



PolyJet™ Materials Reference Guide

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- Opening: PolyJet Technology

- Technology Overview
- Technology Capabilities
- Key Applications

- PolyJet Materials Portfolio

- Material Families
- Material Portfolio

- Summary

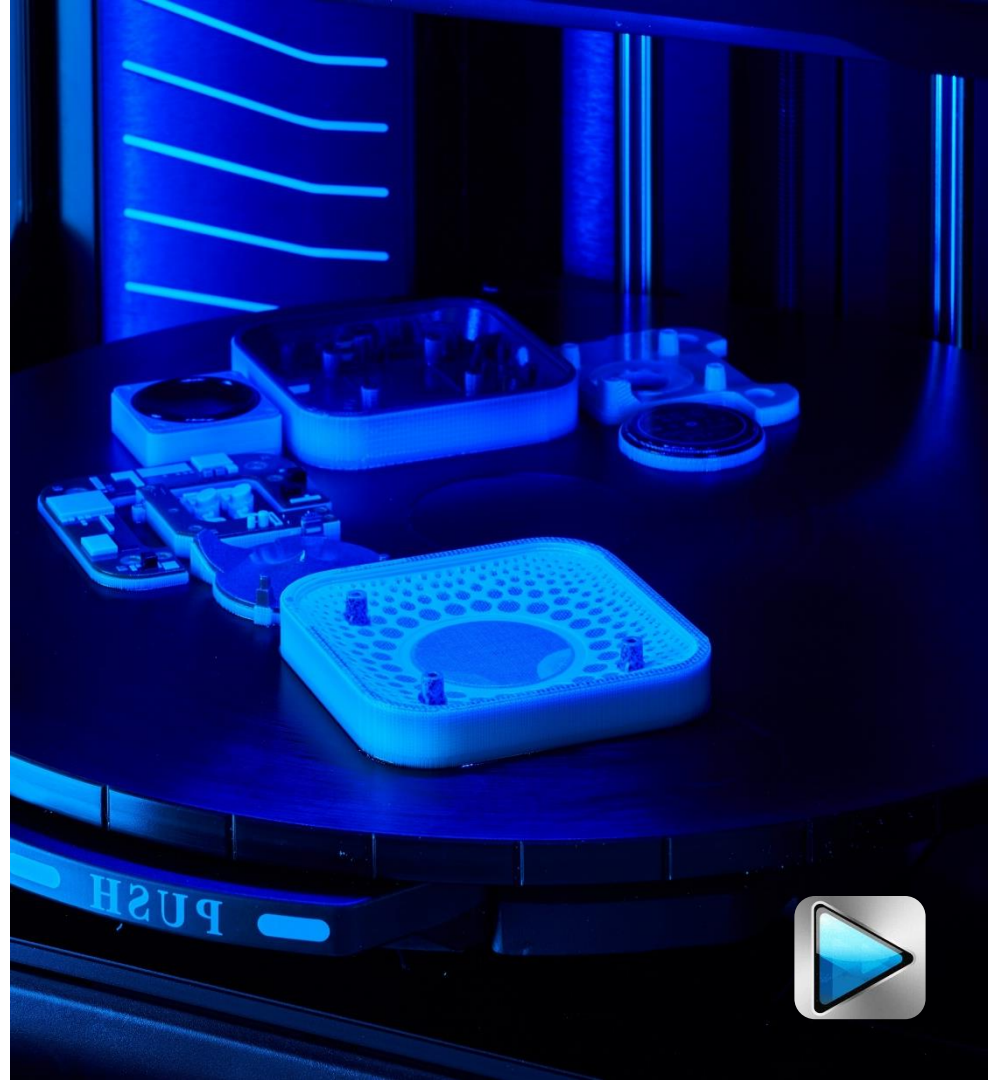
- Full Color Models
- Multi-Material Models
- Digital Materials
- Material Specifications
- Systems and Packaging

- Video Examples throughout click icon:



PolyJet Technology Overview

- PolyJet technology is the only platform that offers true multi-material printing for unparalleled realism.
- Widest range of materials including full color rigid, opaque, flexible, transparent and vivid materials.
- Special photopolymers are available for dental and medical applications.
- Wide range of material properties are available for numerous applications ranging from prototyping to end user parts production.
- Our resins are packed in cartridges at different sizes eliminating powdery mess or unwanted contact with non polymerized material.





PolyJet Technology

Capabilities

Smooth, accurate parts, prototypes and tooling.

With microscopic layer resolution and accuracy down to 0.014 mm, it can produce thin walls and complex geometries using the widest range of materials available with any technology.

PolyJet Technology

What are the benefits?

- Create smooth, detailed prototypes that convey final-product aesthetics.
- Produce accurate molds, jigs, fixtures and other manufacturing tools.
- Achieve complex shapes, intricate details and delicate features.
- Incorporate the widest variety of colors and materials into a single model for unbeatable design realism at super-high productivity.





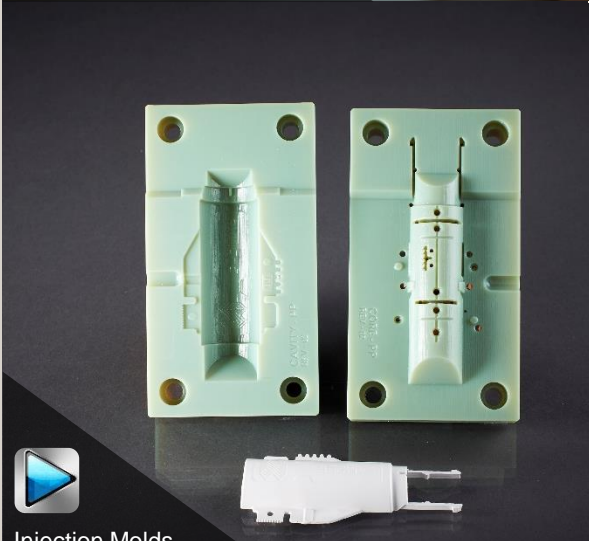
A to Z Design Prototyping



3D Fashion Design



Printing Digital Anatomy



Injection Molds processes with PolyJet

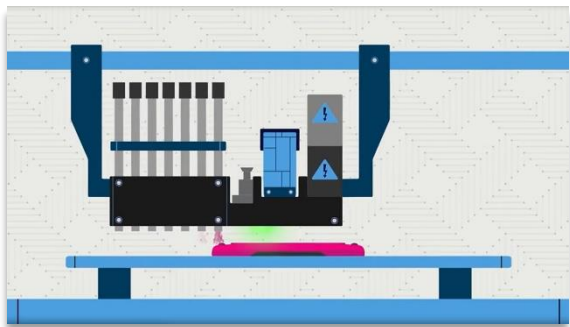
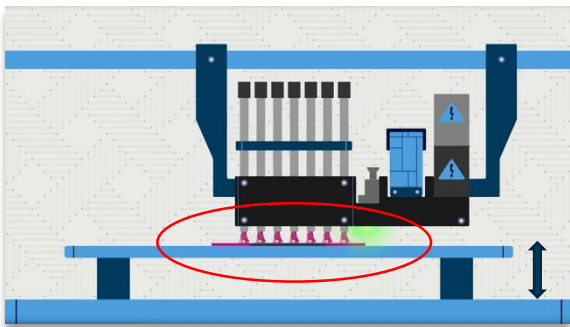
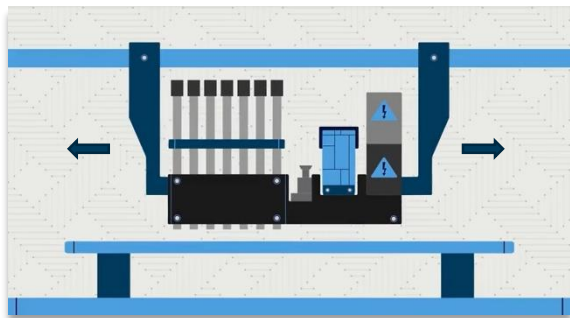


Flexible Prototypes



Full Color Product Design

POLYJET Technology



PolyJet Technology How does it work?

- The **printing block** moves along the X-Y axis in order to maximize the printing area coverage and reach the entire build platform.
- The **Build Platform** moves in z direction layer by layer in order to build the entire geometry.
- Drops of liquid **Photopolymer** are deposited on the building tray by the Printing Block, layer by layer.
- **Exposure to UV light**, initiates a very fast polymerization reaction turning the liquid photopolymer into a fully cured ready to use 3D model.
- Polyjet technology is based on Photopolymer resins, UV light and motion working simultaneously in order to produce precise full color and functional 3D models like no other technology.

PolyJet Material Families

Basic

- VeroWhitePlus™
- VeroBlackPlus™
- DraftGrey™
- VeroBlue™
- VeroGrey™
- RGD720™

Design

- VeroPureWhite™
- Vero Colors
Cyan / Magenta / Yellow
- Vero Vivid Colors
CyanV / MagentaV / YellowV
- VeroClear™
- VeroUltraClear™
- VeroFlex™
White / Black / Clear
Cyan / Magenta / Yellow
CyanV / MagentaV / YellowV

Functional

- Digital ABS Plus™ Green
- Digital ABS Plus™ Ivory
- Rigur™
- DurusWhite™
- High Temperature RGD525™
- Agilus30™
- Agilus30™ Black
- Agilus30™ White
- TangoPlus™
- TangoBlackPlus™
- TangoBlack™
- TangoGray™

Medical

- TissueMatrix™
- BoneMatrix™
- GelMatrix™
- MED610™
- MED615RGD™
- MED Digital ABS™
- Hearing Aids Clear FC630™
- Hearing Aids Rose Clear FC655™

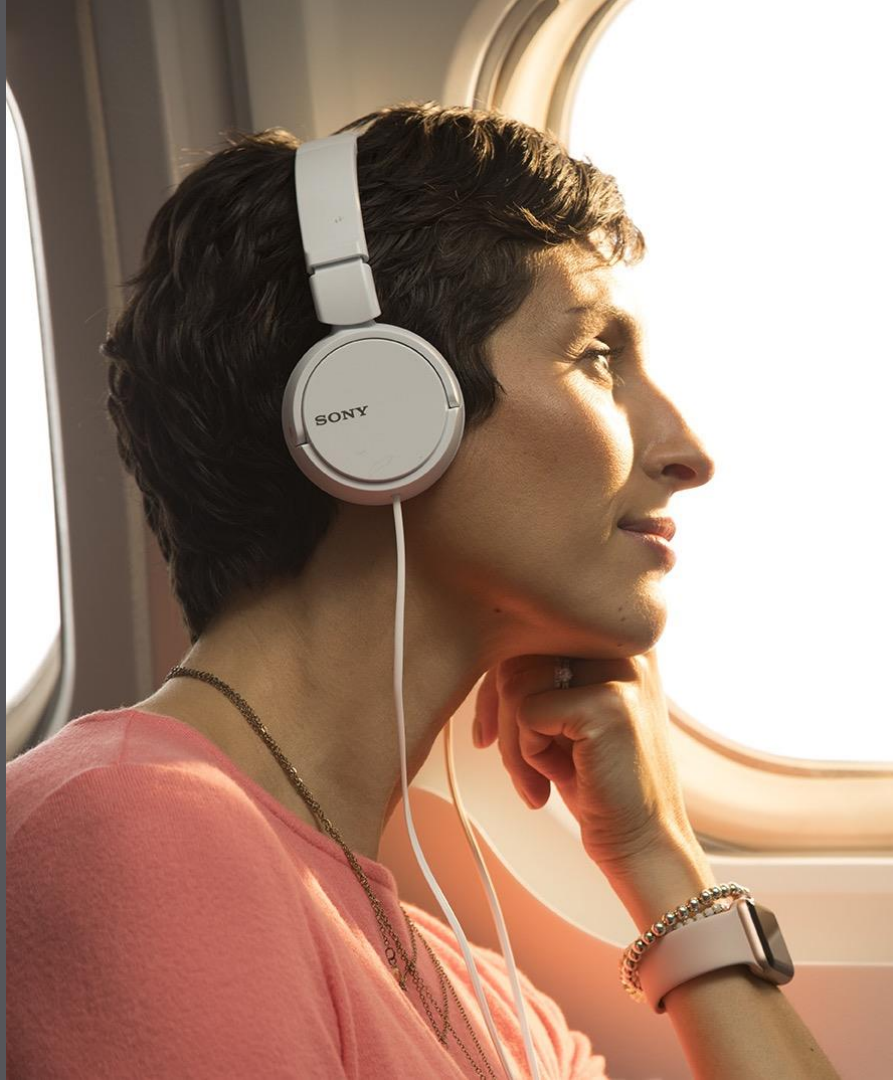
Support

- SUP705™
- SUP705B™
- SUP706B™
- SUP707™
- SUP710™
- GelMatrix™

Dental

- MED610™
- VeroGlaze™ MED620
- MED625FLX™
- VeroDentPlus™ MED690
- VeroDent™ MED670





Basic Materials

- VeroWhitePlus™
- VeroBlackPlus™
- DraftGrey™
- VeroBlue™
- VeroGray™
- RGD720™

Basic Material

VeroWhitePlus (RGD835™)

A multi-purpose basic white material that offers stiffness and high accuracy printing.

