PolyJet Flex & PolyJet Over-Mold

POLYJET MATERIAL SPECIFICATIONS

Highlights

- Wide range of simulated Shore A elastomers (27A - 95A)
- High speed and resolution PolyJet process
- No increased costs from secondary processing
- Black 27A is also known as “TangoBlackPlus (FLX980)”

Applications

- Simulated gaskets, o-rings, etc.
- Over-molded grips on handles
- Keypads and electronic button covers

POLYJET FLEX TYPICAL PHYSICAL PROPERTIES

MECHANICAL PROPERTIES	TEST METHOD	BLACK 27A	BLACK 40A	BLACK 50A	BLACK 60A	BLACK 70A	BLACK 85A	BLACK 95A
Color	Visual	Black	Black	Black	Black	Black	Black	Black
Tensile Strength	ASTM D638	116 - 217 psi 0.8 - 1.5 MPa	72 - 217 psi 0.5 - 1.5 MPa	72 - 217 psi 0.5 - 1.5 MPa	290 - 580 psi 2.0 - 4.0 MPa	290 - 580 psi 2.0 - 4.0 MPa	580 - 1160 psi 4.0 - 8.0 MPa	2175 - 3626 psi 15 - 25 MPa
Elongation @ Break	D-412	170% - 220%	150% - 170%	130% - 150%	80% - 100%	50% - 70%	50% - 60%	25% - 35%
Tensile Tear Resistance	D-624	11 - 22 lb/in 2 - 4 kg/cm	22 - 33 lb/in 4 - 6 kg/cm	28 - 39 lb/in 5 - 7 kg/cm	39 - 50 lb/in 7 - 9 kg/cm	67 - 78 lb/in 12 - 14 kg/cm	140 - 151 lb/in 25 - 27 kg/cm	251 - 263 lb/in 45 - 47 kg/cm
Hardness Shore A	D-2240	22 -32	35 -45	45 -55	55 - 65	65 - 75	80 - 90	90 - 100
Simulated Product Comparison	-	Skin	Latex Gloves	Door Seal	Pencil Eraser	Auto Tire	Skateboard Wheels	Hard Rubber Print Roller

**PolyJet Over-Molded Products include rigid VeroWhitePlus material with your choice of a PolyJet Flex material.*

VEROWHITEPLUS TYPICAL PHYSICAL PROPERTIES

MECHANICAL PROPERTIES	TEST METHOD	ENGLISH	METRIC
Color/Appearance	Visual	White	White
Tensile Strength	ASTM D638	8,350 psi	58 MPa
Elongation at Break	ASTM D638	10% - 25%	10% - 25%
Modulus of Elasticity	ASTM D638	362,500 psi	2,500 MPa
Flexural Strength	ASTM D790	13,500 psi	93 MPa
Flexural Modulus	ASTM D790	392,500 psi	2,700 MPa
Izod Notched Impact	ASTM D256	0.47 ft-lb/in	25 J/m
Shore D Hardness	-	85 D	85 D
Heat Deflection Temperature	ASTM D648 @ 264 psi	118°F	48°C
Heat Deflection Temperature	ASTM D648 @ 66 psi	118°F	48°C

**PolyJet Over-Mold parts require a total of 2 separate STL files. The 2 files are the “part” (solid substrate material) and the “over-mold” (elastomeric Shore A material) files in the correct assembled relationship to one another in CAD space.*

The information presented represents typical values intended for reference and comparison purposes only. It should not be used for design specifications or quality control purposes. End-use material performance can be impacted (+/-) by, but not limited to, part design, end-use conditions, test conditions, color etc. Actual values will vary with build conditions. Product specifications are subject to change without notice.

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