



# Digital Materials™ Data Sheets

## Rigid Opaque Materials

**Primary material:** Objet VeroWhitePlus RGD835  
**Secondary material:** Objet VeroBlack RGD870

Property	ASTM	Units	RGD8310-DM, RGD8320-DM, RGD8330-DM
Tensile strength	D-638-03	MPa	50-65
Elongation at break	D-638-05	%	10-25
Modulus of elasticity	D-638-04	MPa	2000-3000
Flexural Strength	D-790-03	MPa	75-110
Flexural Modulus	D-790-04	MPa	2200-3200
HDT, °C @ 0.45MPa	D-648-06	°C	45-50
Izod Notched Impact	D-256-06	J/m	20-30

**Primary material:** Objet VeroWhitePlus RGD835  
**Secondary material:** Objet TangoBlackPlus FLX980

Property	ASTM	Units	RGD8505-DM RGD8510-DM RGD8515-DM RGD8520-DM	RGD8525-DM
Tensile strength	D-638-03	MPa	40-60	35-45
Elongation at break	D-638-05	%	15-25	20-30
Modulus of elasticity	D-638-04	MPa	1700-2300	1400-2000
Flexural Strength	D-790-03	MPa	55-75	45-60
Flexural Modulus	D-790-04	MPa	1500-2500	1400-1800
HDT at 0.45 MPa	D-648-06	°C	40-45	40-43
Izod Notched Impact	D-256-06	J/m	22-35	25-35

**Primary material:** Objet High Temperature RGD525  
**Secondary material:** Objet TangoBlackPlus FLX980

Property	ASTM	Units	RGD5205-DM RGD5210-DM RGD5215-DM RGD5220-DM RGD5225-DM	RGD5250-DM*
Tensile Strength	D-638-03	MPa	43-55	50-56
Elongation at Break	D-638-05	%	9-15	18-27
Modulus of Elasticity	D-638-04	MPa	1600-2700	1700-2400
Flexural Strength	D-790-03	MPa	50-100	47-70
Flexural Modulus	D-790-04	MPa	1700-2700	1400-2000
HDT at 0.45 MPa	D-648-06	°C	46-60	50-56
Izod Notched Impact	D-256-06	J/m	16-19	16-26

**Primary material:** Objet VeroBlue RGD840  
**Secondary material:** Objet VeroBlack RGD870

Property	ASTM	Units	RGD8210-DM
Tensile strength	D-638-03	MPa	50-60
Elongation at break	D-638-05	%	15-25
Modulus of elasticity	D-638-04	MPa	2000-3000
Flexural Strength	D-790-03	MPa	60-70
Flexural Modulus	D-790-04	MPa	1900-2500
HDT, °C @ 0.45MPa	D-648-06	°C	45-50
Izod Notched Impact	D-256-06	J/m	20-30

**Primary material:** Objet VeroWhitePlus RGD835  
**Secondary material:** Objet TangoPlus FLX930

Property	ASTM	Units	RGD8425-DM
Tensile strength	D-638-03	MPa	35-45
Elongation at break	D-638-05	%	20-30
Modulus of elasticity	D-638-04	MPa	1400-2000
Flexural Strength	D-790-03	MPa	45-60
Flexural Modulus	D-790-04	MPa	1400-1800
HDT at 0.45 MPa	D-648-06	°C	40-43
Izod Notched Impact	D-256-06	J/m	25-35

**Primary material:** Objet High Temperature RGD525  
**Secondary material:** Objet TangoPlus FLX930

Property	ASTM	Units	RGD5150-DM
Tensile strength	D-638-03	MPa	45-60
Elongation at break	D-638-05	%	18-27
Modulus of elasticity	D-638-04	MPa	1700-2400
Flexural Strength	D-790-03	MPa	47-70
Flexural Modulus	D-790-04	MPa	1400-2000
HDT, °C @ 0.45MPa	D-648-06	°C	50-56
Izod Notched Impact	D-256-06	J/m	16-26

Objet Vero-like DM with higher temperature resistance

## Transparent Materials

**Primary material:** Objet FullCure720  
**Secondary material:** Objet VeroBlack RGD870

Property	ASTM	Units	RGD7513-DM (Dots) RGD7523-DM (Grid)
Tensile strength	D-638-03	MPa	50-65
Elongation at break	D-638-05	%	15-25
Modulus of elasticity	D-638-04	MPa	2000-3000
Flexural Strength	D-790-03	MPa	80-110
Flexural Modulus	D-790-04	MPa	2700-3300
HDT, °C @ 0.45MPa	D-648-06	°C	45-50
Izod Notched Impact	D-256-06	J/m	20-30

**Primary material:** Objet FullCure720  
**Secondary material:** Objet TangoBlack FLX970

Property	ASTM	Units	RGD7210-DM	RGD7220-DM	RGD7230-DM
Tensile strength	D-638-03	MPa	50-55	50-55	45-50
Elongation at break	D-638-05	%	15-25	15-25	15-25
Modulus of elasticity	D-638-04	MPa	2200-2500	2000-2300	1700-2000
Flexural Strength	D-790-03	MPa	80-90	75-85	70-80
Flexural Modulus	D-790-04	MPa	2300-2700	2200-2600	2100-2400
HDT, °C @ 0.45MPa	D-648-06	°C	45-50	45-50	45-50