Color: White

Main Properties:

- Opaque White
- Rigid and durable
- Can achieve high accuracy printing
- Affordable pricing

Main Applications:

- Highly accurate presentation models with fine details
- Small parts with complex features
- Electronic housings
- Medical device prototypes and components
- Suitable for a wide range of industries and applications

Available on:

- Objet 260/350/500 Connex 3
- Objet 1000Plus
- Objet 260/500 Connex 1
- Objet30 Prime/Pro



TENSILE STRENGTH

50 – 65 Mpa
(7,250 – 9,450 psi)



HDT

45 – 50 °C
(113 – 122 °F)



IZOD IMPACT, NOTCHED

20 – 30 J/m
(0.375 – 0.562 ft lb/inch)



FLEXURAL STRENGTH

75 – 110 Mpa
(11,000 – 16,000 psi)

Basic Material

VeroBlackPlus (RGD875™)

A multi-purpose basic black material that offers stiffness and high quality appearance and high accuracy printing.

Color: Black

Main Properties:

- Opaque Black
- Rigid and durable
- High accuracy printing at affordable pricing


Main Applications:

- Engineering prototypes
- Electronic housings
- Good Light “blocker” for illuminated prototypes as analogic screens, light sensors testing...
- Highly accurate presentation models with fine details
- Small parts with complex features
- Great smooth and glossy look after polish

Available on:

- | | |
|------------------------------|------------------------|
| • Objet 1000Plus | • J8Series |
| • Objet 260/350/500 Connex 3 | • J7Series |
| • Objet 260/500 Connex 1 | • J750 Digital Anatomy |
| • Objet30 Prime/Pro | • J55 |

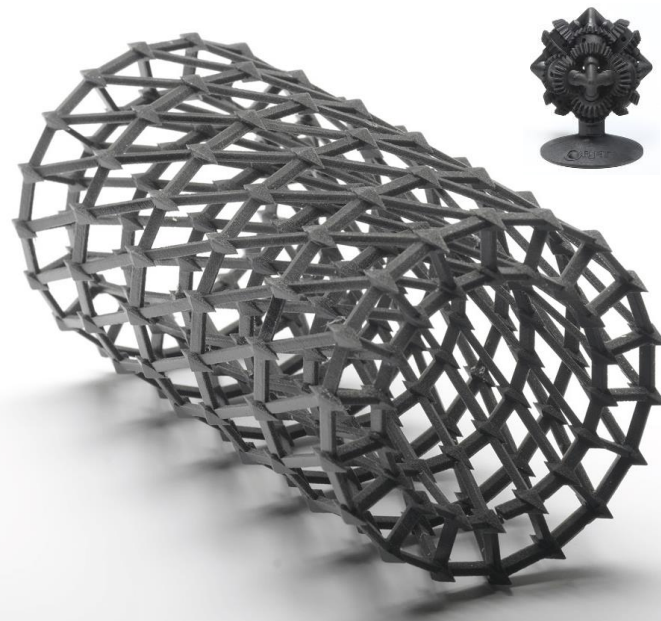
❖ Available also in SHS (Super high-speed Printing) printing mode


**FLEXURAL
STRENGTH**
 75 – 110 Mpa
 (11,000 – 16,000 psi)


**IZOD IMPACT,
NOTCHED**
 20 – 30 J/m
 (0.375 – 0.562 ft lb/inch)


HDT
 45 – 50 °C
 (113 – 122 °F)


**TENSILE
STRENGTH**
 50 – 65 Mpa
 (7,250 – 9,450 psi)



Basic Material

DraftGray (RGD750™)

The ultimate material for concept modeling that offers stiffness and versatility at an extremely affordable price.

Color: Gray

Main Properties:

- Opaque Gray
- Rigid and durable
- High accuracy fast parts production
- Very affordable price

Main Applications:

- Single material concept modeling
- Ideal for fast, low cost iterations at the initial stages of the design process
- Great for examining the shape, accuracy or fine details of a product and iterate cheaply

Available on:

- J8 Series
- J55



**FLEXURAL
STRENGTH**
75 – 110 Mpa
(11,000 – 16,000 psi)



**IZOD IMPACT,
NOTCHED**
20 – 30 J/m
(0.375 – 0.562 ft lb/inch)



HDT
45 – 50 °C
(113 – 122 °F)



**TENSILE
STRENGTH**
50 – 65 Mpa
(7,250 – 9,450 psi)

❖ Available in SHS (Super high-speed Printing) printing mode

Basic Material

VeroBlue (RGD840™)

Great basic material in blue shade for concept modeling that offers stiffness and versatility at a very affordable price.

Color: Blue

Main Properties:

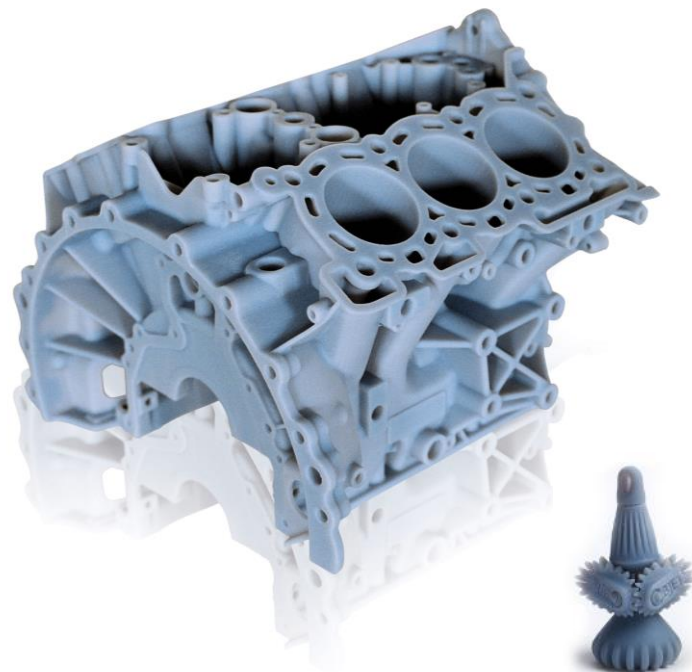
- Opaque Blue
- Rigid and durable
- Quickly and economically produce parts

Main Applications:

- Highly accurate presentation models
- Small parts with complex features
- Suitable for a wide range of industries

Available on:

- J7Series
- J750 Digital Anatomy
- Objet 1000Plus
- Objet30 Prime/Pro
- Objet 260/500 Connex 1
- Objet 260/350/500 Connex 3



FLEXURAL STRENGTH

60 – 70 Mpa
(8,700 – 10,200 psi)



IZOD IMPACT, NOTCHED

20 – 30 J/m
(0.375 – 0.562 ft lb/inch)



HDT

45 – 50 °C
(113 – 122 °F)



TENSILE STRENGTH

50 – 60 Mpa
(7,250 – 8,700 psi)

Basic Material

VeroGray (RGD850™)

Great basic material in gray shade for concept modeling that offers stiffness and versatility at a very affordable price.

Color: Gray

Main Properties:

- Opaque Gray
- Rigid and durable
- Quickly and economically produces parts

Main Applications:

- Highly accurate presentation models
- Small parts with complex features
- Suitable for a wide range of industries



Available on:

- | | |
|------------------------|------------------------------|
| • J7Series | • Objet 260/350/500 Connex 3 |
| • J750 Digital Anatomy | • Objet 260/500 Connex 1 |
| • Objet 1000Plus | • Objet30 Prime/Pro |



FLEXURAL STRENGTH

75 – 110 Mpa
(11,000 – 16,000 psi)



IZOD IMPACT, NOTCHED

20 – 30 J/m
(0.375 – 0.562 ft lb/inch)



HDT

45 – 50 °C
(113 – 122 °F)



TENSILE STRENGTH

50 – 65 Mpa
(7,250 – 9,450 psi)

Basic Material

RGD720 (RGD720™)

The Original PJ Transparent multipurpose material for clear plastics simulation.

Color: Clear (slightly yellowish)

Main Properties:

- Translucent
- Rigid
- Surface smoothness
- Quickly and economically produce parts

Main Applications:

- Highly accurate presentation models
- Small parts with complex features
- Form and fit testing of clear or see-through parts
- Suitable for a wide range of industries

Available on:

- J7Series
- J750 Digital Anatomy
- Objet 260/350/500 Connex 3
- Objet 260/500 Connex 1
- Objet30 Prime



**FLEXURAL
STRENGTH**
80 – 110 Mpa
(12,000 – 16,000 psi)



**IZOD IMPACT,
NOTCHED**
20 – 30 J/m
(0,375 – 0,562 ft lb/inch)



HDT
45 – 50 °C
(113 – 122 °F)

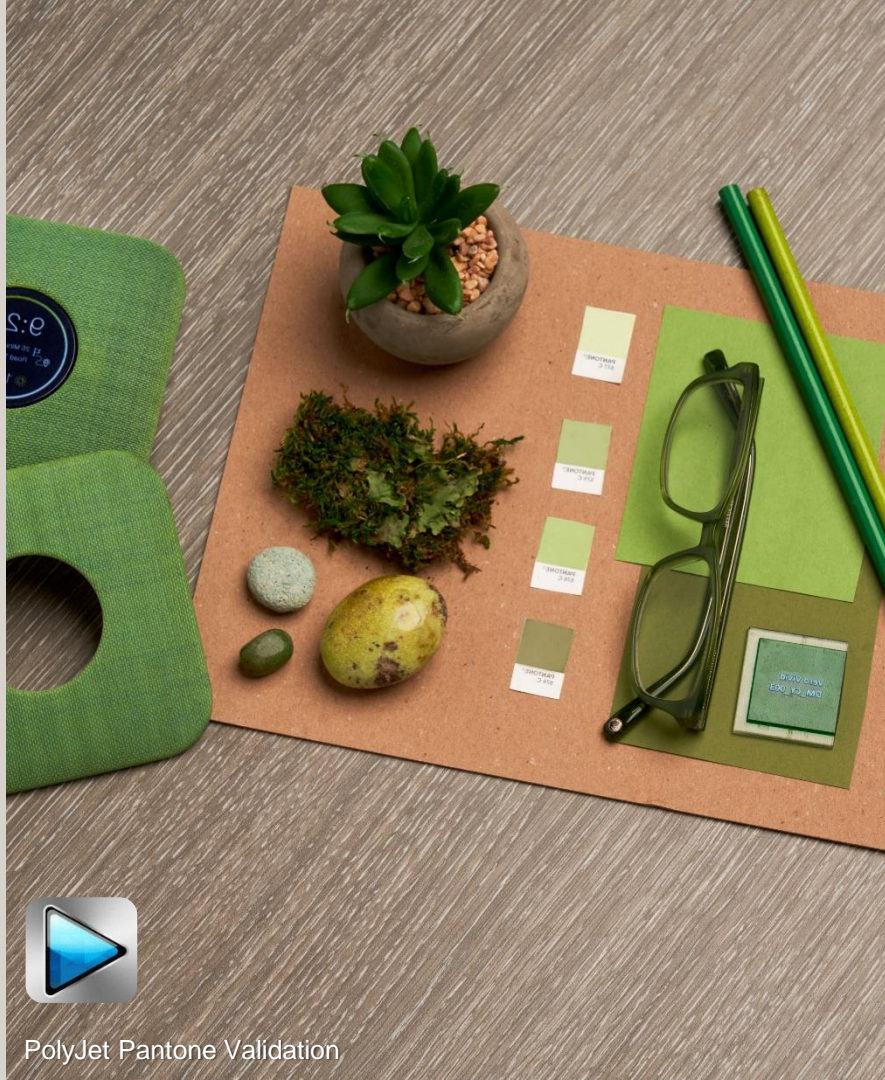


**TENSILE
STRENGTH**
50 – 65 Mpa
(7,250 – 9,450 psi)



Design Materials

- VeroPureWhite™
- VeroCyan™
- VeroMagenta™
- VeroYellow™
- VeroCyanV™
- VeroMagentaV™
- VeroYellowV™
- VeroClear™
- VeroUltraClear™
- VeroFlexVivid™ Cyan
- VeroFlexVivid™ Magenta
- VeroFlexVivid™ Yellow
- VeroflexCyan™
- VeroflexMagenta™
- VeroflexYellow™
- VeroflexWhite™
- VeroflexWhite™
- VeroflexClear™



