



Introduction

The Crestaform[®] Rapid 8K is optimised for high reactivity and positive feature build-up while minimising depth of cure to unlock the potential of next generation 8K LCD and DLP 3D printers and create intricate details.

Crestaform[®] Rapid 8K comes with the following benefits:

- Excellent mechanical performance
- High reactivity and printing speed
- Rigorously tested to ensure optimal performance
- Globally available technical support
- Reputable manufacturer with over 100 years of experience and expertise

Typical printing parameters*

Printer Type	LCD, DLP
Printer Wavelength (nm)	405
Layer Height (µm)	25 - 50
Printing Temperature (°C)	18 - 30
Base Layer Exposure Time (sec)	20 - 40
Normal Layer Exposure Time (sec)	2.0 - 3.0

* For DLP printers, it is recommended that light power is reduced to around 2.5mW/cm²

* It is recommended that 3D resin exposure finder test prints are undertaken to find optimum cure settings

Recommended cleaning

- Soak the print in a clean isopropanol (IPA) (or similar solvent) bath for a minimum of 5 minutes. Alternatively, rinse the part with IPA until all the visible uncured resin has been removed. Reusing IPA in multiple cleans can reduce the cleanliness and clarity of a print
- Leave the print to dry off any residual solvent prior to post-curing

Recommended post-curing

- Post-cure as soon as possible after completion of printing
- Post-cure every print for a minimum of 2 minutes under a dedicated curing UV light operating at 405nm wavelength. Alternatively, leave the print to cure for a minimum of 2 hours under direct sunlight
- Temperature-assisted UV curing will increase the rigidity of the print. It can also be used to initiate shrinkage to improve the quality of negative features. Temperature-assisted UV curing will increase the rigidity of the print

Instructions to use the Crestaform[®] Rapid 8K resin:

- Always shake or mix the resin thoroughly before use. This is especially true for Crestaform Rapid 8K as pigment heterogeneity will affect print quality
- Open the container and pour the appropriate amount of resin into the tank according to the size of the printer model
- Make sure to not spill the resin onto the printer, LCD screen or anywhere outside of the resin tank
- If not used for a long time, please filter the resin and pour the resin into the storage container



Physical properties

	Values	Description
Viscosity (Poise)	1.7 – 2.2	ICI Viscosity @ 25°C
Liquid Density (g/cm ³)	1.05 – 1.07	-
Colour Options	-	Black, Grey

Mechanical properties

Typical properties below: Mechanical Testing Specimen Print Orientation - 50°

	Values	Description
Tensile strength (MPa)*	33	ISO 527-2 Type 5A
Tensile modulus (GPa)*	1.4	ISO 527-2 Type 5A
Elongation at break (%)*	5.0	ISO 527-2 Type 5A
Flexural strength (MPa)*	52	ISO 178
Flexural modulus (GPa)*	1.3	ISO 178
Hardness (Shore)*	79D	ISO 868
Heat deflection temperature (°C)*	46	ISO 75-2, Method A (1.8 MPa)

* 16 mins at 60°C + 405nm UV Post Cure for cured properties

Compatibility

Crestaform® Rapid 8K has been optimised for printers with a 405nm wavelength light source and a light intensity in the region of 2-3mW/cm². Such as:

- Anycubic Photon Ultra
- Phrozen Sonic 8K Series
- Elegoo Saturn 8K



Crestaform®

High performance 3D printing resins



✓ Do

- Always wear Personal Protection Equipment (PPE), protective eyewear and chemical nitrile gloves when handling resin
- Shake the resin well every time before you use it or decant from the container
- If spilled, please clean the spill immediately with paper towel, and Isopropanol (IPA)
- Store it in its original container at room temperature, away from children, untrained personnel, direct or indirect sunlight, heat sources, sparks and open flames
- Use it in well ventilated rooms
- Use every sensible preventive precaution to avoid skin contact, spillage of resin, eye contact or swallowing. Make note of Local Poison Centres availability

X Do not

- Expose resin to direct or indirect sunlight, UV light, heat sources, sparks and open flame while handling and storing the resin
- Touch the resin with bare hands. Always wear appropriate gloves. If skin contact occurs, wash it with soapy water. If you feel unwell, please consult immediately medical assistance
- Swallow the resin or printed objects
- Expose to children or pets
- Handle before completing training
- Expose persons sensitive to the resin components – please see Material Safety Datasheet
- Inhale the resin fumes. Use only in well ventilated rooms or areas
- Pour the resin or used IPA into the draining system

Storage

Crestaform® Rapid 8K should be stored in the dark, in suitable, closed containers. It is recommended that the storage temperature should be between 15°C and 35°C. Ideally, containers should be opened only immediately prior to use. Keep out direct light/sunlight.

Packaging

Crestaform® Rapid 8K is supplied in 500 g and 1000 g bottles. Bulk supply available.

Health and safety

Please see separate Safety Data Sheet.

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