm UV for 10 minutes to an hour.
The time varies based on the thickness of the parts.

Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan

Post-Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore Hardness	D2240		57A
Tensile Strength	D638	2.5 MPa	0.363 ksi
Young' s Modulus	D638	2.6 MPa	0.377 ksi
Elongation	D638		>80 %
Energy Return	Internal		56 %
Glass Transition Temperature	DSC	60 °C	140 °F
Heat Deflection Temperature	D648 @0.46MPa	60 °C	140 °F



Description	Phrozen Make Color-LCD	Phrozen Sonic mini Mono-LCD	Miicraft 125 DLP
Bottom Layer	60 sec@50µm	25~30 sec@50µm	10~12 sec@50µm
Layers	16 sec@50µm	8~10 sec@50µm	1.6~1.7 sec@50µm

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

PP Like

QTS PP-Like resin provides high dimensional accuracy and smooth surface finish. The translucent nature of this resin can be polished with sandpaper and applied with a layer of varnish to achieve transparency. PP-Like Resin is ideal for creating prototypes that need both hardness and flexibility.

Key Features

- > Low viscosity with efficient workflow.
- > High accuracy and smooth surface finish.
- > Low odor before and after printing.
- > Cleans well with Magic Wash Plus or other detergent.

Post Processing

This printed part requires post curing to achieve its ideal hardness and toughness.

- > Expose the printed parts in 365 ~ 405 nm UV for 10 minutes to an hour.
The time varies based on the thickness of the parts.

Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan

Post-Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore Hardness	D2240		66~70D
Tensile Strength	D638	20~25 MPa	2.9~3.63 ksi
Flexural Modulus	D2240	900~950 MPa	131~138 ksi
Elongation	D638		40%
Glass Transition Temperature	DSC	60 °C	140 °F
Heat Deflection Temperature	D648 @0.46MPa	60 °C	140 °F

Description	Phrozen Make Color-LCD	Phrozen Sonic mini Mono-LCD	Miicraft 125 DLP
Bottom Layer	40~50 sec@50µm	25~30 sec@50µm	10~12 sec@50µm
Layers	10~12 sec@50µm	6 sec@50µm	1.1~1.3 sec@50µm

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

Application

- > Lighting prototypes
- > Product development
- > Ornaments

Resin Physical Properties:

Color	Clear
Density	1.2 ~ 1.16 g / cm ³
Viscosity	200 ~ 300 cps @ 25 °C



Clear

Casting Pro

The QTS Casting Pro resins prints in high accuracy to present the intricate details on jewelry designs. With the wax-like characteristics, Casting Pro can achieve extremely low ash residue and low shrinkage. Along with the short curing time on LCD or DLP printers, Casting Pro is one of the most suitable solutions for casting professionals.

Application

- > Jewelry production
- > Dental applications
- > Precision metal casting

Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan

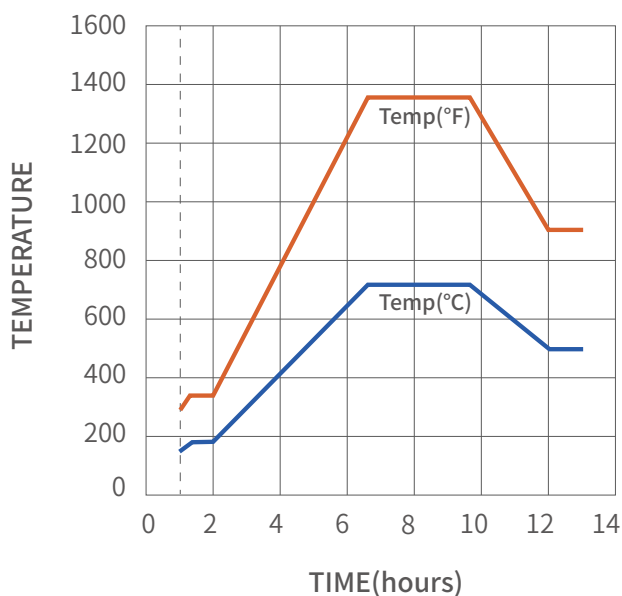
Resin Physical Properties:

Color	Black
Density	1.2 ~ 1.16 g / cm ³
Viscosity	400~500 cps @ 25 °C
Wax-filled	20%