VeropureWhite (RGD837™)

A multi-purpose design material, bright white color photopolymer that is used as single material or as basis for full color models. Offers stiffness and high quality accurate details.

Color: White

- Main Properties:**
- Excellent detail visualization
 - Opaque white
 - Good dimensional stability

- Main Applications:**
- Concept modeling during the design process
 - Full color design and end-use models
 - White details on models (text, labels...)
 - Medical models and medical device prototypes
 - Functional design and engineering models:
 - Prototyping, Pre-production, Production verification
 - Form and fit testing

- Available on:**
- | | |
|------------------------|------------------------------|
| • J8Series | • J55 |
| • J7Series | • Objet 260/350/500 Connex 3 |
| • J750 Digital Anatomy | • Objet 260/500 Connex 1 |

❖ Available in SHS (Super high-speed Printing) printing mode



Design Material

Vero Colors: Cyan / Magenta / Yellow (RGD843/851/836™)

Vero Color Materials are rigid opaque photopolymers providing excellent detail visualization and can be blended with other materials to vary colors, translucency or hardness.

Color: Cyan / Magenta / Yellow


- Main Properties:**
- Durable and stiff
 - Excellent detail visualization
 - Opaque colors
 - Good dimensional stability

- Main Applications:**
- Final full color prototypes
 - Prototyping single and full color
 - Detailed design in full color
 - CMF Pre-production
 - Functional engineering parts for:
 - Form/fit testing
 - Color marking, colored jigs, colored finite elements

Available on:

- J8Series
- J7Series
- J750 Digital Anatomy
- Objet 260/350/500 Connex 3
- Objet 260/500 Connex 1




FLEXURAL STRENGTH
 75 – 110 Mpa
 (11,000 – 16,000 psi)


IZOD IMPACT, NOTCHED
 20 – 30 J/m
 (0.375 – 0.562 ft lb/inch)


HDT
 45 – 50 °C
 (113 – 122 °F)


TENSILE STRENGTH
 50 – 65 Mpa
 (7,250 – 9,450 psi)

❖ Available in SHS (Super high-speed Printing) printing mode

Design Material

Vero Vivid Colors Cyan / Magenta / Yellow (RGD845/852/838™)

Vero Vivid Color Materials are rigid transparent photopolymers providing excellent detail visualization and can be blended with other materials to vary colors, translucency or hardness.

Color: Cyan / Magenta / Yellow (All Translucent)

Main Properties:

- Transparent Colors
- Pantone Validated (500k Colors)
- Can be used to print opaque parts (use VeroPureWhite as inner shell and use Vivid color as coating)

Main Applications:

- Packaging
- Toys/ Figurines
- Transparent, colored lighting covers
- Fast-moving consumer goods
- Highly realistic models and final prototypes with accurate colors

Available on:

- J8Series
- J7Series
- J750 Digital Anatomy
- J55
- Objet 260/350/500 Connex 3

❖ Available in SHS (Super high-speed Printing) printing mode



TENSILE STRENGTH

50 – 65 Mpa
(7,250 – 9,450 psi)



HDT

45 – 50 °C
(113 – 122 °F)



IZOD IMPACT, NOTCHED

20 – 30 J/m
(0.375 – 0.562 ft lb/inch)



FLEXURAL STRENGTH

75 – 110 Mpa
(11,000 – 16,000 psi)

Design Material

VeroClear (RGD810™)

Transparent material nearly colorless featuring proven dimensional stability for general purpose and visual simulation of transparent thermoplastics such as PMMA.

Color: Transparent

Main Properties:

- Good transparency
- Great dimensional stability
- Good Surface finish
- Great fine details appearance

Main Applications:

- PMMA visual simulation
- Form and fit testing of clear or see-through parts
- Glass, eye-wear, lighting covers and light-cases
- Visualization of liquid flow

Available on:

- | | |
|------------------------|------------------------------|
| • J8Series | • Objet 1000Plus |
| • J7Series | • Objet 260/350/500 Connex 3 |
| • J750 Digital Anatomy | • Objet 260/500 Connex 1 |
| • J55 | • Objet30 Prime/Pro |

❖ Available in SHS (Super high-speed Printing) printing mode



TENSILE STRENGTH

50 – 65 Mpa
(7,250 – 9,450 psi)



HDT

45 – 50 °C
(113 – 122 °F)



IZOD IMPACT, NOTCHED

20 – 30 J/m
(0.375 – 0.562 ft lb/inch)



FLEXURAL STRENGTH

75 – 110 Mpa
(11,000 – 16,000 psi)

Design Material

VeroUltraClear (RGD820™)

Transparent material simulates PMMA. Very useful for simulation of glass prototypes, clear polymers, or transparent packaging. Improved clarity and transparency compared to VeroClear.

Color: Transparent

Main Properties:

- Transparent – about 90% light transmission
- Very low yellow index
- Rigid (must be printed together with VeroClear)

Main Applications:

- Glass and Clear Acrylic Plastic/ Perspex / PMMA simulation
- Front and Taillight models (Automotive)
- Eye-wear, lighting covers and light-cases
- Clear or see-through parts, form and fit testing
- Visualization of liquid flow
- Lens and optic components visual simulation (nonfunctional)

Available on:

- J8Series
- J7Series
- J750 Digital Anatomy

❖ [Require VeroClear availability](#)



**FLEXURAL
STRENGTH**
58 – 72 Mpa
(8,400 – 10,400 psi)



**IZOD IMPACT,
NOTCHED**
20 – 30 J/m
(0.375 – 0.562 ft lb/inch)



HDT
Before photobleaching:
47 – 49 °C (117 – 120 °F)
After photobleaching:
48 – 52 °C (118 – 126 °F)



**TENSILE
STRENGTH**
50 – 65 Mpa
(7,250 – 9,450 psi)

Design Material

VeroFlex Materials (RGD890 / 891 / 892 / 893 / 894 / 896 / 898 / 899)

White / Black / Clear / Cyan / Magenta / Yellow / Cyan V / MagentaV / YellowV

VeroFlex offers a unique combination of stiffness and flexibility ideal for all prototyping phases of eyewear and decorations design

Available at a full range of opaque and transparent colors for improved performance testing.

Color: White / Black / Clear / Cyan / Magenta / Yellow (including translucent colors)

- Main Properties:**
- Unique combination of stiffness and flexibility
 - Eyewear prototypes produced with Veroflex can better withstand drop tests, lens-mounting and wearability tests

- Main Applications:**
- Rapid prototyping eyewear from concept to CMF
 - Snap & fit applications of frame and covers
 - Complex textures, including opaque and transparent elements in the toys, packaging, decorations, eyewear and many other industries

- Available on:**
- J7Series
 - J750 Digital Anatomy
 - Objet 260/350/500 Connex 3



FLEXURAL STRENGTH
48 – 88 Mpa
(6,962 – 12,763 psi)



IZOD IMPACT, NOTCHED
20 – 30 J/m
(0.375 – 0.562 lb/in)



HDT
42 – 50 °C
(108 – 122 °F)



TENSILE STRENGTH
43 – 64 Mpa
(6,237 – 9,282 psi)

Product Presentation

Quick Reference Guide

Datasheet

Safety Datasheet

Application Notes

Best Practice

Webinar

VeroFlexYellowV

VeroFlexWhite

VeroFlexBlack

VeroFlexClear

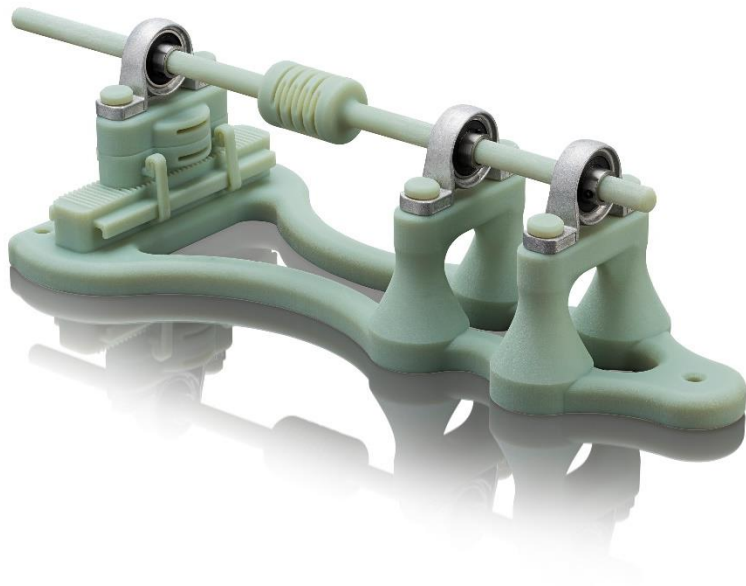
VeroFlexCyan

VeroFlexMagenta

VeroFlexYellow

VeroFlexCyanV

VeroFlexMagentaV



Functional Materials

- Agilus30™
- Agilus30™ Black
- Agilus30™ White
- TangoPlus™
- TangoBlackPlus™
- TangoBlack™
- TangoGray™
- Digital ABS Plus™ Green
- Digital ABS Plus™ Ivory
- Rigur™
- Durus™
- High Temperature RGD525™

Functional Material

DigitalABS Plus™ Green / Ivory (RGD515Plus+ RGD535/ RGD531™)

Digital ABS simulates standard ABS plastics combining **high temperature** resistance and **high toughness**.

Color: Green / Ivory

Main Properties:

- High thermal resistance – 58-68°C (136-154°F)
- 82-90°C (179-309°F) after thermal Post Curing
- Excellent impact resistance & shock absorption (90-115J/m or 1.69-2.15 ft lb/in)
- Superior finish with smooth, glossy surfaces

Main Applications:

- Snap-fit parts –models and prototypes with moving parts
- Living hinges –flexing and bending as clips and fasteners.
- High stress situations – such as falls and blows or high pressure.
- Contact surfaces – such as knives, scissors
- Various other engineering applications

Available on:

- J8Series
- J7Series
- J750 Digital Anatomy
- Objet 1000Plus
- Objet 260/350/500 Connex 3



FLEXURAL STRENGTH

65 – 75 Mpa
(9,500 – 11,000 psi)



IZOD IMPACT, NOTCHED

90 – 115 J/m
(1.69 – 2.06 ft lb/inch)



HDT

58 – 68 °C
(136 – 154 °F)



TENSILE STRENGTH

55 – 60 Mpa
(8,000 – 8,700 psi)



Functional Material

Rigur™ (RGD450™)

Rigur™ is an advanced material simulating polypropylene material for precision prototyping.

