



Rigur

POLYJET SIMULATED POLYPROPYLENE MATERIAL

Rigur™ (RGD450) is an advanced simulated polypropylene photopolymer with improved toughness, increased dimensional stability and great surface finish. Offered in a bright white color, Rigur is ideal for flexible closures and living hinges; reusable containers and packaging; and white appliances including consumer goods, household appliances, consumer electronics and automotive parts. Digital Materials that combine Rigur with other base resins offer a range of gray color and Shore A options, expanding the applications for Rigur.

MECHANICAL PROPERTIES	TEST METHOD	IMPERIAL	METRIC
Tensile Strength	D-638-03	5,800-6,500 psi	40-45 MPa
Elongation at Break	D-638-05	20-35%	20-35%
Modulus of Elasticity	D-638-04	246,000-305,000 psi	1,700-2,100 MPa
Flexural Strength	D-790-03	7,500-8,500 psi	52-59 MPa
Flexural Modulus	D-790-04	217,000-246,000 psi	1,500-1,700 MPa
Izod Notched Impact	D-256-06	0.561-0.656 ft lb/inch	30-35 J/m

THERMAL PROPERTIES	TEST METHOD	IMPERIAL	METRIC
Heat Deflection (HDT) @ 0.45 MPa	D-648-06	120-129 °F	49-54 °C
Heat Deflection (HDT) @ 1.82 MPa	D-648-07	113-122 °F	45-50 °C
Glass Transition (Tg)	DMA, E	118-126 °F	48-52 °C



OTHER	TEST METHOD	IMPERIAL	METRIC
Shore Hardness	Scale D	80-84 Scale D	80-84 Scale D
Rockwell Hardness	Scale M	58-62 Scale M	58-62 Scale M
Polymerized Density	ASTM D792	—	1.20-1.21 g/cm ³
Ash Content	USP 281	0.3-0.4%	0.3-0.4%

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THE 3D PRINTING SOLUTIONS COMPANY



Rigur

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At the core:

PolyJet™ Technology

Objet® 3D Printers are based on proven PolyJet technology, which creates precise prototypes that set the standard for finished-product realism. Their fine resolution makes complex shapes, intricate details and smooth surfaces possible.

PolyJet 3D Printing works by jetting layers of liquid photopolymer onto a build tray and instantly curing them with UV light. The fine layers build up to create a precise 3D model or prototype. Models are ready to handle right out of the 3D printer, with no post-curing needed.

Keep valuable resources in-house

You'll be amazed when you see how easy it is to produce realistic models in-house. Objet 3D Printers offer not only unparalleled speed, they make it easy for you to print with the widest range of material properties.

No special facilities needed

You can install Objet 3D Printers just about anywhere. No special venting is required because Objet 3D Printers don't produce noxious fumes, chemicals or waste.

Good ideas sell easier

Objet 3D Printers improve communication and collaboration because they produce amazingly accurate representations of your ideas that you can share with your team and your clients for a faster, more confident buy-in.

SYSTEM AVAILABILITY	LAYER THICKNESS CAPABILITY	SUPPORT STRUCTURE	AVAILABLE COLOR
Objet30 Pro™ Objet30 Prime™	28 microns (0.0011 in.)	SUP705 (WaterJet removable) SUP706 (soluble)	White
Objet Eden260VS™	16 microns (.0006 in.)		
Objet Eden260V™/350V™/500V™	High Quality mode: 16 microns (0.0006 in.) High Speed mode: 30 microns (0.0012 in.)		
Objet260/350/500 Connex3™			
Objet1000 Plus™	Digital Material: 34 microns (0.0013 in.) High Speed: 34 microns (0.0013 in.) High Quality: 16 microns (0.0006 in.)	SUP705 (WaterJet removable) SUP706 (soluble)	

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Durus

Durus™ (RGD430) is the original simulated polypropylene material and exhibits great impact resilience and an elongation at break of 44 percent. Delicate features and small cavities are easily maintained with easily removed support material.

	ASTM	Value
Tensile Strength	D-638-03	2,900 – 4,350 psi (20 – 30 MPa)
Elongation at Break	D-638-05	40 – 50%
Modulus of Elasticity	D-638-04	145,000 – 175,000 psi (1,000 – 1,200 MPa)
Flexural Strength	D-790-03	4,350 – 5,800 psi (30 – 40 MPa)
Flexural Modulus	D-790-04	175,000 – 230,000 psi (1,200 – 1,600 MPa)
HDT, °C @ 0.45MPa	D-648-06	99 – 108 °F (37 – 42 °C)
HDT, °C @ 1.82MPa	D-648-07	90 – 93 °F (32 – 34 °C)
Izod Notched Impact	D-256-06	0.749 – 0.937 ft lb/inch (40 – 50 J/m)
Water Absorption	D-570-98 24hr	1.5 – 1.9%
Tg	DMA, E»	95 – 99 °F (35 – 37 °C)
Shore Hardness (D)	Scale D	74 – 78 Scale D
Polymerized Density	D792	1.15 – 1.17 g/cm³
Ash Content	USP281	0.1-0.12%

System Availability

Printer	Minimum Layer Thickness Capability	Support Structure	Available Color
Objet30 Pro	14 microns (0.00055 in.)	SUP705™ (WaterJet removable) SUP706™ (soluble and WaterJet removable)	■ Ivory
Objet30 Prime™	14 microns (0.00055 in.)	SUP705 (WaterJet removable) SUP706 (soluble and WaterJet removable)	■ Ivory
Objet Eden260VS™	14 microns (0.00055 in.)	SUP705 (WaterJet removable) SUP706 (soluble and WaterJet removable)	■ Ivory
Objet260 Connex1™	14 microns (0.00055 in.)	SUP705 (WaterJet removable) SUP706 (soluble and WaterJet removable)	■ Ivory
Objet260 Connex3™	14 microns (0.00055 in.)	SUP705 (WaterJet removable) SUP706 (soluble and WaterJet removable)	■ Ivory

Durus

System Availability (Continued)			
System Availability	Layer Thickness Capability	Support Structure	Available Color
Objet350 Connex3™	14 microns (0.00055 in.)	SUP705 (WaterJet removable) SUP706 (soluble and WaterJet removable)	■ Ivory
Objet500 Connex1™	14 microns (0.00055 in.)	SUP705 (WaterJet removable) SUP706 (soluble and WaterJet removable)	■ Ivory
Objet500 Connex3™	14 microns (0.00055 in.)	SUP705 (WaterJet removable) SUP706 (soluble and WaterJet removable)	■ Ivory


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