

XTC-3D™ PRINT

Clear UV Cure 3D Printing Resin

EASY TO TINT!
PLATINUM SILICONE
COMPATIBLE!



www.smooth-on.com

PRODUCT OVERVIEW

XTC-3D™ PRINT is a clear general-purpose UV cure 3D print resin. The resin can be printed with any LCD, DLP or SLA, printer that uses a light source in the 365-405 nm frequency range. XTC-3D™ PRINT has a viscosity of 150-200 cps, is fast printing (3.5 seconds per layer), and is capable of holding very fine detail with high accuracy and minimal shrinkage. XTC-3D™ PRINT is easy to tint with SO-Strong™ colorants or UVO™ pigments and has a low-odor formula. When printed, it forms a hard & durable 82 shore D urethane resin. XTC-3D™ PRINT has a high printing success rate. Fully post-cured XTC-3D™ PRINT is also platinum silicone compatible when a suggested silicone & proper post-cure procedure is followed.

XTC-3D PRINT IS LIGHT SENSITIVE

*Avoid unintentionally exposing the resin to light.
Resin should be stored at 73°F (23° C).*

*Whenever handling the resin in its uncured liquid form, protective gloves and eye wear should be worn.
Vinyl gloves are recommended.*

WORKING FEATURES & BENEFITS

- **LOW ODOR FORMULA**
- **CAN BE MOLDED WITH PLATINUM CURE SILICONE**
- **CAN BE TINTED WITH SO-STRONG™ COLORANTS OR UVO™ PIGMENTS**
- **FAST PRINTING**
- **LOW SHRINKAGE**
- **STRONG & DURABLE**
- **HOLDS DETAIL WELL**
- **HIGHLY ACCURATE**

PROCESSING RECOMMENDATIONS

3D PRINTER PREPARATION

XTC-3D™ PRINT will work with any printer that uses a light source in the 365-405 nm frequency range. Refer to your printer's instructions and/or manufacture to ensure your printer meets this minimum standard before proceeding.

Before dispensing the resin a visual inspection should be made of your printer and its vat to ensure the FEP film is free of any obvious wrinkles or damage and that it is clear, not frosted in color. If there are any signs of damage replace the FEP film according to the manufacturer's instructions before proceeding.

Also, make sure there are no signs of dirt or residue on the surface of the printers glass screen. If there is, clean it thoroughly before proceeding.

TINTING XTC-3D™ PRINT-OPTIONAL

Tinting a Bottle - Shake bottle thoroughly before adding colorant. Add SO-Strong™ colorants or UVO™ pigments to the resin and shake well to create desired color. Shake bottle thoroughly before dispensing each time to ensure consistent coloration. **DO NOT** add more than 5 drops total per full bottle of resin. Tinting the resin may increase print times.

Tinting in Vat - The resin may also be tinted directly in the vat. Add one drop of SO-Strong™ or UVO™ at a time to a full vat and use a plastic spatula to carefully mix it into the resin. **DO NOT** add colorant directly to an empty vat, doing so may stain your FEP film. Once the desired tint is reached and has been mixed to a consistent color, the resin is ready to be printed. Be sure to re-mix before each print. **Failure to mix fully may result in failed prints.**

RECOMMENDED PRINTER SETTINGS

Bottom Layer Count:	4
Exposure Time:	3.5 Sec.
Bottom Exposure Time:	35 Sec.
Transition Layer Count:	8
Bottom Lift Distance:	6.000 + 7.000 mm
Lifting Distance	3.000 + 4.000 mm
Lifting Speed:	65.000 + 180.000 mm/min.
Retract Speed:	180.000 + 65.000 mm/min.

PRINTING WITH XTC-3D™ PRINT

For optimal results, XTC-3D™ PRINT should be printed in an environment that is 73-86 °F (23-30 °C). We do not recommend printing in cooler temperatures.

Printing in temps below 73 °F (23 °C) will increase the chance of a failed print. DO NOT print if room temperature is 60 °F (16 °C) or lower.

Our recommended printer settings in the chart to the left are a starting point to print with XTC-3D™ PRINT and will work with many printers. However, resin printers vary. Please refer to your printer and your preferred slicer for more information regarding base settings that work well with your particular printer. It may take some test prints and experimentation to find the optimal settings for your brand/model printer.

Note - SO-Strong™ and UVO™ come in multiple colors which can be combined to form custom colors.