Post-Curing Mechanical Properties

Description	Test Method	Metric	Imperial
Ash Rate	ASTM E 1131	0~0.01%	
Temperature @ 5% Mass Loss	ASTM E 1131	252 °C	486 °F
Shore Hardness	ASTM D2240	75D	
Tensile strength	ASTM D638	20 Mpa	2.9 ksi
Youngs modulus	ASTM D638	0.4 GPa	58 ksi
Elongation	ASTM D638	10~15%	
Linear shrinkage	ASTM C356	0.1%	
Coefficient of thermal expansion	ASTM E831	138*10 ⁻⁶ /K~151*10 ⁻⁶ /K	



Recommended Burnout Cycles

Preheat	300°F/hr	167°C
Insert Flask	300°F	167°C
Ramp	100°F/hr	56°C/hr
Hold	350°F /30min	177°C /30min
Ramp	210°F/hr	117°C/hr
Hold	1350°F /3hr	732°C /3hr
Ramp	-200°F/hr	-111°C/hr
Hold	900°F /1hr	482°C /1hr

Recommended Investment:
R&R Plasticast with BANDUST

AS Beige

Anti-Scratch series is a photosensitive resin designed specifically for contact-driven models. Joints, fasteners, or gearsets are among the popular usage for this material. The surface quality results in a smooth texture that can avoid extensive marks. The resin is compatible with printers using LCD, DLP, or SLA technology with the wavelength between 395 to 405 nm.

Application

- > Anime character model
- > Character head sculpture
- > Female body skin appears

Resin Physical Properties:

Color	Complexion liquid
Density	1.10 ~ 1.15 g / cm ³
Viscosity	300 ~ 350 cps @ 25 °C

Product Specifications

Package Size	500g
Country of Origin	Taiwan

Characteristics

- > Moderate viscosity, good fluidity, and clear printing details.
- > Fast curing speed, wide printing parameters, saving printing time.
- > Easy to clean, cave and surface texture are perfectly presented.
- > Add nano-meter materials to reduce the problems of sedimentation and floating separation.
- > Great adhesion to the build plate.

Post-Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore Hardness	D2240		81D
Tensile Strength	D638	31.1 MPa	4.51 ksi
Young's Modulus	D638	1.49 GPa	216 ksi
Elongation	D638		30.38 %
Notched Impact Strength	D256	30.4 J/m	0.57 ft-lb/in
Glass Transition Temperature	DSC	71 °C	160 °F
Heat Deflection Temperature	D648 @0.46MPa	70 °C	158 °F

Print parameters range (@Mighty 4K 9.3")

Bottom Layer (4~6 of layer)	20 ~ 30 S
Normal Layer (0.05mm)	3.0 ~ 3.5 S
Lift and return speed	60/60/150 (mm/min)
Lift height	6 ~ 7 mm
Turn off the light delay	12 ~ 14 S
UV Light power	80 ~ 100%
Transition Layer	6

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.



Stone

QTS STONE is a Stone-like liquid UV-curable photosensitive resin, which is suitable for 3D molding equipment with a wavelength of 395~405nm, including DLP, LCD, and SLA desktop models. As long as normal printing is required, this material can present the texture of natural stone, which is suitable for printing stone carvings or handicrafts requiring stone texture.

Characteristics

- > Moderate viscosity, good fluidity, easy to print.
- > Fast curing speed and wide printing parameters.
- > It is easy to clean, the resin does not remain on the surface of the object, and the natural luster of the stone is presented.
- > Great adhesion to the build plate.
- > After the finished product is cured, it has excellent mechanical properties and is not easy to break.
- > After the object is formed, the texture and luster are directional, comparable to natural stone carvings.

