Print-Parameters InovaPrint

Printing parametes recommendation: depending on the type of printer and individual expertise, the parameters can be individually adjusted and optimised.

All **InovaPrint** resins are compatible with all open source LCD and DLP in the range of 385 - 420nm

Preparations before starting to print:
- shake the bottle well for 2 minutes before each use
- after shaking the bottle, leave the resin for 10 minutes to let air bubbles get out of the resin
- the resin can be poured back from the vat into the bottle once your print is finished
- always use protective measurements like safety glasses and nitrile gloves when handling resins

General suggestions for getting a good printing result:
* The more volume (weight) the print object has, the more burn in layers are suggested to be used.
* We suggest to hollow your print objects always - wall thickness of 2,5 mm is suggested to decrease the adhesion with the FEP film.
* Always keep in mind: the bigger the surface touching the FEP film per layer - the bigger the risk of failures due to high adhesion not releasing the object.
 -> The bigger the surface - the bigger the lift height after print in mm.
* We recommend the cleaning process with **InovaPrint wash: …** safe, fast and economic avoiding white marks on the printed objects.
* Cure your models in a high power curing chamber for approximately 20-30 minutes at 65° C - The preferred curing wavelength is between 385-420nm
* If needed, cure your castables/pressables in a high power curing chamber with max. 80% power for approximately 10 minutes at 30° C - The preferred curing wavelength is between 385-420nm

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3D printed models

HPdent recommends a resolution of 50 µm to print a high quality/precise model (print-results will be more precise or at least equivalent to class IV plaster model)

Colors/Resin		LCD technology	Examples of printers	Layer Thickness µm	Base Layers Exposure Time sec.	Number of Base Layers	Base Exposure Off Time sec.	Exposure Off Time sec.	Layers Exposure Time sec.	Lift Height mm	Lift Speed mm/sec.	Lowering Speed mm/sec.
	InovaPrint orca | black opaque | model	Standard RGB LCD Panel	Ackuretta Freshape 120/Dentiq, Anycubic Photon/Photon S, Phrozen	50	140	8	2	2	14.5	8	130	100
	InovaPrint orca | black opaque | model	Monochrome LCD Panel	Anycubic Photon Mono, Phrozen Mono	50	20-50	8	3	1 - 2	2	8	60	60
	InovaPrint beluga | white opaque | model	Standard RGB LCD Panel	Ackuretta Freshape 120/Dentiq, Anycubic Photon/Photon S, Phrozen	50	140	8	2	1	13.5	8	130	100
	InovaPrint beluga | white opaque | model	Monochrome LCD Panel	Anycubic Photon Mono, Phrozen Mono	50	20-50	8	3	1 - 2	2	8	60	60
	InovaPrint dolphin | grey opaque | model	Standard RGB LCD Panel	Ackuretta Freshape 120/Dentiq, Anycubic Photon/Photon S, Phrozen	50	140	8	2	1	13.5	8	130	100
	InovaPrint dolphin | grey opaque | model	Monochrome LCD Panel	Anycubic Photon Mono, Phrozen Mono	50	20-50	8	3	1 - 2	2	8	60	60

Print-Parameters InovaPrint

Printing parametes recommendation: depending on the type of printer and individual expertise, the parameters can be individually adjusted and optimised.

Print & press or cast InovaPrint Ocean-blue												
Colors/Resin		LCD technology	Examples of printers	Layer Thickness µm	Base Layers Exposure Time sec.	Number of Base Layers	Base Exposure Off Time sec.	Exposure Off Time sec.	Layers Exposure Time sec.	Lift Height mm	Lift Speed mm/sec.	Lowering Speed mm/sec.
	InovaPrint ocean | blue translucent | press `n cast	Standard RGB LCD Panel	Ackuretta Freshape 120/Dentiq, Anycubic Photon/Photon S, Phrozen	50	130	5	2	1.5	10.5	6	130	100
	InovaPrint ocean | blue translucent | press `n cast	Monochrome LCD Panel	Anycubic Photon Mono, Phrozen Mono	50	50-60	5	3	1	3	6	90	150

Printparameters for Asiga printers & Ackuretta Sol are soon included in their libraries.

Mechanical properties of InovaPrint resins for model preparation (beluga-white, dolphin-grey, orca-black)

Test objects (ASTM method) printed and cured 30 minutes with high power LED at 65°C
(values may vary depending on individual setting of 3D printers and post-curing process)

Elasticity modulus:	2,1 GPa
Flexural strength:	82 MPa
Tensile modulus:	1,9 GPa
Tensile strenght:	55 MPa
Shore D hardness:	84

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Water sorption:	0.38%

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