Safety First!

The Safety Data Sheet (SDS) for this or any Smooth-On product should be read before using and is available on request. All Smooth-On products are safe to use if directions are read and followed carefully.

Keep Out Of Reach Of Children. DO NOT ingest.

Avoid direct skin contact. Wash immediately if resin touches skin.

IMPORTANT: The information contained in this bulletin is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained from the use thereof, or that any such use will not infringe upon a patent. User shall determine the suitability of the product for the intended application and assume all risk and liability whatsoever in connection therewith.

CLEANING A 3D PRINT

For best results clean your parts by hand with 91% or higher isopropyl alcohol followed by a water rinse.

DO NOT soak your print for extended periods of time in the alcohol. The print should be dipped in the isopropyl alcohol to wet it, then use a soft bristle brush to remove any uncured resin. Take your time cleaning the part, ensuring that you thoroughly remove all uncured resin during the cleaning process. Uncured resin can damage the part over time and inhibit platinum silicone when molding or casting.

Hollow Prints - The inside surface of hollowed prints must also be cleaned thoroughly and free of uncured resin to avoid inhibition when molding.

Visually inspect the part to ensure there is no uncured resin in any details or creases on the print. Uncured resin can appear shiny or as a white haze compared to clean resin which will be more matte in appearance.

Once the part has been thoroughly cleaned with isopropyl alcohol, dip the print into a water bath and use a clean brush to rinse the alcohol away. If uncured resin persists, rinse a second time in isopropyl alcohol, followed by water.

BASIC CURING

Once air dried, place your print in a UV chamber or expose to direct sunlight to cure it. XTC-3D™ PRINT only needs to cure in a UV chamber or direct sunlight for 3-5 minutes if you do not intend to mold with or cast platinum cure silicone into it.

POST CURING - MOLDING

XTC-3D™ PRINT must be post-cured to enable molding it with a platinum cured silicone. Failure to do so will inhibit the cure of the silicone. Using one of our recommended silicones will ensure the best chance of success. (See chart below)

After the print has been properly cleaned, the part needs to then be fully submerged in a clear container filled with warm to the touch water which is then placed into a UV cure chamber or direct sunlight for a minimum of 5-6 hours.

Model Configuration - The color, size, shape and thickness of your model will affect the time needed for a proper post-cure. A more opaque, thicker walled model or one that has deep recesses that will be difficult for light to fully penetrate will need a longer post-cure than the recommended minimum 5-6 hrs. to ensure success.

While post curing, the print needs to remain under water and should be turned several times to ensure the UV light reaches all surfaces of the print and that all deep recesses or undercuts are exposed to full direct light for a number of hours. The more detailed the print, the more it should be turned and the longer time it will need to post cure. Once post cured, the print may be removed from the water, dried and prepared to be molded. If the print itself is the mold it should be ready to use at this point. Some silicones can occasionally bond to XTC-3D™ PRINT.

To Avoid Bonding - We strongly recommend using Ease Release™ 200 or 205 on the print before molding or casting into it to ensure the platinum cure silicone used does not bond to the print.

COMPATIBLE PLATINUM CURE SILICONES

After following the post-curing schedule for XTC-3D™ PRINT, the following platinum silicones are compatible for molding and casting.*

DRAGON SKIN™

10, 20 NV, FX PRO

ECOFLEX™

5, 00-20, 00-30, 00-33AF, 00-35

EZ-BRUSH™

VACUUM BAG SILICONE

MOLD STAR™

15, 16, 30, 14T, 19T, 20T, 22T, 31T, 40T

REBOUND™

25, 40

SMOOTH-SIL™

950, 960

SOLARIS™

SORTA-CLEAR™

40

*** WHEN PROPER
POST CURE
PROCEDURE
IS FOLLOWED.**

Note - As mentioned in the post-curing section, the more complicated your print the more time that may be needed to fully post-cure the print. If you experience slight inhibition after following the post-cure procedure you may need to post-cure the print longer than the recommended minimum of 5-6 hours.

After demolding, if the surface of your rubber is tacky, in most cases it can be eliminated by heating the casting to 150 °F (60 °C) for 5 hours.

Call Us Anytime With Questions About Your Application.

Toll-free: (800) 381-1733 Fax: (610) 252-6200

www.smooth-on.com is loaded with information about mold making, casting and more.

