



RESIN GUIDE

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

atum3D combines in-house expertise in the fields of hardware engineering, chemical material properties and software algorithms to create 3D excellence. With the atum3D open platform DLP Station, you are free to select any resin for your parts. Our Operator Station software connects to our online database of known resins, which includes hardware presets. We've selected several popular resins on the market today for your convenience. Our close cooperation with suppliers keeps us on the forefront of resin developments and the application in our products.

atum 3D

3D Manufacturing Excellence

We are here to help you select the resin with the optimal properties for your application. Tell us your anticipated application and the process or result variables that are most important to you. Potentially include the current material properties. We'll gladly advise you on the best available material. Can't find the combination of properties you're looking for right away? Don't worry. With the atum3D Material R&D Service, our team is your partner in finding or creating the resin you're looking for.

Product Design & Manufacturing

Resin	3DM-IMPACT	3DM-XPRO	3DM-ABS	3DM-BLACK
Appearance	Opaque White	Grey, White, Green	Orange	Black
Curing wavelength (nm)	365-405	405	405	405
Liquid density (g/cm ³)	1,12 @25°C	1,12 @25°C	1,12 @25°C	1,16 @25°C
Viscosity (mPa.s)	450-500 @28°C	380-420 @28°C	50 @30°C	60 @30°C
Hardness (Shore)	D81-D82	D83	D84	D82-D83
Tensile strength (Mpa)	52	50	N/A	N/A
Elongation at break (%)	25	25	N/A	N/A
Tensile modulus (Mpa)	2200	2300	N/A	N/A
Flexural strength (Mpa)	80	82	N/A	N/A
Flexural modulus (Mpa)	2000	2200	N/A	N/A
Supplier	3D-Materials	3D-Materials	3D-Materials	3D-Materials
Application examples	Mechanical assemblies, functional parts, snap-fit, sporting goods, tooling & casing.	Functional parts, hinges, hooks, gears, tools.	Functional parts, display parts, enclosures, electronics housings.	Figurines, toys, electronics housings.

Product Design & Manufacturing

Jewellery & Casting

Dentistry

Resin	3DM-TOUGH	3DM-FLEX	Freeprint Cast	Freeprint Splint
Appearance	Transparent	Black	Red	Clear
Curing wavelength (nm)	365-405	405	405	405
Liquid density (g/cm ³)	1,13 @25°C	1,10 @25°C	N/A	N/A
Viscosity (mPa.s)	140-150 @30°C	210-230 @30°C	N/A	N/A
Hardness (Shore)	D88-D90	A95-A100	N/A	N/A
Residual ash content	N/A	N/A	N/A	N/A
Shrinkage	N/A	N/A	N/A	N/A
Medical class	N/A	N/A	N/A	IIa
Supplier	3D-Materials	3D-Materials	DETAX	DETAX
Application examples	Medical, electronics, architecture & art, toys, packaging, microfluid & flow analysis.	Animation, architecture, art, education, custom jewels, toys.	Titanium castings, dental castings (e.g. crowns, bridges), jewellery castings, technical castings (e.g. gears, impellers and complex parts in any metal).	Drilling templates for implantology, X-ray templates and occlusal splints.

Dentistry

Resin	Freeprint Model	Freeprint Ortho	Freeprint Tray
Appearance	Ivory, Grey or Sand	Clear	Green
Curing wavelength (nm)	405	405	405
Viscosity (mPa.s)	N/A	N/A	N/A
Hardness (Shore)	N/A	N/A	N/A
Residual ash content	N/A	N/A	N/A
Shrinkage	N/A	N/A	N/A
Medical class	N/A	IIa	I
Supplier	DETAX	DETAX	DETAX
Application examples	Dental models.	Base parts for orthodontic apparatuses, drilling and X-ray templates, occlusal and fixation splints.	Individual impression and functional trays and base resin plates.

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.



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