**Primary material:** Objet VeroClear  
**Secondary material:** Objet TangoPlus FLX930 / TangoBlackPlus FLX980

Property	ASTM	Units	RGD8705-DM RGD8710-DM RGD8715-DM RGD8720-DM	RGD8625-DM RGD8725-DM
Tensile strength	D-638-03	MPa	40-60	35-45
Elongation at break	D-638-05	%	15-25	20-30
Modulus of elasticity	D-638-04	MPa	1,700-2,300	1,400-2,000
Flexural Strength	D-790-03	MPa	55-75	45-60
Flexural Modulus	D-790-04	MPa	1,500-2,500	1,400-1,800
HDT, °C @ 0.45MPa	D-648-06	°C	40-45	40-43
Izod Notched Impact	D-256-06	J/m	22-35	25-35

## Polypropylene-like Materials

**Primary material:** Objet DurusWhite RGD430  
**Secondary material:** Objet VeroWhitePlus RGD835, VeroBlue RGD840, VeroBlack RGD870 or FullCure720

Property	ASTM	Units	RGD4310-DM, RGD4410-DM, RGD4510-DM, RGD4710-DM,
Tensile strength	D-638-03	MPa	30-40
Elongation at break	D-638-05	%	40-50
Modulus of elasticity	D-638-04	MPa	1200-1600
Flexural Strength	D-790-03	MPa	40-50
Flexural Modulus	D-790-04	MPa	1300-1700
HDT, °C @ 0.45MPa	D-648-06	°C	40-45
Izod Notched Impact	D-256-06	J/m	35-45

**Primary material:** Objet VeroWhitePlus RGD835  
**Secondary material:** Objet TangoPlus FLX930 / TangoBlackPlus FLX980

Property	ASTM	Units	RGD8430-DM RGD8530-DM
Tensile strength	D-638-03	MPa	29-38
Elongation at break	D-638-05	%	25-35
Modulus of elasticity	D-638-04	MPa	1100-1700
Flexural Strength	D-790-03	MPa	35-45
Flexural Modulus	D-790-04	MPa	1200-1500
HDT at 0.45 MPa	D-648-06	°C	38-41
Izod Notched Impact	D-256-06	J/m	21-40

**Primary material:** Objet VeroClear  
**Secondary material:** Objet TangoPlus FLX930 / TangoBlackPlus FLX980

Property	ASTM	Units	RGD8630_DM RGD8730_DM
Tensile strength	D-638-03	MPa	29-38
Elongation at break	D-638-05	%	25-35
Modulus of elasticity	D-638-04	MPa	1100-1700
Flexural Strength	D-790-03	MPa	35-45
Flexural Modulus	D-790-04	MPa	1200-1500
HDT at 0.45 MPa	D-648-06	°C	38-41
Izod Notched Impact	D-256-06	J/m	21-40

## Rubber - like Materials

**Primary material:** Objet TangoBlackPlus FLX980 / TangoPlus FLX930  
**Secondary material:** Objet VeroWhitePlus RGD835

Property	ASTM	Units	FLX9840-DM FLX9740-DM	FLX9850-DM FLX9750-DM	FLX9860-DM FLX9760-DM	FLX9870-DM FLX9770-DM	FLX9885-DM FLX9785-DM	FLX9895-DM FLX9795-DM
Tensile strength	D-412	MPa	0.5-1.5	0.5-1.5	2-4	2-4	4-8	15-25
Elongation at break	D-412	%	150-170	130-150	80-100	50-70	50-60	25-35
Shore Hardness (A)	D-2240	Scale A	35-45	45-55	55-65	65-75	80-90	90-100
Tensile Tear resistance	D-624	Kg/cm	4-6	5-7	7-9	12-14	25-27	45-47

**Primary material:** Objet TangoGray FLX950  
**Secondary material:** Objet TangoBlack FLX970

Property	ASTM	Units	FLX9510-DM
Tensile strength	D-412	MPa	1-3
Elongation at break	D-412	%	35-45
Shore Hardness (A)	D-2240	Scale A	60-70
Tensile Tear resistance	D-624	Kg/cm	5-7

**Primary material:** Objet TangoBlackPlus FLX980 / Objet TangoPlus FLX930  
**Secondary material:** Objet VeroClear RGD810

Property	ASTM	UNIT	FLX9040-DM FLX9940-DM	FLX9050-DM FLX9950-DM	FLX9060-DM FLX9960-DM	FLX9070-DM FLX9970-DM	FLX9085-DM FLX9985-DM	FLX9095-DM FLX9995-DM
Tensile Strength	D-412	MPa	1.3-1.8	1.9-3.0	2.5-4.0	3.5-5.0	5.0-7.0	8.5-10.0
Elongation at Break	D-412	%	110-130	95-110	75-85	65-80	55-65	35-45
Hardness Shore A	D-2240	MPa	35-40	45-50	57-63	68-72	80-85	92-95
Tensile Tear Resistance	D-624-Die C	N/mm	5.5-7.5	7.5-9.5	11-13	15.5-17.5	23-25	41-44