Color: White

- Main Properties:**
- High toughness material, introducing impact values of ~35 J/m and HDT of 54°C
 - Good dimensional stability
 - Excellent surface quality

- Main Applications:**
- Wide range of 'Fit' testing: snap fit applications and living hinges
 - Final product Visualization
 - Moving parts and assembled parts
 - Assembly of electronic components
 - Various other engineering applications

- Available on:**
- Objet 260/350/500 Connex 3
 - Objet 260/500 Connex 1
 - Objet30 Prime/Pro
 - Objet 1000Plus



FLEXURAL STRENGTH
52-59 Mpa
(7,500-8,500 psi)



IZOD IMPACT, NOTCHED
30-35 J/m
(0.561-0.656 ft lb/inch)



HDT
49-54 °C
(113-122 °F)



TENSILE STRENGTH
40-45 Mpa
(5,800-6,500 psi)

Functional Material

Durus (RGD430™)

Durus™ is the original simulated polypropylene material and exhibits great impact resilience and an elongation at break of 44%.

Color: White

Main Properties:

- Flexibility and toughness
- Good dimensional stability
- Excellent surface quality

Main Applications:

- Simulation of Polypropylene
- Snap fit assemblies
- Packaging applications
- Form/fit/function testing

Available on:

- J8 Series
- J7 Series
- J750 Digital Anatomy
- Objet30 Prime/Pro
- Objet 260/500 Connex 1
- Objet 260/350/500 Connex 3



**FLEXURAL
STRENGTH**
30 – 40 MPa
(4,350 – 5,800 psi)



**IZOD IMPACT,
NOTCHED**
40 – 50 J/m
(0.749 – 0.937 ft lb/inch)



HDT
37 – 42 °C
(99 – 108 °F)



**TENSILE
STRENGTH**
20 – 30 MPa
(2,900 – 4,350 psi)

Functional Material

High Temperature (RGD525™)

With a heat deflection temperature of 80 °C after thermal treatment, our High Temperature materials is ideal for testing static parts and hot-air flow or hot-water flow in pipes and faucets.

Color: Black

- Main Properties:**
- Thermal resistance of 63-67°C (149°F) out of the printer, 80°C (176°F) after thermal post curing

- Main Applications:**
- Form, fit and thermal functional testing of static parts
 - Exhibition modeling under strong lighting conditions
 - Taps, pipes and household appliances
 - Hot air and hot water testing
 - Can be combined with Rubber-like material to create a versatile range of materials with adjustable properties

- Available on:**
- Objet30 Prime/Pro
 - Objet 260/500 Connex 1
 - Objet 260/350/500 Connex 3



FLEXURAL STRENGTH

110 – 130 Mpa
(16,000 – 19,000 psi)



IZOD IMPACT, NOTCHED

14 – 16 J/m
(0.262 – 0.300 ft lb/inch)



HDT

63 – 67 °C
(145 – 163 °F)



TENSILE STRENGTH

70 – 80 Mpa
(10,000 – 11,500 psi)

Functional Material

Agilus30 (FLX935™)

Agilus30 is a clear flexible PolyJet Photopolymer with superior tear-resistance and tensile strength, capable of withstanding repeated flexing and bending cycles.

Color: Transparent

- Main Properties:**
- Great elongation at break – 240%
 - Silicone/Rubber look and feel
 - High tear resistance
 - High tensile strength
 - Combine with rigid materials to vary flexibility levels

- Main Applications:**
- Sporting goods, masks, food storage containers,
 - Simulating soft tissue for surgical evaluation, planning and medical training
 - Tooling - Knobs, jigs, grips, seals, gaskets, hoses, handles
 - General Prototyping- Rubber-like components, surrounds & over molding

- Available on:**
- J8 Series
 - J7 Series
 - J750 Digital Anatomy
 - Objet 260/500 Connex 1
 - Objet 260/350/500 Connex 3



POLYMERIZED DENSITY
1.14 – 1.15
g/cm³



SHORE HARDNESS
30 – 35
Scale A



ELONGATION AT BREAK
220 – 240%



TENSILE STRENGTH
2.4 – 3.1 MPa
(348 – 450 psi)

Functional Material

Agilus30White (FLX945™)

Agilus30White is a white flexible PolyJet Photopolymer with superior tear-resistance and tensile strength, capable of withstanding repeated flexing and bending cycles.

Color: White

- Main Properties:**
- Great elongation at break – 230%
 - Silicone/Rubber look and feel
 - High tear resistance
 - High tensile strength
 - Combine with rigid materials to vary flexibility levels

- Main Applications:**
- Sporting goods, masks, food storage containers,
 - Simulating soft tissue for surgical evaluation, planning and medical training
 - Tooling - Knobs, jigs, grips, seals, gaskets, hoses, handles
 - General Prototyping- Rubber-like components, surrounds & over molding

- Available on:**
- J8 Series
 - J7 Series
 - J750 Digital Anatomy



POLYMERIZED DENSITY
1.14 – 1.15
g/cm³



SHORE HARDNESS
30 – 35
Scale A



ELONGATION AT BREAK
185 – 230%



TENSILE STRENGTH
2.4 – 2.6 MPa
(305 – 377 psi)

Functional Material

Agilus30Black (FLX985™)

Agilus30Black is a black flexible PolyJet Photopolymer with superior tear-resistance and tensile strength, capable of withstanding repeated flexing and bending cycles.

Color: Black

- Main Properties:**
- Great elongation at break – 240%
 - Silicone/Rubber look and feel
 - High tear resistance
 - High tensile strength
 - Combine with rigid materials to vary flexibility levels

- Main Applications:**
- Sporting goods, masks, food storage containers,
 - Simulating soft tissue for surgical evaluation, planning and medical training
 - Tooling - Knobs, jigs, grips, seals, gaskets, hoses, handles
 - General Prototyping- Rubber-like components, surrounds & over molding

- Available on:**
- J8 Series
 - J7 Series
 - J750 Digital Anatomy
 - Objet 260/500 Connex 1
 - Objet 260/350/500 Connex 3



POLYMERIZED
DENSITY
1.14 – 1.15
g/cm³



SHORE
HARDNESS
30 – 35
Scale A



ELONGATION
AT BREAK
220 – 240%



TENSILE
STRENGTH
2.4 – 3.1 MPa
(348 – 450 psi)

Functional Material

TangoPlus / TangoBlackPlus (FLX930/980™)

Tango is a flexible Photopolymer that simulates soft-touch coatings, nonslip surfaces, rubber surrounds or over-molding.



Color: Transparent / Black

- Main Properties:**
- Good elongation at break
 - Rubber look and feel
 - Good tear resistance & tensile strength
 - Combine with rigid materials to vary flexibility levels

- Main Applications:**
- Functional prototypes that require rubber- like performance
 - Soft touch coatings
 - Nonslip surfaces
 - Rubber over-molding

- Available on:**
- J7 Series
 - J750 Digital Anatomy
 - Objet 1000Plus
 - Objet 260/500 Connex 1
 - Objet 260/350/500 Connex 3



POLYMERIZED
DENSITY
1.12 – 1.13
g/cm³



SHORE
HARDNESS
26 – 28
Scale A



ELONGATION
AT BREAK
170 – 220%



TENSILE
STRENGTH
0.8 – 1.5 Mpa
(115 – 220 psi)

***Applicable also with soluble support (SUP706)**

Functional Material

TangoBlack / Gray (FLX973/950™)

Tango is a flexible Photopolymer that simulates soft-touch coatings, nonslip surfaces, rubber surrounds or over-molding.

Color: Black / Gray

Main Properties:

- Good elongation at break
- Rubber look and feel
- Good tear resistance & tensile strength
- Combine with rigid materials to vary flexibility levels

Main Applications:

- Functional prototypes that require rubber-like performance
- Soft touch coatings
- Nonslip surfaces
- Rubber over-molding

Available on:

- Objet 260/350/500 Connex 3
- Objet30 Prime
- Objet 260/500 Connex 1
- Objet 1000Plus



POLYMERIZED DENSITY

Gray:
1.16 – 1.17 g/cm³
Black:
1.14 – 1.15 g/cm³



SHORE HARDNESS

Gray:
73 – 77 Scale A
Black:
60 – 62 Scale A



ELONGATION AT BREAK

45 – 55%



TENSILE STRENGTH

Gray:
3.0 – 5.0 MPa (435 – 725 psi)
Black:
1.8 – 2.4 MPa (115 – 350 psi)



These 3D printed models have tremendous value in developing surgeons' skills...students agreed the 3D printed heart models were tremendously helpful for them."

Dr. Shi-Joon Yoo,
head, pediatric cardiac imaging,
The Hospital for Sick Children

Medical Materials

- TissueMatrix™ MED310
- BoneMatrix™ RGD516
- GelMatrix™ FLG110
- Biocompatible Clear MED610
- Rigid Ivory Biocompatible MED615RGD
- MED Digital ABS MED515Plus / MED531
- Hearing Aids Clear FC630™
- Hearing Aids Rose Clear FC655™

Medical Material

TissueMatrix™ (MED310™)

The softest material commercially available. Ideal for replicating the look and feel of heart tissue.

Color: Translucent

Main Properties:

- Ultra-Soft material
 - Shore00 30 (below Shore A)
 - Printed with Agilus30 coating
 - DMs including oriented microfibers to enhance performance (i.e., suturability)
-

Main Applications:

- Ultra-soft material to recreate the feel of heart tissue and soft organs
 - Variable coating to enable realistic behavior when cutting and suturing
 - Variable thickness and properties can be applied to all heart tissues, using a variety of digital material options
-

Available on:

- J750 Digital Anatomy
-

❖ [Require Agilus30 availability](#)



Medical Material

BoneMatrix™ (RGD516™ + RGD837™)

The Flex-Rigid Medical Polyjet material specially designed to **simulate real bone (external shell)** for the medical Industry prototypes, Surgery simulation and presentation tools manufacturing.

Color: Ivory White

Main Properties:

- Flex-rigid material for bone simulation
 - Enables screw insertion
 - Withstands cracking
-

Main Applications:

- Cortical and cancellous bone, with internal trabecula provide realistic haptic feedback
 - Enables high toughness connective tissue and bone modeling
 - Enable Device interaction such as Pedicle screw insertion
-

Available on:

- J750 Digital Anatomy
-

❖ [Require VeroPureWhite availability](#)



Medical Support Material

GelMatrix™ (FLG110+SUP706B)

A gel-like support material for medical applications use. Easy removal from blood vessels inner diameters as small as 1mm and wall thickness as low as 1mm.

Support Removal Methods:

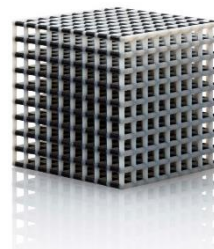
- **Cleaning solution**
Use Alkaline cleaning solution to dissolve GelMatrix support
"hands-free" (for detailed information please see SUP706B Datasheet)
- **Break Away**
Carefully break away the support material from the printed model by hand or water flow
- **Blood Vessel Cleaning Station**
After breaking external (706B) Supports and establishing initial flow, connect to BVCS for automated support removal from internal cavities

Support Resin Grid-style:

Agilus30Clr Spheres as "grid-like" structure

Application Tips:

- Use the dedicated solvent circulation unit for easy removal of support from blood vessel models



Biocompatible Clear (MED610™)

Biocompatible Clear is a rigid medical rapid prototyping material with various biocompatibility approvals. It features high dimensional stability and colorless transparency. Ideal for applications requiring prolonged skin contact or mucosal short term contact.

