

HEYGEARS

HeyGears was founded in 2015 as an innovation-driven company, devoted to providing digital manufacturing solutions in various industries. The company bases its core competencies in 3D printing, software development, materials, and big-data handling. We have a global presence with teams across the US, UAE and China.

HeyGears believes in a product development process rooted deeply into vertical applications, and our vision goes beyond just 3D printing technology. We strive to create vertically integrated solutions through the solid establishment of hardware, software, material, and service platforms, delivering our goal to bring advanced technology into daily life.

 www.heygears.com

 sales@heygears.com

 +1 949-418-9418 (USA) / +86 020-22042035 (CHN)

 USA: 17931 Sky Park Circle, Suite E, Irvine, CA, 92614

CHN: Block B2, 501, 601, Enterprise Accelerator, Kaifa District, Guangzhou, Guangdong, China



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MATERIALS FORMULATED FOR DENTISTRY

ULTRAPRINT DENTAL SERIES



ULTRAPRINT DENTAL SERIES

01 Model HP UV 2.0

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C O N T

E N T S



Model HP UV 2.0

- ✓ High building speed
- ✓ High precision
- ✓ High surface hardness
- ✓ Dimensional stability
- ✓ Exceptional surface quality
- ✓ MMA Free

Color Grey ● Sand ●

Specification 1000g Bottle / 3000g Bottle

Certifications NMPA / FDA / CE

Machine Compatibility

A2D A2D Ortho A2D 4K DS



Model HP UV 2.0 is tailored for high-precision dental model production. The material has a fast building speed, high precision, and high surface hardness. With vivid detail restoration, exceptional surface quality, and outstanding long-term dimensional stability, this material has pushed the rapid production of high-precision dental models to the next level. Moreover, its low viscosity helps minimize material consumption and greatly accelerates the cleaning process.

Properties	Units	Standard	Result
Flexural Strength	MPa	ASTM D790	83.2-88.2
Flexural Modulus	MPa	ASTM D790	2180-2351
Water Sorption	%	ASTM D570	0.72-0.98
Hardness	Shore D	ASTM D2240	83
Impact Strength (Notched)	J/m	ASTM D648	32.0-36.6
Working Temperature	°C	/	<50°C

Gingiva Mold

Partial Skull

Implant Model

Sectioned/Unsectioned Model

Working Model

Base Positioner

Perio Tray Model (Concave)

Perio Tray Model (Convex)

Applications

Applications



Custom Impression Tray

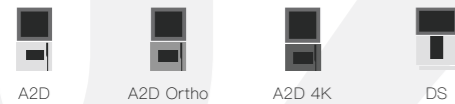
Radiographic Tray

Tray UV 2.0

- ✓ Dimensional stability during print
- ✓ High flexural strength
- ✓ High printing speed
- ✓ Biocompatible
- ✓ MMA free



Color Green ●
Specification 1000g Bottle
Certifications CE / FDA / NMPA Free
Machine Compatibility



Tray UV 2.0 is a biocompatible material developed to fabricate individual impressions and functional trays. The material has low viscosity, high accuracy, and high flexural modulus. After printing, it generates a good surface finish and does not need to be polished. It is also suitable for all types of impression material.

Properties	Units	Standard	Result
Flexural Strength	MPa	ASTM D790	101.6–105.8
Flexural Modulus	MPa	ASTM D790	2226–2706
Water Sorption	%	ASTM D570	1.36–1.64
Hardness	Shore D	ASTM D2240	85
Impact Strength (Notched)	J/m	ASTM D256	27.2–34.4

Perio Tray Model (Convex)



Perio Tray Model (Concave)



Orthodontic Model

Applications

Model TF UV 2.0

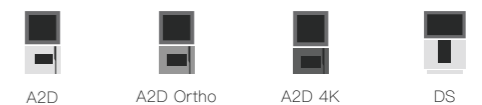
- ✓ High building speed
- ✓ High surface hardness
- ✓ High precision
- ✓ Outstanding edge stability
- ✓ Low viscosity
- ✓ High-temperature resistance



Model TF UV 2.0 is formulated for thermoforming. The material has a fast building speed, high precision, and ultra-high surface hardness. With excellent ability to restore structural details, it also demonstrates high geometric stability during the thermoforming process, making this material a perfect candidate for manufacturing dental appliances with the need for thermoforming.



