



## RESIN GUIDE

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1. Open platform.
2. Unrivalled properties.
3. Create standards.

atum3D combines in-house expertise in the fields of hardware engineering, chemical material properties and software to create 3D excellence for your specific application. Our open platform DLP Station range and proprietary Resin Tray coating allows us to give you unbiased advice on the best resin for your application. Working closely with leading resin suppliers, we're on the forefront of new resin developments. This Resin Guide contains a random selection of popular resins to give you an idea about the possibilities.

**atum 3D**

3D Manufacturing Excellence

Tell us your application and we'll help you find the resin that offers the best fit with your desired material properties. Can't quite find the right combination of properties? With the atum3D Material R&D Service, our team is your partner in searching for or even creating the specific resin you're looking for. We can often adjust hardware settings or work together with resin suppliers to provide the print speed, detail or mechanical properties your application requires.

#### DLP STATION 5-365 (EXZ) Manufacturing

<b>Resin</b>	Addigy®	ST-45	Diabeam™
<b>Appearance</b>	Transparent	Transparent	Transparent
<b>Curing wavelength (nm)</b>	365	365-405	365
<b>Liquid density (g/cm3)</b>	N/A	1,2	1,1 @ 25°C
<b>Viscosity (mPa.s)</b>	N/A	80 @ 30°C	2850 @ 25°C
<b>Hardness (Shore)</b>	N/A	D81	D80
<b>Tensile strength (Mpa)</b>	N/A	62	30-40
<b>Tensile modulus (Mpa)</b>	N/A	2300	700-1200
<b>Elongation at break (%)</b>	N/A	25	50-94
<b>Flexural strength (Mpa)</b>	N/A	109	N/A
<b>Flexural modulus (Mpa)</b>	N/A	2430	N/A
<b>Supplier</b>	Covestro	BASF Ultracur3D®	Mitsubishi
<b>Application examples</b>	Orthopaedic insoles.	Orthopaedic test shoes.	Automotive interior parts.

#### DLP STATION 5-405 Product Design & Prototyping

<b>Resin</b>	ST-80	3DM-XPRO	3DM-BLACK	Strong-X	Stone Coal Black	3D 3820 UC
<b>Appearance</b>	Transparent	Grey, White, Green	Black	Grey	Black	Transparent
<b>Curing wavelength (nm)</b>	405	405	405	405	365-405	405
<b>Liquid density (g/cm3)</b>	1,12	1,12 @ 25°C	1,16 @ 25°C	1,12 @ 25°C	1,12 @ 25°C	1,1 @ 25°C
<b>Viscosity (mPa.s)</b>	418 @ 30°C	380-420 @ 28°C	60 @ 30°C	550 @ 25°C	700 @ 25°C	800-1000 @ 25°C
<b>Hardness (Shore)</b>	D82	D83-D84	D82-D83	D87	D80	D60
<b>Tensile strength (Mpa)</b>	34,30	50	N/A	91	62	18-28
<b>Tensile modulus (Mpa)</b>	1530	2300	N/A	2500	2200	75-122
<b>Elongation at break (%)</b>	21	25	N/A	8	4	26-46
<b>Flexural strength (Mpa)</b>	60,70	82	N/A	135	75	N/A
<b>Flexural modulus (Mpa)</b>	1670	2200	N/A	3250	1900	N/A
<b>Supplier</b>	BASF Ultracur3D®	ADMAT	ADMAT	Liqcreate	Liqcreate	LOCTITE®
<b>Application examples</b>	Electrical casings, customised consumer goods and tools, orthopedics, high detail and textured parts.	Functional parts, hinges, hooks, gears, tools.	Figurines, toys, electronics housings.	Injection moulding, heavy duty applications, prototyping.	Figurines, toys, electronics housings.	Functional prototyping.

#### DLP STATION 5-405

#### Jewellery & Casting

#### Dentistry

<b>Resin</b>	FREEPRINT cast	PowerCast WAX	FREEPRINT splint	FREEPRINT model	FREEPRINT ortho	FREEPRINT tray
<b>Appearance</b>	Red	Blue	Clear	Ivory, Grey, Sand	Clear	Green
<b>Curing wavelength (nm)</b>	405	405	405	405	405	405
<b>Medical class</b>	N/A	N/A	Ila	N/A	Ila	I
<b>Supplier</b>	DETAX	Power Resins	DETAX	DETAX	DETAX	DETAX
<b>Application examples</b>	Titanium castings, dental crowns & bridges, jewellery castings, technical castings.	Jewellery castings, models with stone settings, surface models.	Drilling templates for implantology, X-ray templates and occlusal splints.	Dental models.	Base parts for orthodontic apparatuses, drilling and X-ray templates, splints.	Individual impression and functional trays and base resin plates.

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atum3D strives for 3-fold excellence. With proprietary **software, hardware** and an **open resin platform**, we offer exceptional **accuracy, speed** and **cost-effectiveness**. We aim to make your life easy with comprehensive **training, services** and **support**. Team up with atum3D and become a part of the next industrial revolution!

For more information and specifications, please call +31 (0)85 488 26 60 or visit [atum3D.com](http://atum3D.com).



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