Dental Materials

Advanced materials for superior digital dentistry and orthodontics.

Stratasys® offers an impressive array of dental materials for two of the most innovative 3D printing technologies, PolyJet™ and WDM™. Combining superior accuracy, high precision and dimensional stability, the Stratasys Dental Series of 3D printers uses these materials to create a range of dental appliances, restorations and models with consistency and exactness.

PolyJet Technology

Stratasys offers four PolyJet materials for digital dentistry and orthodontics:

Clear Bio-compatible
(MED610)

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

Ideal for:
• Orthodontic appliances
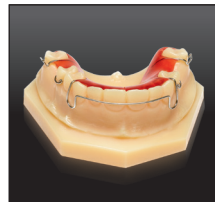• Delivery and positioning trays
• Surgical guides

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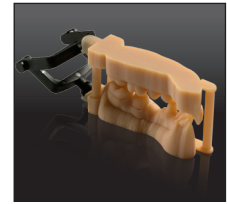
Ideal for: Veneer try-ins and diagnostic wax-ups

VeroDent™
(MED670)

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

Ideal for: Dental and orthodontic models

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

WDM Technology™

Stratasys offers non-toxic wax-like materials that burn out with no ash, residue, material shrinkage, cracking or expansion.

TrueCast™

A firm but flexible material that allows you to 3D print any dental wax-up with extreme accuracy. It is 100% castable for any alloy.

Application: Castable material for the creation of dental wax-ups

TrueSupport™

Material that is quickly applied around the TrueCast materials to form a support structure. It is later dissolved away to reveal the wax-up for casting.

Application: Supports TrueCast material

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Property	Standard/Procedure	Clear Bio-compatible MED610	VeroGlaze MED620	VeroDent MED670	VeroDentPlus MED690
Tensile Strength (MPa)	D-638-03	50 – 65	55 – 65	50 – 60	54 – 65
Elongation at break (%)	D-638-05	10 – 25	15 – 25	10 – 25	15 – 25
Modulus of elasticity (MPa)	D-638-04	2,000 – 3,000	2,300 – 3,300	2,000 – 3,000	2,200 – 3,200
Flexural Strength (MPa)	D-790-03	75 – 110	80 – 100	75 – 110	80 – 110
Flexural Modulus (MPa)	D-790-04	2,200 – 3,200	2,300 – 3,200	2,200 – 3,200	2,400 – 3,300
HDT 0.45 MPa (ºC)	D-648-06	45 – 50	45 – 50	45 – 50	45 – 50
HDT 1.82 MPa (ºC)	D-648-07	45 – 50	45 – 50	45 – 50	45 – 50
Izod Notched Impact (J/M)	D-256-06	20 – 30	20 – 30	20 – 30	20 – 30
Water Absorption (%)	D-570-98 24HR	1.1 – 1.5	.1 – 1.5	1.1 – 1.5	1.2 – 1.5
Tg (ºC)	DMA E	52 – 54	52 – 54	52 – 54	52 – 54
Shore Hardness (D)	Scale D	83 – 86	83 – 86	83 – 86	83 – 86
Rockwell Hardness (scale M)	Scale M	73 – 76	73 – 76	73 – 76	73 – 76
Polymerized density (gr/cm³)	ASTM D792	1.17 – 1.18	1.17 – 1.18	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*	WaterJet or soluble*	WaterJet or soluble*

Property	TrueCast	TrueSupport
Material	Organic Compound	Wax Blend
Melting Point	95 - 115ºC (221 - 239ºF)	50 - 72ºC (121 - 162ºF)
Toxicology Information	Non-toxic; registered by TSCA	Non-toxic; registered by TSCA

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.

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