Color Sky Blue ●
Specification 1000g Bottle / 3000g Bottle
Certifications NMPA / FDA / CE
Machine Compatibility



Properties	Units	Standard	Result
Flexural Strength	MPa	ASTM D790	104.2–119.2
Flexural Modulus	MPa	ASTM D790	2020–2214
Water Sorption	%	ASTM D570	0.35–0.48
Hardness	Shore D	ASTM D2240	85
Working Temperature	°C	/	≤160

Applications



Model WW UV



Perio Tray Model (Concave)

Perio Tray Model (Convex)

Orthodontic Model

Model WW UV

- ✓ Water washable
- ✓ Outstanding edge stability
- ✓ High precision
- ✓ Vivid detail restoration
- ✓ Low viscosity
- ✓ High building speed
- ✓ High-temperature resistance



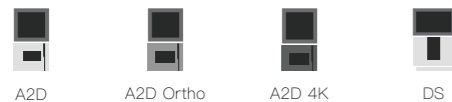
Model WW UV is designed for the thermoforming process and easy post-processing operations. The material can be printed at high speed with high precision. A novel resin formulation makes it water washable, which means no more hassle dealing with IPA or ethanol. With excellent ability to restore structural details while having high-temperature resistance, this material has proven to be the perfect candidate for producing clear-aligner models.

Color Baby Blue ●

Specification 1000g Bottle / 3000g Bottle

Certifications NMPA / FDA / CE

Machine Compatibility



A2D

A2D Ortho

A2D 4K

DS

Properties	Units	Standard	Result
Flexural Strength	MPa	ASTM D790	73.8–79.1
Flexural Modulus	MPa	ASTM D790	1893–1909
Water Sorption	%	ASTM D570	1.75–1.81
Hardness	Shore D	ASTM D2240	80
Working Temperature	°C	/	≤160

Water Washable
with High Precision

H
E
Y
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E
A
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S



Cast UV 3.0

- ✓ Clean burn-out
- ✓ Dimensional stability
- ✓ Vivid detail restoration
- ✓ High precision casting

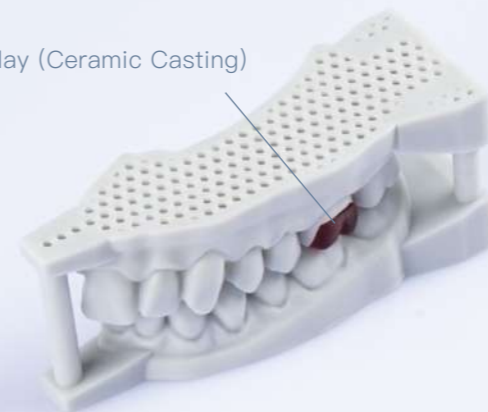
- Color** Clear Red ●
- Specification** 1000g Bottle
- Certifications** NMPA / FDA / CE Free
- Machine Compatibility**



Cast UV 3.0 is developed to produce high-precision casting of dental objects. Its low viscosity and optimized cure depth help reduce print time, material consumption, and wash time. Printing results are precise and without any distortions. It has a burnout process that leaves zero residue in the mold when using phosphate-based investment materials, which fulfills the demand to produce RPD, post & core, and inner crown for metal casting or zirconia crown, veneer, and inlay for ceramic casting.

Properties	Units	Standard	Result
Flexural Strength	MPa	ASTM D790	72.3-84.5
Sintering Temperature	°C	/	900-950
Sintering Time	Hours	/	1-1.5
Wall Thickness	mm	/	≥0.35
Storage Time	Hours	/	<10
Ash Value	/	/	<0.03%

Inlay (Ceramic Casting)



Veneer (Ceramic Casting)



Crown (Metal/Ceramic Casting)



RPD (Metal Casting)



APPLICATIONS

Applications



IBT UV

- ✓ Elastic and tear-resistant
- ✓ Precise bracket placement
- ✓ Easy to remove
- ✓ Odorless
- ✓ Biocompatible

Color Clear ○

Specification 1000g Bottle

Certifications FDA / NMPA Free

Machine Compatibility



IBT UV is a biocompatible material developed for the fabrication of orthodontic indirect bonding trays for positioning brackets. The transparent color of the material makes it easier for the positioning process. Its high tear resistance and flexibility allow easy positioning of brackets in one single step. The material is also odorless for the best user experience.

Properties	Units	Standard	Result
Tensile Strength	MPa	ASTM D638	9.6–10.2
Elongation at Break	%	ASTM D638	72–84
Water Sorption	%	ASTM D570	2.24
Hardness	Shore A	ASTM D2240	92.5

Applications



Gingiva UV 2.0

- ✓ Elastic and tear-resistant
- ✓ Dimensional stability during print
- ✓ Limited shrinkage
- ✓ Aging resistance
- ✓ Long-term storage
- ✓ Odorless
- ✓ Natural tone



Color Pink ●

Specification 500g Bottle / 1000g Bottle

Certifications NMPA Free / CE Free / FDA

Machine Compatibility



Gingiva UV 2.0 has excellent dimensional stability, elasticity, and tear-resistance for 3D reproduction of functional gingival model segments in a digital workflow in conjunction with our Model UV materials. It remains elastic after extended use without shrinkage or degradation and is odorless after the printing process.