Color: Transparent

Main Properties:


- Suitable for applications requiring skin contact of over 30 days and short term mucosal-membrane contact of up to 24 hours.
- The material has seven medical approvals according to the harmonized standard ISO 10993-1

Main Applications:


- Medical and dental applications
- 3D printing of medical surgical guides
- 3D printing of dental and orthopedic surgical guides
- Customized fit check of surgical guides and delivery trays in the mouth
- Monitoring oral soft tissue during surgical guide procedures

Available on:

- J7 Series
- J750 Digital Anatomy
- J700/720 Dental
- Objet 260/350/500 Connex 3
- Objet 260/500 Connex 1
- Objet 260 Dental
- Objet 260/500 Dental Selection
- Objet30 Prime/Dental Prime


FLEXURAL STRENGTH
75 – 110 Mpa
(10,878 – 15,954 psi)


IZOD IMPACT, NOTCHED
20– 30 J/m
(0.37 – 0.56 ft lb/inch)


HDT
45 – 50 °C
(113 – 122 °F)


TENSILE STRENGTH
50 – 65 Mpa
(7,252 – 9,427 psi)



Rigid Ivory Biocompatible (MED615RGD™)

MED615 is a biocompatible rigid medical rapid prototyping material with an Ivory shade. It features high dimensional and has various biocompatibility approvals. Ideal for applications requiring prolonged skin contact or mucosal short term contact.

Color: Light Ivory

Main Properties:

- Durable and stiff
- Excellent detail visualization
- Good dimensional stability
- Suitable for applications requiring skin contact of over 30 days and short term mucosal-membrane contact of up to 24 hours.
- The material has seven medical approvals according to the harmonized standard ISO 10993-1

Main Applications:

- Medical and dental applications
- Medical surgical guides
- Customized fit check

Available on:

- J7 Series
- J750 Digital Anatomy
- Objet 260/350/500 Connex 3



FLEXURAL STRENGTH
75 – 110 Mpa
(10,878 – 15,954 psi)



IZOD IMPACT, NOTCHED
20–30 J/m
(0.37 – 0.56 ft lb/inch)



HDT
45 – 50 °C
(113 – 122 °F)



TENSILE STRENGTH
50 – 65 Mpa
(7,252 – 9,427 psi)

Digital ABS Plus Biocompatible™ (MED515Plus/MED531™)

Our Biocompatible Digital ABS simulates standard ABS plastic and combines **high temperature** resistance and **high toughness**. It has various biocompatibility approvals and its high temperature resistance makes it suitable for flash autoclave.

Color: Ivory

- Main Properties:**
- High thermal resistance – 58-68°C (136-154°F)
 - 82-90°C (179-309°F) after thermal Post Curing
 - Excellent impact resistance & shock absorption (65-80J/m or 1.22-1.50 ft lb/in)
 - Superior finish with smooth, glossy surfaces
 - Suitable for applications requiring skin contact of over 30 days and short term mucosal-membrane contact of up to 24 hours
 - The material has seven medical approvals according to the harmonized standard ISO 10993-1
-

- Main Applications:**
- High resistance medical housing
 - Surgical cutting guides
 - Surgical Drilling guides
 - Operating room tool holders
-

- Available on:**
- Objet 260/350/500 Connex 3
 - J735/J750
 - J750 Digital Anatomy
-

Hearing Aids Clear / Rose Clear (FC630/FC655™)

Biocompatible materials approved for prolonged skin contact specifically designed for hearing aids applications.

Color: Transparent Clear / Rose

- Main Properties:**
- Durable rigid
 - Transparent clear or rose shades

- Main Applications:**
- Hearing aids

- Available on:**
- Objet 260
 - Objet 260V
 - Objet 350





Dental Materials

- Biocompatible Clear MED610
- VeroGlaze™ MED620
- Flexible Clear Biocompatible MED625FLX
- VeroDentPlus™ MED690
- VeroDent™ MED670

Medical Material

Biocompatible Clear (MED610™)

Biocompatible Clear is a rigid medical rapid prototyping material with various biocompatibility approvals. It features high dimensional stability and colorless transparency. Ideal for applications requiring prolonged skin contact or mucosal short term contact.

Color: Transparent

Main Properties:


- Suitable for applications requiring skin contact of over 30 days and short term mucosal-membrane contact of up to 24 hours.
- The material has seven medical approvals according to the harmonized standard ISO 10993-1

Main Applications:


- Medical and dental applications
- 3D printing of dental and orthopedic surgical guides
- Customized fit check of surgical guides and delivery trays in the mouth
- Monitoring oral soft tissue during surgical guide procedures

Available on:

- J7 Series
- J750 Digital Anatomy
- J700/720 Dental
- Objet 260/350/500 Connex 3
- Objet 260/500 Connex 1
- Objet 260 Dental
- Objet 260/500 Dental Selection
- Objet30 Prime/Dental Prime


FLEXURAL STRENGTH
75 – 110 Mpa
(10,878 – 15,954 psi)


IZOD IMPACT, NOTCHED
20–30 J/m
(0.37 – 0.56 ft lb/inch)


HDT
45 – 50 °C
(113 – 122 °F)


TENSILE STRENGTH
50 – 65 Mpa
(7,252 – 9,427 psi)



Dental Material

VeroGlaze™ (MED620™)

VeroGlaze™ is a with A2 opaque material shading designed to provide the best color match in the industry. It has various biocompatibility approvals and is ideal for applications requiring prolonged skin contact or mucosal short term contact.

Color: Light Ivory

Main Properties:

- Durable and stiff
- Excellent detail visualization
- Good dimensional stability
- A2 shading
- Medically approved for temporary in-mouth placement, up to 24 hours
- The material has seven medical approvals according to the harmonized standard ISO 10993-1

Main Applications:

- Realistic veneer models
- Diagnostic wax-ups that require A2-Shade color match
- Surgical guides

Available on:

- J720 Dental
- Objet 260/500 Dental Selection
- Objet 260 Dental
- Objet30 Dental Prime



**FLEXURAL
STRENGTH**
75 – 110 Mpa
(10,878 – 15,954 psi)



**IZOD IMPACT,
NOTCHED**
20 – 30 J/m
(0.37 – 0.56 ft lb/inch)



HDT
45 – 50 °C
(113 – 122 °F)



**TENSILE
STRENGTH**
50 – 65 Mpa
(7,252 – 9,427 psi)

Dental Material

Flexible Clear Biocompatible (MED625FLX™)

MED625FLX™ is a transparent, flexible, biocompatible PolyJet™ material. It has various biocompatibility approvals and is ideal for applications requiring prolonged skin contact or mucosal short term contact.

Color: Transparent

Main Properties:

- Flexible
- Enabling direct printing of indirect bonding trays
- Biocompatible material -certified for temporary in-mouth placement

Main Applications:

- Orthodontic indirect bonding trays and implant gingival masks



Available on:

- Objet 260 Dental
- Objet 260/500 Dental Selection
- Objet 260/350/500 Connex 3



POLYMERIZED
DENSITY

1.16 – 1.17 g/cm³



SHORE
HARDNESS

73 – 77 Scale A



ELONGATION
AT BREAK

45 – 55%



TENSILE
STRENGTH

3.0 – 5.0 MPa (435 – 725 psi)

Dental Material

VeroDent™ (MED670™)

VeroDent™ is a peach-tone material offering high-quality detail, strength and durability.

Color: Peach-Tone

Main Properties:

- High-quality detail
- Durable and stiff

Main Applications:

- Various orthodontic applications
- Stone models and aligners



Available on:

- J700/720 Dental
- Objet 260/500 Dental Selection



**FLEXURAL
STRENGTH**
75 – 110 Mpa
(10,878 – 15,954 psi)



**IZOD IMPACT,
NOTCHED**
20 – 30 J/m
(0.37 – 0.56 ft lb/inch)



HDT
45 – 50 °C
(113 – 122 °F)



**TENSILE
STRENGTH**
50 – 65 Mpa
(7,252 – 9,427 psi)

Dental Material

VeroDentPlus™ (MED690™)

VeroDentPlus™ is a 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.

Color: Dark Beige

Main Properties:

- High-quality detail
- Durable and stiff
- Deliver higher level of opacity than VeroDent
- Appearance of dental stone

Main Applications:

- Various orthodontic applications
- Stone models and aligners

Available on:

- J700/720 Dental
- Objet 260/500 Dental Selection
- Objet 260 Dental
- Objet30 Dental Prime



**FLEXURAL
STRENGTH**
75 – 110 Mpa
(10,878 – 15,954 psi)



**IZOD IMPACT,
NOTCHED**
20 – 30 J/m
(0.37 – 0.56 ft lb/inch)



HDT
45 – 50 °C
(113 – 122 °F)



**TENSILE
STRENGTH**
50 – 65 Mpa
(7,252 – 9,427 psi)



Support Materials

- SUP705™/ SUP705B™
- SUP706B™
- SUP707™
- SUP710™
- GelMatrix™

Support Material

SUP705™ / SUP705B™

The Original Stratasys Support Material, can be used on all PolyJet Systems

-
- Support Removal Methods:**
- **Break Away**
Carefully break away the support material from the printed model by hand or water flow
 - **Water Pressure**
This method requires a water jet unit. Cleaning time depends on the complexity and dimensions of the printed model.

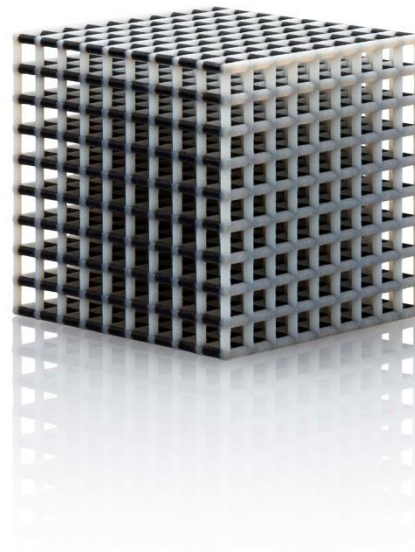
Support Resin Grid-style Lite, Standard or Heavy Grid

-
- Application Tips:**
- Pay careful attention to fine features when removing the support using water pressure

System Compatibility:

- All PolyJet Printing Systems exc. J750 Digital Anatomy

❖ **Tango/Agilus material will automatically be printed with heavy grid**



Support Material SUP706B™

Soluble Support

Support Removal Methods:

- **Cleaning solution**
Use Alkaline cleaning solution to dissolve SUP706
“hands-free” (for detailed information please see SUP706B Datasheet)
- **Break Away**
Carefully break away the support material from the printed model by hand or water flow
- **Water Pressure**
This method requires a water jet unit. Cleaning time depends on the complexity and dimensions of the printed model.

Support Resin Grid-style

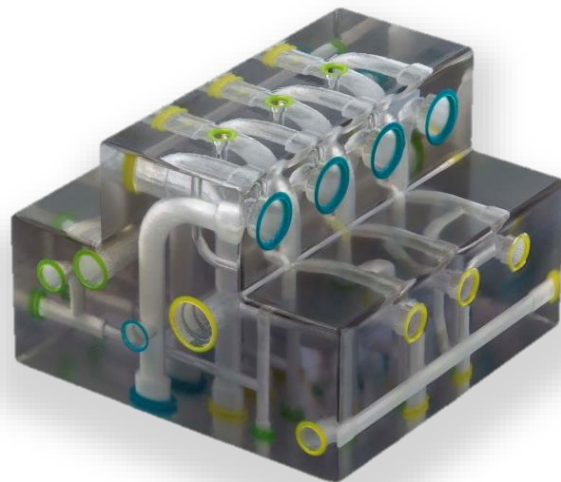
“Lite Grid” (default)* , **Standard or Heavy Grid**

Application Notes and Tips:

- Bio Compatible with MED610 and MED620; MEDDABS+; MED615 RGD.
- Matte finish requires glycerol solution dip
- For proper dissolution with Alkaline solution-light grid is preferred.

