3D COMPOSITES

Transforming ideas into 3-dimensional objects

ABSi

ABSi™ is an ideal material for conceptual modeling, functional prototyping and direct digital manufacturing. Its strength is superior to standard ABS, and the translucent nature of ABSi is beneficial for monitoring material flow and light transmission, most commonly used for medical and automotive applications.

Color options: Translucent

MECHANICAL PROPERTIES	TEST METHOD	ENGLISH	METRIC
Tensile Strength (Type 1, 0.125", 0.2"/min)	ASTM D638	5,400 psi	37 MPa
Tensile Modulus (Type 1, 0.125", 0.2"/min)	ASTM D638	277,700 psi	1,920 MPa
Tensile Elongation (Type 1, 0.125", 0.2"/min)	ASTM D638	4.4%	4.4%
Flexural Strength (Method 1, 0.05"/min)	ASTM D790	8,980 psi	62 MPa
Flexural Modulus (Method 1, 0.05"/min)	ASTM D790	278,000 psi	1,920 MPa
IZOD Impact, notched (Method A, 23°C)	ASTM D256	1.8 ft-lb/in	96.4 J/m
IZOD Impact, un-notched (Method A, 23°C)	ASTM D256	3.6 ft-lb/in	191.1 J/m

THERMAL PROPERTIES	TEST METHOD	ENGLISH	METRIC
Heat Deflection (HDT) @ 66 psi, 0.125" unannealed	ASTM D648	188°F	110°C
Heat Deflection (HDT) @ 264 psi, 0.125" unannealed	ASTM D648	163°F	96°C
Glass Transition Temperature (Tg)	DMA (SSYS)	240°F	125°C
Coefficient of Thermal Expansion	ASTM D696	6.7x10-06 in/in/°F	12.1x10-05 mm/mm/°C
Melt Point	- - - - - - - - -	Not Applicable	Not Applicable

ELECTRICAL PROPERTIES	TEST METHOD	VALUE RANGE
Volume Resistivity	ASTM D257	1.5x109 - 6.1x1010 ohm-cm
Dielectric Constant	ASTM D150-98	3.4 - 3.6
Dissipation Factor	ASTM D150-98	0.12 - 0.15
Dielectric Strength	ASTM D149-09, Method A	100 - 320 V/mil

OTHER	TEST METHOD	VALUE
Specific Gravity	ASTM D792	1.08
Rockwell Hardness	ASTM D785	R108
Flame Classification	UL 94	HB (0.059", 1.5mm)