Properties	Units	Standard	Result
Hardness	Shore A	ASTM D2240	38
Elongation at Break	%	ASTM D638	134.6–143.1
Tear Resistance	N/mm	ASTM D624	7.8–10.5



Applications

Surgical Guide UV

- ✓ Low material consumption
- ✓ Autoclaving verified
- ✓ High mechanical stability
- ✓ Vivid detail restoration
- ✓ High building speed
- ✓ High yield rate
- ✓ High transparency
- ✓ Biocompatible
- ✓ MMA Free




Surgical Guide UV is a biocompatible material developed to fabricate orthodontic guides, drill guides, X-ray templates, occlusal and fixation splints. It has high mechanical strength, low water sorption, and is easy to polish. Surgical Guide UV is odorless and can be used in the mouth for an extended period.


Color Clear


Specification 1000g Bottle

Certifications FDA / CE / NMPA Free

Machine Compatibility


A2D


A2D 4K


DS

Properties	Units	Standard	Result
Flexural Strength	MPa	ASTM D790	75.4-83.6
Flexural Modulus	MPa	ASTM D790	1660-1830
Water Sorption	%	ASTM D570	0.47-0.65
Impact Strength (Notched)	J/m	ASTM D648	20.3-23.7



Temp C&B UV

- ✓ Natural tone
- ✓ High precision
- ✓ High printing speed
- ✓ High tensile and flexural strength
- ✓ High abrasion resistance
- ✓ Biocompatible

Color A1 ● A2 ● A3 ●

Specification 500g Bottle / 1000g Bottle

Certifications FDA

Machine Compatibility



A2D



A2D 4K



DS



Temp C&B UV is a biocompatible material developed to manufacture temporary crowns & bridges. The material has high tensile strength, high flexural modulus, and high abrasion resistance. Printed temporary crowns & bridges have natural tooth aesthetics and translucent colors, and it is very easy to be processed and polished. It is odorless and can be used in the mouth for an extended period.

Properties	Units	Standard	Result
Flexural Strength	MPa	ASTM D790	89.3–101.0
Flexural Modulus	MPa	ASTM D790	2145–2572
Impact Strength (Notched)	J/m	ASTM D256	16.3–18.5
Water Sorption	%	ASTM D570	1.20–1.57
Hardness	Shore D	ASTM D2240	90

APPLICATIONS

Applications



Properties	Units	Result
Flexural Strength	MPa	≥50
Bonding Strength	MPa	≥ 5
Solubility	µg/mm ³	≤7.5
Water Sorption	µg/mm ³	≤40

Based on results of ISO 20795–2 tests

Cytotoxicity (ISO 10993–5)	Pass
Irritation (ISO 10993–10)	Pass
Sensitization (ISO 10993–10)	Pass

Based on results of ISO 10993 tests

Ideal Choice for Digital Dentures

Applications



Flipper Denture Base



Full Denture Base

Denture UV

- ✓ Long-term stability
- ✓ Biocompatible
- ✓ High printing speed
- ✓ MMA free



Denture UV is a biocompatible material developed to produce removable denture bases. This material has excellent process reliability due to its high hardness, and it has low viscosity for easy cleaning and lower material consumption. The unique formulation of the material provides maximum flexural and tensile strength with a stable color tone and odorless characteristics.

Color Pink ●

Specification 1000g Bottle

Certifications FDA

Machine Compatibility



Properties	Units	Standard	Result
Flexural Strength	MPa	ASTM D790	113.6–128.4
Flexural Modulus	MPa	ASTM D790	2546–2654
Impact Strength (Notched)	J/m	ASTM D648	14.8–19.4
Water Sorption	%	ASTM D570	0.52
Hardness	Shore D	ASTM D2240	87



Denture Teeth UV

- ✓ Natural tone
- ✓ High precision
- ✓ High building speed
- ✓ High tensile and flexural strength
- ✓ High abrasion resistance
- ✓ Biocompatible
- ✓ Long-term storage

Color A1 ● A2 ● A3 ● A3.5 ● B1 ● B2 ● B3 ● BL ○

Specification 1000g Bottle

Certifications FDA

Machine Compatibility



A2D



A2D 4K



DS



Denture Teeth UV is a biocompatible material designed to produce digital dentures. It has very high tensile strength and flexural strength; it is also abrasion-resistant and withstands high pressure. The high durability of this material allows it to resist corrosion from everyday products such as coffee, tea, and carbonated beverages. The texture and color tone of the printed products accurately simulate those of actual human teeth. It is odorless, effortless to polish, and is compatible to use with the Denture UV material. The material has obtained Class II clearance from the FDA.