System Compatibility:

- | | |
|------------------------|------------------------------|
| • J8Series | • Objet 260/350/500 Connex 3 |
| • J7Series | • Objet 260/500 Connex 1 |
| • J750 Digital Anatomy | • Objet30 Prime/Pro |



*Tango/Agilus material will automatically be printed with heavy grid

*Floating parts which can only be cleaned with WaterJet will require manual change to Heavy grid

Support Material

SUP707™

Water Soluble Support

Support Removal Methods:

- **Break Away**
Carefully break away the support material from the printed model by hand or water flow
- **Water Pressure**
This method requires a water jet unit. Cleaning time depends on the complexity and dimensions of the printed model.

Support Resin Grid-style

No Grid

Application Tips:

- Matte finish requires glycerol solution dip

Specially Designed for:

- Eden260VS



SUP710™

Gel-like SUP710™ support material was specially designed to uphold overhangs and complicated geometries on J55 3D printing LED curing process.

Support Removal Methods:

- **Break Away**

Carefully break away the support material from the printed model by hand or water flow

- **Water Pressure**

This method requires a water jet unit. Cleaning time depends on the complexity and dimensions of the printed model.

Support Resin Grid-style

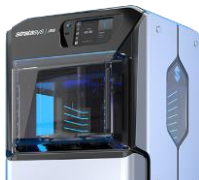
“Standard Grid”

Application Tips:

- Models Printed with Support “Standard Grid Style” (J55 Default Configuration) – SUP710 :
- For models printed with a standard grid style, use the Support Removal with Water Pressure.

Specially Designed for:

J55



Medical Support Material

GelMatrix™ (FLG110+SUP706B)

A gel-like support material for medical applications use. Easy removal from blood vessels inner diameters as small as 1mm and wall thickness as low as 1mm.

Support Removal Methods:

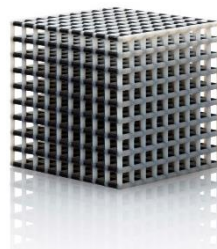
- Cleaning solution**
 Use Alkaline cleaning solution to dissolve GelMatrix support
 "hands-free" (for detailed information please see SUP706B Datasheet)
- Break Away**
 Carefully break away the support material from the printed model by hand or water flow
- Blood Vessel Cleaning Station**
 After breaking external (706B) Supports and establishing initial flow, connect to BVCS for automated support removal from internal cavities

Support Resin Grid-style:

Agilus30Clr Spheres as "grid-like" structure

Application Tips:

- Use the dedicated solvent circulation unit for easy removal of support from blood vessel models



PolyJet Support Material

The Evolution

2002

SUP705



1 Method with WaterJet

2014

SUP707



Water Soluble
Basic Vero Only
Eden260VS only

2015-16

SUP706



Soluble Support
All Materials

SUP706 is Support material
Suitable for
Stratasys J750/J735; Objet2
60/360/500 Connex1/2/3 ;
Objet30 Family; Objet260/
500 Dental Selection

Replaced by SUP706B

2018

SUP706B



Advanced Soluble Support
for all materials

Significant reduced Dioxane in
waste water, and improved print
quality, replacing SUP706

Suitable for
Stratasys J850/835/826;
J750/J735; Objet260/350/500
Connex1/2/3 ; Objet30 Family;
Objet260/ 500 Dental Selection

2020

SUP710



Advanced LED Compatible
Support for all J55 materials

Gel-like SUP710™ support
material was specially designed
for J55 3D printing LED curing
process.

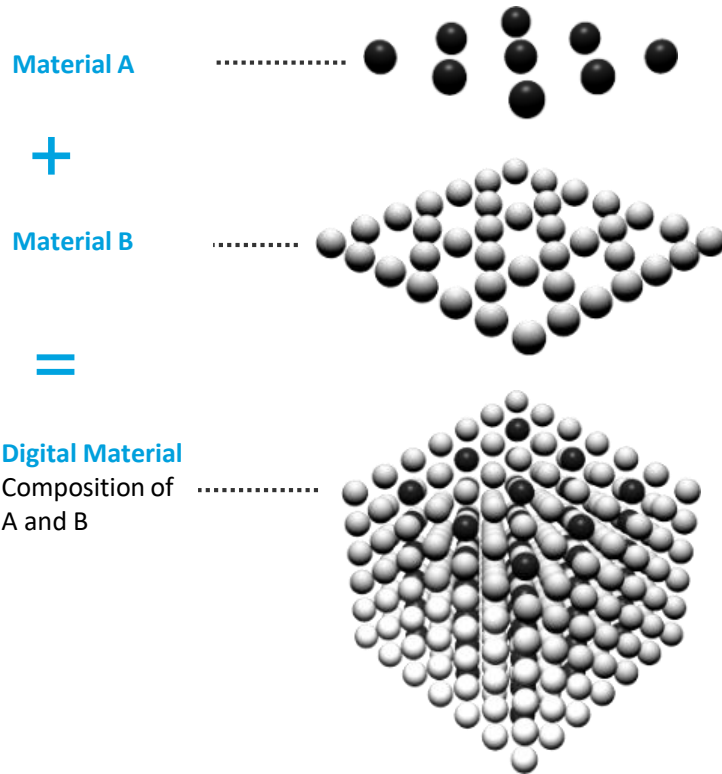


Multi, Color and Digital Materials

Overview

Digital Materials (DM) Overview

- Composite materials consisting of up to 7 model materials (J8 Series) integrated in specific concentrations and structures.
- Each combination produces a set of properties (physical, mechanical, shades and tones, etc.) different from those of the parent materials.
- The materials are created automatically during printing, without user intervention.



Digital Materials Color

VeroCyan (CMY Basic Color)



+

VeroYellow (CMY Basic Color)



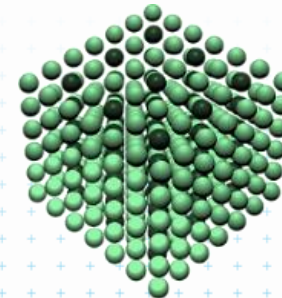
+

VeroClear (Transparency)



=

"Green" Digital Material



VeroMagenta

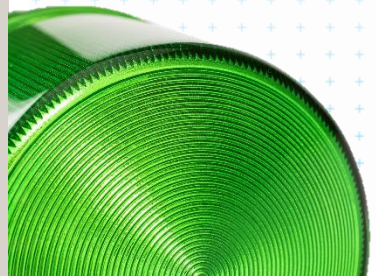
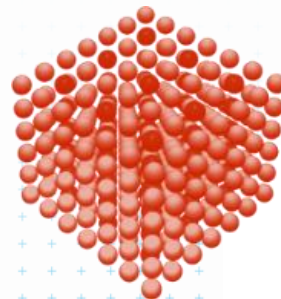
+

VeroPureWhite



=

"Pink" opaque Digital Material



PANTONE®

Standardized Color Matching System

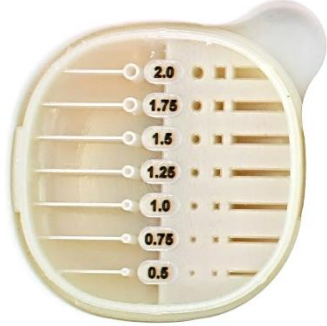
PANTONE® utilizes a universal language of color.

This enables different brands and manufacturers to sync decisions across locations and services to help define, communicate and control color from inspiration to realization.

Stratasys is the **only** PANTONE® Validated 3D printer on the market.

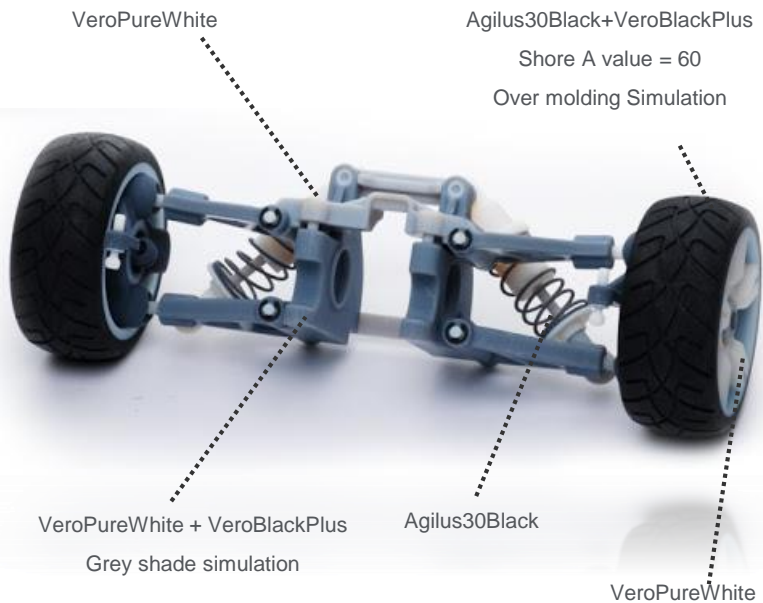


ASK ABOUT ME!

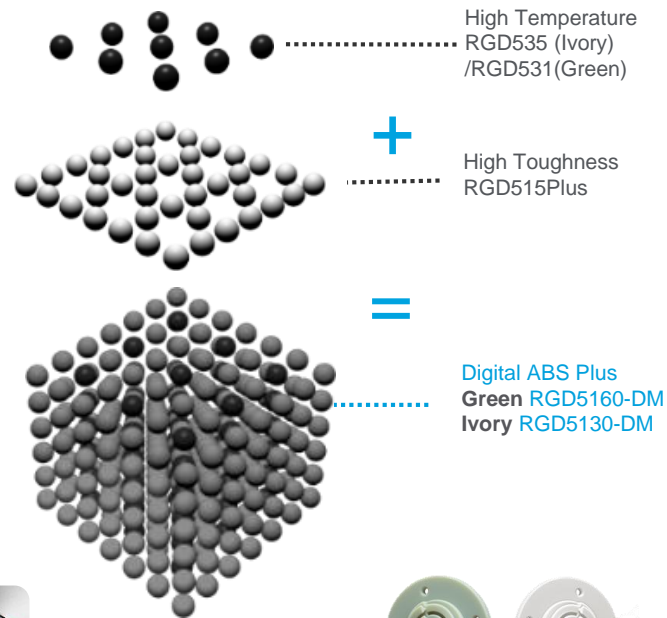


Multi-Functional Digital Materials

Multi-Material PolyJet models are the best way to present functional prototypes and to analyse performance and shape of different features acting in the same model.



Digital ABS Plus is a composite material based on two combined materials: High temperature (RGD535 – Green / RGD515 - Ivory) and high toughness (RGD515Plus).

