

# Dental Materials

## Advanced materials for superior digital dentistry and orthodontics.

The Stratasys Dental Series 3D printers use the superior accuracy, high precision and dimensional stability of PolyJet materials to create a range of dental appliances, restorations and models with consistency and exactness.

### Clear Biocompatible (MED610™)

Transparent, bio-compatible material that is medically approved for temporary in-mouth placement.

Ideal for: Orthodontic appliances, delivery and positioning trays and surgical guides

### Flexible Biocompatible (MED625FLX™)

Flexible, biocompatible material that is certified for temporary in-mouth placement.

Ideal for: Orthodontic indirect bonding trays and implant gingival masks

### Biocompatible VeroGlaze™ (MED620™)

Opaque white material with A2 shading designed to provide the best color match in the industry. VeroGlaze is medically approved for temporary in-mouth placement up to 24 hours.

Ideal for: Veneer try-ins and diagnostic wax-ups

### VeroDent™ (MED670™)

Natural peach-tone material with high-quality detail, strength and durability.

Ideal for: Dental and orthodontic models including clear aligner arches

### VeroDentPlus™ (MED690™)

Dark beige material that creates amazingly fine features and finish. VeroDentPlus also offers excellent strength and durability, and delivers a higher level of opacity than VeroDent.

Ideal for: Dental and orthodontic models including clear aligner arches

## Triple-Jetting technology

In addition, standard 3D printing materials provide composites with these advanced features: Gum-like textures, range of colors to represent natural tooth and gum shades, ability to render anatomy such as nerve canal, jaw and teeth in contrasting materials, all in one print

Property	Standard/ Procedure	Clear Biocompatible MED610	Biocompatible VeroGlaze MED620
Tensile Strength (MPa)	D-638-03	50 – 65	55 – 65
Elongation at break (%)	D-638-05	10 – 25	15 – 25
Modulus of elasticity (MPa)	D-638-04	2,000 – 3,000	2,300 – 3,300
Flexural Strength (MPa)	D-790-03	75 – 110	80 – 100
Flexural Modulus (MPa)	D-790-04	2,200 – 3,200	2,300 – 3,200
HDT 0.45 MPa (°C)	D-648-06	45 – 50	45 – 50
HDT 1.82 MPa (°C)	D-648-07	45 – 50	45 – 50
Izod Notched Impact (J/M)	D-256-06	20 – 30	20 – 30
Water Absorption (%)	D-570-98 24HR	1.1 – 1.5	.1 – 1.5
Tg (°C)	DMA E	52 – 54	52 – 54
Shore Hardness (D)	Scale D	83 – 86	83 – 86
Rockwell Hardness (scale M)	Scale M	73 – 76	73 – 76
Polymerized density (gr/cm <sup>3</sup> )	ASTM D792	1.17 – 1.18	1.17 – 1.18
Bio-compatibility	DIN EN ISO 10993-1:2009	Approved	Approved
Support Removal Type	–	WaterJet	WaterJet or soluble*

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Property	Standard/ Procedure	VeroDent MED670	VeroDentPlus MED690
Tensile Strength (MPa)	D-638-03	50 – 60	54 – 65
Elongation at break (%)	D-638-05	10 – 25	15 – 25
Modulus of elasticity (MPa)	D-638-04	2,000 – 3,000	2,200 – 3,200
Flexural Strength (MPa)	D-790-03	75 – 110	80 – 110
Flexural Modulus (MPa)	D-790-04	2,200 – 3,200	2,400 – 3,300
HDT 0.45 MPa (°C)	D-648-06	45 – 50	45 – 50
HDT 1.82 MPa (°C)	D-648-07	45 – 50	45 – 50
Izod Notched Impact (J/M)	D-256-06	20 – 30	20 – 30
Water Absorption (%)	D-570-98 24HR	1.1 – 1.5	1.2 – 1.5
Tg (°C)	DMA E	52 – 54	52 – 54
Shore Hardness (D)	Scale D	83 – 86	83 – 86
Rockwell Hardness (scale M)	Scale M	73 – 76	73 – 76
Polymerized density (gr/cm <sup>3</sup> )	ASTM D792	1.17 – 1.18	1.17 – 1.18
Bio-compatibility	DIN EN ISO 10993-1:2009	–	–
Support Removal Type	–	WaterJet or soluble*	WaterJet or soluble*t

Property	Standard/ Procedure	MED625FLX
Tensile Strength (MPa)	D-412	3 – 5
Elongation at break (%)	D-412	45 – 55%
Compressive Set (%)	D-395	0.5 – 1.5%
Shore Hardness (Scale A)	D-2240	73 – 77
Tensile Tear Resistance (kg/cm)	D-624	8 – 12
Polymerized density (gr/cm <sup>3</sup> )	D-792	1.16 – 1.17 g/cm <sup>3</sup>
Bio-compatibility	EN ISO 10993-1	Approved
Support Removal Type	–	WaterJet

For detailed material specifications of non-dental materials, please see the PolyJet Materials Data Sheet. All data provided herein, which is related to consumables, was collected from specific specimens and test conditions and is provided for information only. Characteristics may vary if different specimens and test conditions are applied. Unless expressly provided in writing, no warranties are made and warranties of merchantability or fitness for a particular purpose are expressly disclaimed.

\*Soluble support is available on the Eden260VS Dental Advantage™, Objet260 Dental™ and Objet260/500 Dental Selection™. No full bio-compatibility on soluble support.

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