Properties	Units	Standard	Result
Flexural Strength	MPa	ASTM D790	90.5–97.2
Flexural Modulus	MPa	ASTM D790	2056.5–2230.7
Impact Strength (Notched)	J/m	ASTM D256	34.7–48.8
Water Sorption	%	ASTM D570	0.8–1.3
Hardness	Shore D	ASTM D2240	80



Applications

Cytotoxicity (ISO 10993-5)	Pass
Irritation (ISO 10993-10)	Pass
Sensitization (ISO 10993-10)	Pass

Based on results of ISO 10993 tests



H E M Y G E A R S A R S

Applications



Study Model

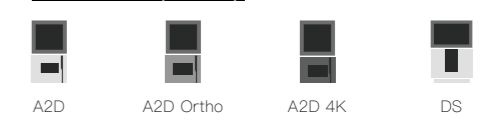
Study Model UV

- ✓ High precision
- ✓ High surface hardness
- ✓ Dimensional stability
- ✓ Color tone stability
- ✓ High performance stability
- ✓ Storage > 3 years
- ✓ Exceptional surface quality
- ✓ MMA free



Study Model UV is a material designed to produce high-quality models for treatment planning purposes. It has high printing speed, resolution, and surface hardness, which creates a premium finish for clinical use. The material is also explicitly formulated for long-term storage (over three years) without suffering from degradation of color or mechanical properties.

- Color** White ●
- Specification** 1000g Bottle / 3000g Bottle
- Certifications** FDA / NMPA / CE
- Machine Compatibility**



Properties	Units	Standard	Result
Flexural Strength	MPa	ASTM D790	60.0–62.1
Flexural Modulus	MPa	ASTM D790	1489–1646
Water Sorption	%	ASTM D570	0.52–0.68
Impact Strength (Notched)	J/m	ASTM D256	35.2–38.4
Storage	Year	/	>3

Study Model UV

Hard Splint UV



- ✓ High precision
- ✓ High toughness
- ✓ Dimensional stability
- ✓ Biocompatible
- ✓ High abrasion resistance
- ✓ Easy to clean

Color Semi-clear ○
Specification 1000g Bottle
Certifications FDA
Machine Compatibility



Hard Splint UV is a biocompatible material used to produce bite plates, occlusal splints, and retainers. It can produce products with high accuracy and dimensional stability, and it is also abrasion resistant with high flexural strength and impact strength. The high surface energy of the material makes the printed products easy to clean. The material has obtained Class II clearance from the FDA.

Properties	Units	Standard	Result
Flexural Strength	MPa	ASTM D790	100–110
Flexural Modulus	MPa	ASTM D790	2300–2400
Impact Strength (Notched)	J/m	ASTM D256	29
Elongation at Break	%	ASTM D638	9
Hardness	Shore D	ASTM D2240	89



Twin Block Brace



Bite Plate



Hawley Retainer



Splint



Stabilization Splint

Applications

Properties	Units	Result
Flexural Strength	MPa	60–65
Bonding Strength	MPa	1510
Solubility	µg/mm ³	18
Water Sorption	µg/mm ³	0.1

Based on results of ISO 20795–2 tests

Cytotoxicity (ISO 10993–5)	Pass
Irritation (ISO 10993–10)	Pass
Sensitization (ISO 10993–10)	Pass


Based on results of ISO 10993 tests

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Soft Splint UV




- ✓ High precision
- ✓ Thermo-reactive
- ✓ Easy to wear/take off
- ✓ Biocompatible
- ✓ Anti-corrosion
- ✓ High stability

- Color** Semi-clear ○
 - Specification** 1000g Bottle
 - Certifications** FDA
 - Machine Compatibility**
- 

A2D



A2D 4K



DS

Soft Splint UV is a biocompatible material developed to produce flexible bite plates and night guards. Its unique formulation makes the material thermo-reactive and softens under a temperature of 45°C (113°F), making it easier to put on or take off. The material has passed the biocompatibility test and can be worn safely in the mouth for an extended period.

Properties	Units	Standard	Result
Flexural Strength	MPa	ASTM D790	47
Flexural Modulus	MPa	ASTM D790	1356
Elongation at Break	%	ASTM D638	66
Hardness	Shore D	ASTM D2240	82
Impact Strength (Notched)	J/m	ASTM D256	45-48



APPLICATIONS

Properties	Units	Result
Flexural Strength	MPa	4.3
Flexural Modulus	MPa	200
Water Sorption	µg/mm ³	<18
Solubility	µg/mm ³	<4.5

Based on results of ISO 20795-2 tests

Cytotoxicity (ISO 10993-5)	Pass
Irritation (ISO 10993-10)	Pass
Sensitization (ISO 10993-10)	Pass

Based on results of ISO 10993 tests