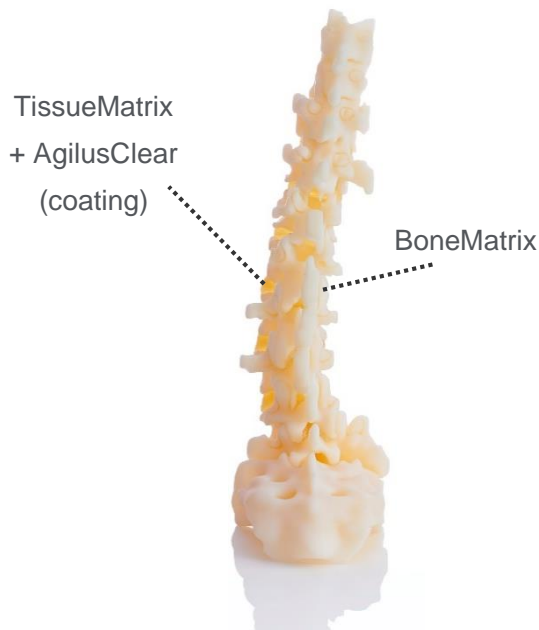


DigitalABS
Video

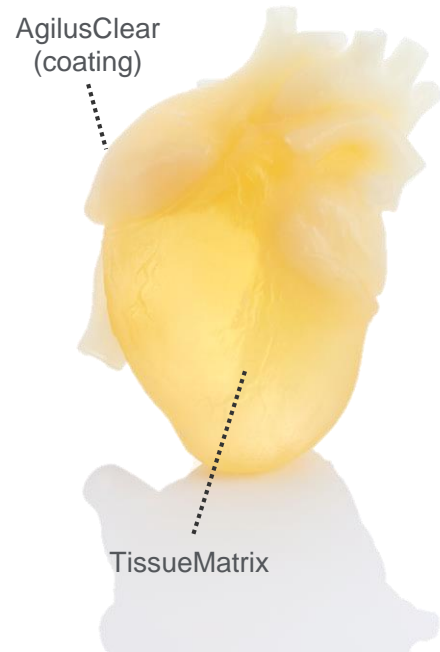
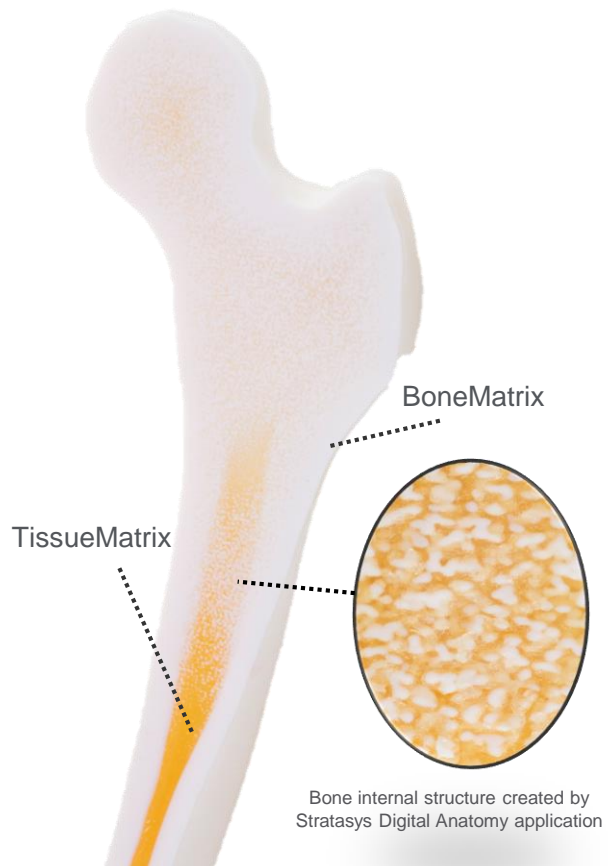


Medical Digital Materials & Applications

The Digital Anatomy GrabCAD Print Digital Anatomy software takes PolyJet Technology to the next level. No longer are anatomical models defined solely by their external geometry and color, but also by their unique, patient-specific biomechanics.



Pre-programmed to take the guess work out of design, the software saves time and money. It not only creates complex anatomical structures but also automatically designs minute internal structures using its proprietary digital materials to achieve the look, feel, and function of your patient's unique anatomy. Simply select from a variety of settings describing your patient's specific anatomical attributes and the software does the rest.



Design hearts with myocardial tissue fibers, valves, leaflets and annulus of varying levels of compliance to match your patient's exact anatomy. Rather than just one preset option for each, the software license allows you to choose from a variety of options to replicate the contractibility of each individual cardiac structure from normal to diseased myocardium, valve chordae, and valve annulus.



PJ Materials Technical Specifications

Overview

BASIC

Material Properties	VeroBlackPlus (RGD875), VeroWhitePlus (RGD835), VeroGray (RGD850)	RGD720	VeroBlue (RGD840)	DraftGrey (RGD750)
Tensile Strength	50 – 65 Mpa (7,250 – 9,450 psi)	50 – 65 Mpa (7,250 – 9,450 psi)	50 – 60 Mpa (7,250 – 8,700 psi)	50 – 65 Mpa (7,250 – 9,450 psi)
Elongation at Break	10 – 25%	15 – 25%	15 – 25%	10 – 25%
Modulus of Elasticity	2,000 – 3,000 Mpa (290,000 – 435,000 psi)	2,000 – 3,000 Mpa (290,000 – 435,000 psi)	2,000 – 3,000 Mpa (290,000 – 435,000 psi)	2,000 – 3,000 Mpa (290,000 – 435,000 psi)
Flexural Strength	75 – 110 MPa(11,000 – 16,000 psi)	80 – 110 MPa(12,000 – 16,000 psi)	60 – 70 MPa(8,700 – 10,200 psi)	75 – 110 MPa(11,000 – 16,000 psi)
Flexural Modulus	2,200 – 3,200 Mpa (320,000 – 465,000 psi)	2,700 – 3,300 Mpa (390,000 – 480,000 psi)	1,900 – 2,500 Mpa (265,000 – 365,000 psi)	2,200 – 3,200 Mpa (320,000 – 465,000 psi)
HDT, °C @ 1.82 MPa	45 – 50 °C (113 – 122 °F)	45 – 50 °C (113 – 122 °F)	45 – 50 °C (113 – 122 °F)	45 – 50 °C(113 – 122 °F)
Izod Notched Impact	20 – 30 J/m (0.375 – 0.562 ft lb/inch)	20 – 30 J/m (0.375 – 0.562 ft lb/inch)	20 – 30 J/m (0.375 – 0.562 ft lb/inch)	20 – 30 J/m (0.375 – 0.562 ft-lb/inch)
Water Absorption	1.1 – 1.5%	1.5 – 2.2%	1.5 – 2.2%	1.1 – 1.5%
Tg	52 – 54 °C (126 – 129 °F)	48 – 50 °C (118 – 122 °F)	48 – 50 °C (118 – 122 °F)	52 – 54 °C(126 – 129 °F)
Shore Hardness	83 – 86 Scale D	83 – 86 Scale D	83 – 86 Scale D	83 – 86 Scale D
Rockwell Hardness	73 – 76 Scale M	73 – 76 Scale M	73 – 76 Scale M	73 – 76 Scale M
Polymerized Density	1.17 – 1.18 g/cm3	1.18 – 1.19 g/cm3	1.18 – 1.19 g/cm3	1.17 – 1.18 g/cm3
Ash Content	0.23 – 0.26% (VeroGray, Vero WhitePlus), 0.01 – 0.02% (VeroBlackPlus, VeroMagentaV, VeroYellowV)	0.01 – 0.02%	0.21 – 0.22%	0.23 – 0.26%

Material	VeroPureWhite (RGD837), VeroYellow (RGD836), VeroCyan (RGD841), VeroMagenta (RGD851), VeroMagentaV (RGD852)*, VeroYellowV (RGD838)*, VeroCyanV (RGD845)*	VeroFlex Black (RGD895), VeroFlex Clear (RGD896), VeroFlex White (RGD894), VeroFlex Cyan (RGD891), VeroFlex Magenta (RGD892), VeroFlex Yellow (RGD893), VeroFlex CyanV (RGD898), VeroFlex MagentaV (RGD899), VeroFlexYellowV (RGD890)	VeroClear (RGD810)	VeroUltraClear (RGC820)
Properties				
Tensile Strength	50 – 65 MPa(7,250 – 9,450 psi)	43 – 64 MPa(6,237 – 9,282 psi)	50 – 65 MPa(7,250 – 9,450 psi)	39 – 43 MPa(5,650 – 6,240 psi)
Elongation at Break	10 – 25%	8 – 20%	10 – 25%	20 – 35%
Modulus of Elasticity	2,000 – 3,000 Mpa (290,000 – 435,000 psi)	950 – 1600 Mpa (137,786 – 232,060 psi)	2,000 – 3,000 Mpa (290,000 – 435,000 psi)	1,400 – 2,100 MPa (203,000 – 304,600 psi)
Flexural Strength	75 – 110 MPa(11,000 – 16,000 psi)	48 – 88 MPa(6,962 – 12,763 psi)	75 – 110 MPa(11,000 – 16,000 psi)	58 – 72 MPa(8,400 – 10,400 psi)
Flexural Modulus	2,200 – 3,200 Mpa (320,000 – 465,000 psi)	1,600 – 2,300 Mpa (232,061 – 333,587 psi)	2,200 – 3,200 Mpa (320,000 – 465,000 psi)	1,900 – 2,300 MPa (275,000 – 333,000 psi)
HDT, °C @ 1.82 MPa	45 – 50 °C (113 – 122 °F)	42 – 50 °C(108 – 122 °F)	45 – 50 °C (113 – 122 °F)	Before photobleaching: 47 – 49 °C (117 – 120 °F) After photobleaching: 48 – 52 °C (118 – 126 °F)
Izod Notched Impact	20 – 30 J/m (0.375 – 0.562 ft lb/inch)	20 – 30 J/m (0.375 – 0.562 lb/in)	20 – 30 J/m (0.375 – 0.562 ft lb/inch)	20 – 30 J/m (0.375 – 0.562 ft lb/inch)
Water Absorption	1.1 – 1.5%	-	1.1 – 1.5%	1.25 – 1.4%
Tg	52 – 54 °C (126 – 129 °F)	-	52 – 54 °C (126 – 129 °F)	52 – 54 °C (126 – 129 °F)
Shore Hardness	83 – 86 Scale D	75 – 85 Scale D	83 – 86 Scale D	80 – 85 Scale D
Rockwell Hardness	73 – 76 Scale M	-	73 – 76 Scale M	70 – 75 Scale M
Polymerized Density	1.17 – 1.18 g/cm3	-	1.18 – 1.19 g/cm3	1.18 – 1.19 g/cm3
Ash Content	0.23 – 0.26% (VeroGray,Vero WhitePlus), 0.01 – 0.02% (VeroBlackPlus, VeroMagentaV, VeroYellowV)	-	0.02 – 0.06%	0.02 – 0.06%

FUNCTIONAL

Material Properties	Digital ABS Plus, Green, made of RGD515 Plus & RGD535	High Temperature (RGD525)	Durus White (RGD430)	Rigur
	Digital ABS Plus, Ivory, made of RGD515 Plus & RGD531			
Tensile Strength	55 – 60 MPa(8,000 – 8,700 psi)	70 – 80 MPa(10,000 – 11,500 psi)	20 – 30 MPa (2,900 – 4,350 psi)	40-45 Mpa (5,800-6,500 psi)
Elongation at Break	25 – 40%	10 – 15%	40 – 50%	20-35%
Modulus of Elasticity	2,600 – 3,000 Mpa (375,000 – 435,000 psi)	3,200 – 3,500 Mpa (465,000 – 510,000 psi)	1,000 – 1,200 Mpa (145,000 – 175,000 psi)	1,700-2,100 Mpa (246,000-305,000 psi)
Flexural Strength	65 – 75 MPa(9,500 – 11,000 psi)	110 – 130 MPa(16,000 – 19,000 psi)	30 – 40 MPa (4,350 – 5,800 psi)	52-59 Mpa (7,500-8,500 psi)
Flexural Modulus	1,700 – 2,200 Mpa (245,000 – 320,000 psi)	3,100 – 3,500 Mpa (450,000 – 510,000 psi)	1,200 – 1,600 Mpa (175,000 – 230,000 psi)	1,500-1,700 Mpa (217,000-246,000 psi)
HDT, °C @ 1.82 MPa	51 – 55 °C (124 – 131 °F)	55 – 57 °C (131 – 135 °F)	32 – 34 °C (90 – 93 °F)	45-50 °C (113-122 °F)
Izod Notched Impact	90 – 110 J/m(1.69 – 2.06 ft lb/inch)	14 – 16 J/m(0.262 – 0.300 ft lb/inch)	40 – 50 J/m (0.749 – 0.937 ft lb/inch)	30-35 J/m (0.561-0.656 ft lb/inch)
Water Absorption	–	1.2 – 1.4%	1.5 – 1.9%	-
Tg	47 – 53 °C (117 – 127 °F)	62 – 65 °C (144 – 149 °F)	35 – 37 °C (95 – 99 °F)	48-52 °C (118-126 °F)
Shore Hardness	85 – 87 Scale D	87 – 88 Scale D	74 – 78 Scale D	80-84 Scale D
Rockwell Hardness	67 – 69 Scale M	78 – 83 Scale M	–	58-62 Scale M
Polymerized Density	1.17 – 1.18 g/cm3	1.17 – 1.18 g/cm3	1.15 – 1.17 g/cm3	1.20-1.21 g/cm3
Ash Content	–	0.38 – 0.42%	0.10 – 0.12%	0.3-0.4%