Application

- > Arts and crafts creation
- > Architectural models

Resin Physical Properties:

Color	Grey, Dark Grey
Density	1.13 ~ 1.2g / cm ³
Viscosity	300 ~ 350 cps @ 25 °C

Product Specifications

Package Size	500g / 1kg
Country of Origin	Taiwan

Post-Curing Mechanical Properties

Description	ASTM Method	Metric	Imperial
Shore Hardness	D2240		77
Tensile Strength	D638	50 MPa	7.25 ksi
Young's Modulus	D638	2.48 GPa	360 ksi
Elongation	D638		20 %
Notched Impact Strength	D256	25 J/m	0.47 ft-lb/in
Glass Transition Temperature	DSC	62 °C	144 °F
Heat Deflection Temperature	D648 @0.46MPa	62 °C	144 °F



Stone Recommended Parameters(@50µm)

	Anycubic Mono (2K)	Anycubic Mono X(4K)	Phrozen Mighty
Bottom Layer	3 Layer* 30 S	3 Layer* 30 S	3 Layer* 35~40S
Layers	1.8~2.0 S	1.2~1.5 S	3.2~3.5 S
Light off delay	5~6 S	5~6 S	16 S
Light power	100%	100%	100%

* The post-curing mechanical properties were obtained by testing specimens printed with Phrozen Sonic Mini 4K.

光固化樹脂基本物性

液體材料的物理性能：

顏色 流動液體

密度 1.13~1.2 g/cm³

黏度 300 ~ 350 cps@25°C

成型固化後材料機械性能

測試項目	測試方法	物性數值
硬度 Shore D	ASTM D2240	77
拉伸強度 Mpa	ASTM D638	50 MPa
拉伸模數 Mpa	ASTM D638	2480 MPa
斷裂延長率 %	ASTM D638	20 %
缺口衝擊強度	ASTM D256	25 J/m
Tg 玻璃轉移溫度 °C	ASTM DSC	62 °C
HDT 熱變形溫度 °C	ASTM D648 @0.46MPa	62 °C

Stone 建議參數 (@50µm)

	Anycubic Mono (2K)	Anycubic Mono X(4K)	Phrozen Mighty
底層	3層x 30S	3層x 30S	3層x 35~40S
一般層	1.8~2.0 S	1.2~1.5 S	3.2~3.5 S
滅燈延時	5~6 S	5~6 S	16 S
光源功率%	100%	100%	100%

Stone 建議參數 (@50µm)

Anycubic Mono (2K)	Anycubic Mono X(4K)	Phrozen Mighty
3層x 30S	3層x 30S	3層x 35~40S
1.8~2.0 S	1.2~1.5 S	3.2~3.5 S
5~6 S	5~6 S	16 S
100%	100%	100%

光固化樹脂基本物性

液體材料的物理性能：

顏色 流動液體

密度 1.1 g/cm³

黏度 350 ~ 360 cps@25°C

成型固化後材料機械性能

測試項目	測試方法	物性數值
硬度 Shore D	ASTM D2240	85D
拉伸強度 Mpa	ASTM D638	56.84 MPa
拉伸模數 Mpa	ASTM D638	2720 MPa
斷裂延長率 %	ASTM D638	21.74 %
缺口衝擊強度	ASTM D256	14.79 J/m
Tg 玻璃轉移溫度 °C	ASTM DSC	79 °C
HDT 熱變形溫度 °C	ASTM D648 @0.46MPa	77 °C

底層曝光時間：25 sec

層間曝光時間：9-10 sec

曝光間斷時間：8 sec

後固化光源：LED-UV405nm

後固化時間：30 min

MODEL PROPERTIES

Liquid Resin Physical Properties :

Color Clear

Density 1.1 g / cm³

Viscosity 100~210 cps @ 25 °C

POST CURING MECHANICAL PROPERTIES

Description	ASTM Method	Metric
Shore D Hardness	D2240	80
Tensile Strength	D638	12 MPa
Young's Modulus	D638	610 MPa
Elongation	D638	18 %
Notched Impact Strength	D256	2.87 J/m
Glass Transition Temperature	DSC	60 °C
Heat Deflection Temperature	D648 @0.46MPa	60 °C

Print parameters range (@Mighty 4K 9.3")

Bottom exposure time	25 Sec
Interlayer exposure time	9~10 Sec
Exposure interruption time	8 Sec
Post-curing light source	LED-UV405nm
Post-curing time	30min

Basic-CP Recommended Parameters(@50µm)

	Anycubic Mono(2K)	Anycubic Mono X(4K)	Phrozen Mighty
Bottom Layer	3 Layer* 30 S	3 Layer* 30 S	3 Layer* 35~40 S
Layers	1.8~2.0 S	1.2~1.5 S	3.2~3.5 S
Light off delay	5~6 S	5~6 S	16 S
Light power	100%	100%	100%