DIGITAL® MECHANICS
RAPID PRODUCTION SERVICES

METALS
PLASTICS

PolyJet Materials Data Sheet

VeroWhite, VeroBlack, VeroGray, VeroColor			
Properties	ASTM	Unit	Metric
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
HDT °C@1.82MPa	D-648-07	°C	45-50
Izod notched impact	D-256-06	J/m	20-30
Water absorption	D-570-98, 24hr	%	1.1-1.5
Tg	DMA, E>>	°C	52-54
Shore hardness	Scale D	Scale D	83-86
Rockwell hardness	Scale M	Scale M	73-76
Polymerized density	D-792	g/cm^3	1.17-1.18
Ash content VeroGray + White	USP-281	%	0.23-0.26
Ash content VeroBlack	USP-281	%	0.01-0.02

VeroBlue			
Properties	ASTM	Unit	Metric
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
HDT °C@1.82MPa	D-648-07	°C	45-50
Izod notched impact	D-256-06	J/m	20-30
Water absorption	D-570-98, 24hr	%	1.5-2.2
Tg	DMA, E>>	°C	48-50
Shore hardness	Scale D	Scale D	83-86
Rockwell hardness	Scale M	Scale M	73-76
Polymerized density	D-792	g/cm^3	1.18-1.19
Ash content	USP-281	%	0-21-0.22

Transparent			
Properties	ASTM	Unit	Metric
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
HDT °C@1.82MPa	D-648-07	°C	45-50
Izod notched impact	D-256-06	J/m	20-30
Water absorption	D-570-98, 24hr	%	1.5-2.2
Tg	DMA, E>>	°C	48-50
Shore hardness	Scale D	Scale D	83-86
Rockwell hardness	Scale M	Scale M	73-76
Polymerized density	D-792	g/cm^3	1.18-1.19
Ash content	USP-281	%	0.01-0.02

VeroClear			
Properties	ASTM	Unit	Metric
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
HDT °C@1.82MPa	D-648-07	°C	45-50
Izod notched impact	D-256-06	J/m	20-30
Water absorption	D-570-98, 24hr	%	1.1-1.5
Tg	DMA, E>>	°C	52-54
Shore hardness	Scale D	Scale D	83-86
Rockwell hardness	Scale M	Scale M	73-76
Polymerized density	D-792	g/cm^3	1.18-1.19
Ash content	USP-281	%	0.02-0.06

Digital Mechanics AB
Tallmätargatan 1C
721 34 Västerås, Sweden

Tel: +46 21-475 53 00

CAD/Orders: model@digitalmechanics.se
info@digitalmechanics.se
www.digitalmechanics.se

3D production with brains

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ABS-like			
Properties	ASTM	Unit	Metric
Tensile strength	D-638-03	MPa	55-60
Elongation at break	D-638-05	%	25-40
Modulus of elasticity	D-638-04	MPa	2600-3000
Flexural strength	D-790-03	MPa	65-75
Flexural modulus	D-790-04	MPa	1700-2200
HDT °C@0.45MPa	D-648-06	°C	58-68
HDT °C@0.45MPa after thermal post treatment procedure A	D-648-06	°C	82-90
HDT °C@0.45MPa after thermal post treatment procedure B	D-548-06	°C	92-95
HDT °C@1.82MPa	D-648-07	°C	51-55
Izod notched impact	D-256-06	J/m	90-115
Tg	DMA, E>>	°C	47-53
Shore hardness	Scale D	Scale D	85-87
Rockwell hardness	Scale M	Scale M	67-69
Polymerized density	D-792	g/cm^3	1.17-1.18

PP-like			
Properties	ASTM	Unit	Metric
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 °C@0.45MPa	D-648-06	°C	38-41
Izod notched impact	D-256-06	J/m	21-40
Shore hardness	D2240-05	Scale D	76.1-81.7

Rubber-like, Shore A, FLX									
Properties	ASTM	Unit	27	40	50	60	70	85	95
Tensile strength	D-412	MPa	0.8-1.5	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	%	170-220	110-130	95-110	75-85	65-80	55-65	35-45
Tensile tear resistance	D-624	Kg/cm	2-4	5.5-7.5	7.5-9.5	11-13	15.5-17.5	23-25	41-44
Shore hardness	D-2240	Scale A	27	40	50	60	70	85	95

What is PolyJet Technology?

PolyJet is a powerful 3D printing technology that produces smooth, accurate parts, prototypes and tooling. With microscopic layer resolution and accuracy down to 0.014mm, it can produce thin walls and complex geometries.

Benefits of PolyJet:

- 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 efficiency.

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