FUNCTIONAL

Material Properties	TangoBlack (FLX973)	TangoGray (FLX950)	TangoBlackPlus (FLX980), TangoPlus (FLX930)	Agilus30 Clear (FLX935), Agilus30 Black (FLX 985)	Agilus30 White (FLX945)
	Tensile Strength	1.8 – 2.4 MPa (115 – 350 psi)	3.0 – 5.0 MPa (435 – 725 psi)	0.8 – 1.5 Mpa (115 – 220 psi)	2.4 – 3.1 MPa (348 – 450 psi)
Elongation at Break	45 – 55%	45 – 55%	170 – 220%	220 – 240%	185 – 230%
Modulus of Elasticity	–	–	–	–	–
Flexural Strength	–	–	–	–	–
Flexural Modulus	–	–	–	–	–
HDT, °C @ 1.82 MPa	–	–	–	–	–
Izod Notched Impact	–	–	–	–	–
Water Absorption	–	–	–	–	–
Tg	–	–	–	–	–
Shore Hardness	60 – 62 Scale A	73 – 77 Scale A	26 – 28 Scale A	30 – 35 Scale A	30 – 40 Scale A
Rockwell Hardness	–	–	–	–	–
Polymerized Density	1.14 – 1.15 g/cm3	1.16 – 1.17 g/cm3	1.12 – 1.13 g/cm3	1.14 – 1.15 g/cm3	1.14 – 1.15 g/cm3
Ash Content	–	–	–	–	–



PolyJet Materials & Systems Matrix

PolyJet Systems Overview

	Objet 24	Objet 30	Objet 30 Pro	Objet 30 Prime	Eden 260/350/500	Connex 260/350/500	Connex1 260/350/500	Connex2. 260/350/500	Connex3 260/350/500	J750/735/DAP Dental J700/720	O1000	J4100	J850/835/826	J55
														
Year	2010	2010			2004	2007	2014	2014	2014	2016	2013	2021	2019	2020
Model Channels	1	1	1	1	1	2	3	3	3	6	2	3	7	5
Materials Together on tray	1	1	1	1	1	2	1	2	3	6	2	3	7	5
Color (CMY)	N	N	N	N	N	N	N	N	Y	Y	N	N	Y	Y

System & Material Matrix

Rigid Opaque									
Material	Objet30 Pro™	Objet30 Prime™	Objet260/500 Connex1™ 1,2	Objet1000 Plus™	Objet260/350/500 Connex3™	Stratasys J735™ ² /J750™	Stratasys J750™ Digital Anatomy™	Stratasys J826™/J835™/J850™	Stratasys J55™
VeroWhitePlus™ (RGD835)	●	●	●	●	●	○	○	○	○
VeroBlackPlus™ (RGD875)	●	●	●	●	●	●	●	●	●
VeroBlue™ (RGD840)	●	●	●	●	●	●	● ³	○	○
VeroGray™ (RGD850)	●	●	●	●	●	●	● ³	○	○
VeroCyan™ (RGD843)	○	○	○	○	●	●	● ³	●	○
VeroMagenta™ (RGD851)	○	○	○	○	●	●	●	●	○
VeroYellow™ (RGD836)	○	○	○	○	●	●	●	●	○
Vero PureWhite™ (RGD837)	○	○	●	○	●	●	●	●	●
DraftGrey™ (RGD750)	○	○	○	○	○	○	○	●	●

Rigid Transparent									
Material	Objet30 Pro	Objet30 Prime	Objet260/500 Connex1 ¹	Objet1000 Plus	Objet260/350/500 Connex3	Stratasys J735 ² /J750	Stratasys J750 Digital Anatomy	Stratasys J826/J835/J850	Stratasys J55
VeroCyanV™ (RGD845)	○	○	○	○	○	●	●	●	●
VeroMagentaV™ (RGD852)	○	○	○	○	●	●	●	●	●
VeroYellowV™ (RGD838)	○	○	○	○	●	●	●	●	●
RGD720™ (General Purpose Transparent)	○	●	●	○	●	●	● ³	○	○
VeroClear™ (RGD810)	●	●	●	●	●	●	●	●	●
VeroUltraClear™ (RGD820)	○	○	○	○	○	●	● ³	● ⁴	○

Simulated Rubber									
Material	Objet30 Pro	Objet30 Prime	Objet260/500 Connex1 ¹	Objet1000 Plus	Objet260/350/500 Connex3	Stratasys J735 ² /J750	Stratasys J750 Digital Anatomy	Stratasys J826/J835/J850	Stratasys J55
TangoGray™ (FLX950)	○	●	●	●	●	○	○	○	○
TangoBlack™ (FLX973)	○	●	●	●	●	○	○	○	○
TangoPlus™ (FLX930)	○	○	●	●	●	●	● ³	○	○
TangoBlackPlus™ (FLX980)	○	○	●	●	●	●	● ³	○	○
Agilus30™ Black (FLX985)	○	○	●	○	●	●	● ³	●	○
Agilus30 White (FLX945)	○	○	○	○	○	●	● ³	●	○
Agilus30 (Transparent) (FLX935)	○	○	●	○	●	●	●	●	○

Simulated Polypropylene									
Material	Objet30 Pro	Objet30 Prime	Objet260/500 Connex1 ¹	Objet1000 Plus	Objet260/350/500 Connex3	Stratasys J735 ² /J750	Stratasys J750 Digital Anatomy	Stratasys J826/J835/J850	Stratasys J55
Durus™ (RGD430)	●	●	●	○	●	○	○	○	○
Rigur™ (RGD450)	●	●	●	●	●	○	○	○	○

¹Not available in the Americas

²Subject to regional availability

³VeroUltraClear is available only when operating in J750 (non-DAP) configuration

⁴Availability on the J826 is pending

System & Material Matrix

Simulated Engineering Plastics									
Material	Objet30 Pro	Objet30 Prime	Objet260/500 Connex1 ¹	Objet1000 Plus	Objet260/350/500 Connex3	Stratasys J735/J750	Stratasys J750 Digital Anatomy	Stratasys J826/J835/J850	Stratasys J55
Digital ABS Plus Ivory (RGD515 Plus & RGD531)	○	○	○	●	●	●	● ⁵	●	○
Digital ABS Plus Green ¹ (RGD515 Plus & RGD535)	○	○	○	●	●	●	● ⁵	●	○
High Temp (RGD525)	●	●	●	○	●	○	○	○	○

Medical & Dental									
Material	Objet30 Pro	Objet30 Prime, Objet30 Dental Prime	Objet260/500 Connex1 ¹	Objet1000 Plus	Objet260 Dental, Objet260/500 Dental Selection, Objet260/350/500 Connex3	Stratasys J735/750, Stratasys J700 Dental, Stratasys J720 Dental	Stratasys J750 Digital Anatomy	Stratasys J826/J835/J850	Stratasys J55
VeroDent™ (MED670)	○	○	○	○	● ²	● ⁵	○	○	○
VeroDentPlus™ (MED690)	○	● ⁴	○	○	● ²	● ⁵	○	○	○
VeroGlaze™ (MED620)	○	● ⁴	○	○	● ²	● ⁷	○	○	○
Biocompatible Clear (MED610)	○	●	●	○	●	●	● ⁵	○	○
Digital ABS Plus Biocompatible (MED515+DABS, IV and MED531DABS, IV)	○	○	○	○	● ²	● ⁸	● ⁵	○	○
Rigid Ivory Biocompatible (MED615RIGD, IV)	○	○	○	○	● ²	● ⁸	● ⁵	○	○
Flexible Clear Biocompatible (MED625FLX, CL)	○	○	○	○	● ²	○	○	○	○
TissueMatrix™ (MED310)	○	○	○	○	○	○	●	○	○
GelMatrix™ (FLG110)	○	○	○	○	○	○	●	○	○
BoneMatrix™ (RGD516)	○	○	○	○	○	○	●	○	○

1-Not available in the Americas

3-Objet260/350/500 Connex3 only

4-Stratasys J735/750 only

5-Dental and Dental Selection only

8-Objet30 Dental Prime only

System & Material Matrix

Specialty										
Material	Objet30 Pro	Objet30 Prime	Objet260/500 Connex1 ¹	Objet1000 Plus	Objet260/350/500 Connex3	Stratasys J735/J750	Stratasys J750 Digital Anatomy	Stratasys J826/J835/J850	Stratasys J55	
VeroFlex™ Cyan (RGD891)	○	○	○	○	○	●	●	○	○	
VeroFlex Magenta (RGD892)	○	○	○	○	○	●	●	○	○	
VeroFlex Yellow (RGD893)	○	○	○	○	○	●	●	○	○	
VeroFlex White (RGD894)	○	○	○	○	○	●	●	○	○	
VeroFlex Black (RGD895)	○	○	○	○	○	●	●	○	○	
VeroFlex Clear (RGD896)	○	○	○	○	○	●	●	○	○	
VeroFlexVivid™ Cyan (RGD898)	○	○	○	○	○	●	●	○	○	
VeroFlexVivid Magenta (RGD899)	○	○	○	○	○	●	●	○	○	
VeroFlexVivid Yellow (RGD890)	○	○	○	○	○	●	●	○	○	

Support											
Material	Objet30 Pro	Objet30 Prime	Objet Eden260VS	Objet260/500 Connex1 ¹	Objet1000 Plus	Objet260/350/500 Connex3	Stratasys J735/J750	Stratasys J720 Dental	Stratasys J750 Digital Anatomy	Stratasys J826/J835/J850	Stratasys J55
SUP705™ and SUP705B (APJ) (Water Jet Removal) Biocompatible ³ with FC630; FC655; MED610; MED620; MED625FLX ⁴ ; MEDDABS+; MED615RGD	●	●	●	●	●	●	●	●	● ⁴	●	○
SUP706B™ (Soluble Support) Biocompatible ³ with MED610; MED620; MED625FLX; MEDDABS+; MED615RGD ³	●	●	○	●	○	●	●	●	●	●	○
SUP707™ (Water Soluble)	○	○	●	○	○	○	○	○	○	○	○
SUP710™	○	○	○	○	○	○	○	○	○	○	●

Packaging Details			
Printer	Type	Amount (kg)	Packing
Objet1000 Plus	Container	18 kg, Partial-filled 3.6 kg	Pack of 1
Eden/Connex	Cartridge	3.6 kg	Pack of 1/Pack of 4 ²
Stratasys J735/J750	Cartridge	3.6 kg	Pack of 1/Pack of 3 ²
Objet30 Pro/Prime	Cartridge	1 kg	Pack of 2
Stratasys J826/J835/J850	Cartridge	4 kg	Pack of 1
Stratasys J750 Digital Anatomy	Cartridge	3.6 kg Note: TissueMatrix (MED310) has 3.1 kg in a 3.6 kg cartridge	Pack of 1
Stratasys J55	Cartridge	1.1 kg	Pack of 1

¹Not available in the Americas

²Packaging subject to regional availability

³Biocompatibility is system dependent, please refer to the Medical & Dental section above











⁴SUP705/SUP705B available only when operating in J750 (non-DAP) configuration

PolyJet Materials Packaging

Overview



Naming of Material Packaging

Type	PJ Naming	Systems/Printers	Kg	Packing	
	Container	Objet 1000/Plus		18kg, Partial-filled 3.6kg	Pack of 1
	Cartridge	J850/J835/J826		4kg	
	Cartridge	Eden/Connex J750/J735		3.6kg	Pack of 1/Pack of 4* Pack of 1/Pack of 3* Partial-filled pack of 3.6kg
	Cartridge	J55		1.1Kg	
	Cartridge	Desktop		1kg	Pack of 2

*Multi-packs are available only in APJ, In EMEA a volume discount is applicable above 4 units of the same item (4%). No discounts in Americas

Thank you!

