



XactCure™

Process Control for UV Cured Inkjet Printers Medical and Healthcare

UV cured inkjet inks are in a liquid form when applied to the product or packaging, before being cured to a solid state using an LED UV lamp.

For healthcare applications it is critical that the ink is correctly cured, to ensure no residue liquid can possibly migrate through the packaging material, without the ink being over cured.

XactCure is a process that is integrated into the Greydon Genesis printer to control and record every aspect of the curing process, taking all of the many variables into account.

XactCure works before production, during production and has extensive reporting capabilities for your lot/batch records.

Variables Monitored by XactCure Include:

- Line, substrate and printhead speeds
- LED UV lamp output
- Artwork composition
- Ink drop size
- UV ink used

Before production	During production	After production
Process parameters analysis	Monitor key parameters	Log parameters used
Automatically choose optimal parameters	Adjust parameters to actual conditions	Create reports
Prevent start of production if parameters do not result in a safe-context	Prevent changes that will result in production out of safe-context	

Before production begins, XactCure carries out an extensive analysis of the application to ensure all parameters are within predetermined safe limits.

Before production	
Process parameters analysis	<ul style="list-style-type: none"> ○ Line speed ○ UV Lamp output ○ Artwork composition ○ Drop size ○ UV ink used
Automatically choose optimal parameters	Greydon's XactCure™ algorithm calculates the optimal parameter values to achieve: <ul style="list-style-type: none"> ○ Best UV curing (no undercuring, no overcuring) ○ Apply company specific safety margin
Prevent start of production if parameters do not result in a safe-context	Disallow start of production runs that do not meet company set safety margins and criteria.

During your production run, XactCure constantly monitors the printing parameters to ensure that the process is always within the validated Safe Window/Context.

XactCure keeps your process safe by not allowing manual adjustments to be made during production that might result in moving outside of the Safe Window.



During production

Monitor key parameters	Monitor for changes in Line speed, UV power, or artwork composition (if dynamic)
Adjust parameters to actual conditions	Automatically adjust some parameters to maintain process inside the Safe Window
Prevent changes that will result in production out of safe-context	Disallow running changes that will make the process fail, avoiding production stalls



Keeping accurate lot/batch records is an important part of your GMP process and XactCure reports ensure that a complete record of your printing process parameters is maintained.

After production

Log parameters used	The system creates and stores a running history of the parameters used in production, allowing recall of the parameter set for future production runs
Create reports	All the parameters used are exportable in user definable reports, loaded into external database or monitoring systems or available for official audits

XactCure is available with Genesis, Greydon's digital inkjet printer specially designed for medical device and other healthcare companies.

Greydon printers are built specifically to meet the high quality print and operational demands of the industry and allow for compliance with all regulatory requirements such as UDI and 21 CFR.