**Primary material:** Objet TangoBlack FLX970  
**Secondary material:** Objet VeroWhitePlus RGD835, VeroBlue RGD840, VeroBlack RGD870 FullCure720

Property	ASTM	Units	FLX9110-DM FLX9410-DM FLX9210-DM FLX9310-DM	FLX9120-DM FLX9420-DM FLX9220-DM FLX9320-DM	FLX9130-DM FLX9430-DM FLX9230-DM FLX9330-DM
Tensile strength	D-412	MPa	2-4	3-5	7-11
Elongation at break	D-412	%	45-55	35-45	35-45
Shore Hardness (A)	D-2240	Scale A	75-85	80-90	90-100
Tensile Tear resistance	D-624	Kg/cm	7-9	13-17	45-50

**Primary material:** Objet TangoGray FLX950  
**Secondary material:** Objet VeroBlack RGD870

Property	ASTM	Units	FLX9610-DM
Tensile strength	D-412	MPa	9-13
Elongation at break	D-412	%	45-55
Shore Hardness (A)	D-2240	Scale A	75-85
Tensile Tear resistance	D-624	Kg/cm	45-50

**Primary material:** Objet TangoPlus FLX930 / TangoBlackPlus FLX980  
**Secondary material:** Objet High Temperature RGD525

Property	ASTM	UNIT	FLX9540-DM FLX9640-DM	FLX9550-DM FLX9650-DM	FLX9560-DM FLX9660-DM	FLX9570-DM FLX9670-DM	FLX9585-DM FLX9685-DM	FLX9595-DM FLX9695-DM
Tensile Strength	D-412	MPa	1.3-1.8	2.0-2.8	2.8-4.0	3.8-4.9	6.0-7.3	9.0-12
Elongation at Break	D-412	%	100-130	80-100	60-80	50-70	35-50	27-40
Hardness Shore A	D-2240	MPa	39-41	52-55	60-67	70-78	85-87	95-96
Tensile Tear Resistance	D-624-Die C	N/mm	5.96	9.18	11	13.82	23.2	45.9

## ABOUT OBJET

Objet Ltd., is a leading provider of high quality, cost effective inkjet-based 3D printing systems and materials. A global company, Objet has offices in North America, Europe, Japan, China, Hong Kong, and India.

Objet's 3D printing systems and 3D printing materials are ideal for any company involved in the manufacture or design of physical products using 3D software or other 3D content. Companies using Objet's solutions can be typically found in sectors such as consumer goods & electronics, aerospace & defense, automotive, education, dental, medical and medical devices, architecture, industrial machinery, footwear, sporting goods, toys and service bureaus.

Founded in 1998, the company has thousands of customers worldwide including a substantial share of the relevant Fortune 100 and Fortune 500. Its award-winning technology (13 awards in 8 years) is based upon over 110 patents and patent pending inventions.

Objet's advanced 3D printing systems and range of more than 100 materials enable professionals to build prototypes that accurately simulate the true look, feel and function of an end-product, even complex, assembled goods.

The **Objet Connex™** line of multi-material 3D printers features the world's only technology to simultaneously jet 2 materials. With this, users can print many different materials into a single part and print various mixed parts on the same build tray. Users can also create advanced composite materials, or **Digital Materials™** featuring unique mechanical and thermal properties. Objet's range of about 70 3D printing materials simulate properties ranging from rigid to rubber-like, transparent to opaque and standard to **ABS-grade engineering plastics**, with a large number of in-between shore grades and shades.

Objet's 3D printers are available in a range of form-factors, from cost-effective desktop 3D printers ideal for entry-level professionals all the way to industrial-scale multi-material machines for front-line designers and top manufacturers. Objet's 3D printers feature the industry's highest-resolution 3D printing quality, based on 16-micron (0.0006 in.) super-thin layering, wide material versatility, office friendliness and ease of operation.

For more information, visit us at [www.objet.com](http://www.objet.com), and for more about 3D printing industry-related news, business issues and trends, read the [Objet Blog](#).

Objet Ltd. Headquarters	Objet Inc. North America	Objet GmbH Europe	Objet AP Asia Pacific	Objet Shanghai Ltd. China	Objet Japan Co. Ltd.	Objet AP India
T: +972-8-931-4314 F: +972-8-931-4315	T: +1-877-489-9449 F: +1-866-676-1533	T: +49-7229-7772-0 F: +49-7229-7772-990	T: +852-3944-8888 F: +852-217-40555	T: +86-21-51750566 F: +86-21-58362468	T: +81-43-212-3302 F: +81-43-212-3305	T: +91-124-4696939 F: +91-124-4696970

[info@objet.com](mailto:info@objet.com) [www.objet.com](http://www.objet.com)

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The Power to Create

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