

MED610

POLYJET BIO-COMPATIBLE PHOTOPOLYMER

MED610™ Bio-Compatible photopolymer is a rigid, nearly colorless material ideal for applications requiring prolonged skin contact of over 30 days and short term mucosal-membrane contact of up to 24 hours. MED610 is medically approved for Cytotoxicity, Genotoxicity, Delayed Type Hypersensitivity, Irritation, and is USP Class VI Plastic *. Polyjet Bio-Compatible material is utilized for medical and dental applications such as: 3D printing of dental and orthopedic surgical guides, checking the customized fit of surgical guides and delivery trays in the mouth and monitoring oral soft tissue during surgical guide procedures.

MECHANICAL PROPERTIES	TEST METHOD	IMPERIAL	METRIC
Tensile Strength	D-638-03	7,250 - 9,450 psi	50 - 65 MPa
Elongation at Break	D-638-05	10 - 25%	10 - 25%
Modulus of Elasticity	D-638-04	290,000 - 435,000 psi	2,000 - 3,000 MPa
Flexural Strength	D-790-03	11,000 - 16,000 psi	75 - 110 MPa
Flexural Modulus	D-790-04	320,000 - 465,000 psi	2,200 - 3,200 MPa
Izod Notched Impact	D-256-06	0.375 - 0.562 ft lb/inch	20 - 30 J/m

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

OTHER	TEST METHOD	IMPERIAL	METRIC
Shore Hardness	Scale D	83 - 86 Scale D	83 - 86 Scale D
Rockwell Hardness	Scale M	73 - 76 Scale M	73 - 76 Scale M
Polymerized Density	ASTM D792	-	1.18 - 1.19 g/cm ³
Ash Content	USP 281	0.02- 0.06 %	0.02 - 0.06 %
Water Absorption	D-570-98 24hr	1.5 - 2.2%	1.5 - 2.2%

