



MATERIAL DATA SHEET

ABS-M30i is a high strength material well suited for the medical, pharmaceutical and food packaging industries. Parts manufactured with ABS-M30i material are biocompatible (ISO 10993 USP Class VI) and can be gamma or EtO sterilized. When combined with Fortus® 3D Production Systems, ABS-M30i gives you biocompatible Real Parts™ with excellent Mechanical properties that are well suited for conceptual modeling, functional prototyping, manufacturing tools, and end-use-parts.

MECHANICAL PROPERTIES	TEST METHOD	ENGLISH	METRIC
Tensile Strength [Type 1, 0.125", 0.2"/min]	ASTM D638	5,200 psi	36 MPa
Tensile Modulus [Type 1, 0.125", 0.2"/min]	ASTM D638	350,000 psi	2,400 MPa
Tensile Elongation [Type 1, 0.125", 0.2"/min]	ASTM D638	4%	4%
Flexural Strength [Method 1, 0.05"/min]	ASTM D790	8,800 psi	61 MPa
Flexural Modulus [Method 1, 0.05"/min]	ASTM D790	336,000 psi	2,300 MPa
IZOD Impact, notched [Method A, 23 °C]	ASTM D256	2.6 ft-lb/in	139 J/m
IZOD Impact, un-notched [Method A, 23 °C]	ASTM D256	5.3 ft-lb/in	283 J/m

THERMAL PROPERTIES	TEST METHOD	ENGLISH	METRIC
Heat Deflection [HDT] @ 66 psi, 0.125" unannealed	ASTM D648	204 °F	96 °C
Heat Deflection [HDT] @ 264 psi, 0.125" unannealed	ASTM D648	180 °F	82 °C
Vicat Softening Temperature [Rate 8/50]	ASTM D1525	210 °F	99 °C
Glass Transition [Tg]	DSC [SSYS]	226 °F	108 °C
Coefficient of Thermal Expansion [flow]	ASTM E831	4.9E-05 in/in/°F	8.82E-05 mm/mm/°C
Coefficient of Thermal Expansion [xflow]	ASTM E831	4.7E-05 in/in/°F	8.46E-05 mm/mm/°C
Melting Point	-----	Not Applicable	Not Applicable

ELECTRICAL PROPERTIES	TEST METHOD	VALUE RANGE
Volume Resistivity	ASTM D257	1.5 x 10e14 - 6.0 x 10e13 ohm-cm
Dielectric Constant	ASTM D150-98	2.9 - 2.7
Dissipation Factor	ASTM D150-98	.0053 - .0051
Dielectric Strength	ASTM D149-09, Method A	370 - 80 V/mil

OTHER	TEST METHOD	VALUE
Specific Gravity	ASTM D792	1.04
Flame Classification	UL94	HB [0.06", 1.5 mm]
Rockwell Hardness	ASTM D785	109.5

