

MCast Acrylic Properties



Typical Properties

Property	Test Method	Units	Values
MECHANICAL			
Specific gravity	ASTM D 792	-	1.19
Tensile strength	ASTM D 638	MPa	75
Elongation, rupture	ASTM D 638	%	4.5
Tensile modulus of elasticity	ASTM D 638	MPa	3,150
Flexural strength	ASTM D 790	MPa	115
Flexural modulus of elasticity	ASTM D 790	MPa	3,200
Izod impact strength	ASTM D 256	J/cm	0.3
Rockwell hardness	ASTM D 785	M-scale	96
THERMAL			
Specific heat	-	J/Kg-K	1,470
Vicat softening point	ASTM D 1525	°C	115
Forming temperature	-	°C	170-190
Deflection Temp under load @ 264 psi	ASTM D 648	°C	100
Coefficient of thermal linear expansion	ASTM D 696	K ⁻¹	7.5X10 ⁵
Conductivity	ASTM C 177	W/m-K	0.19
Max. recommended continuous service temp	-	°C	80
FLAMMABILITY			
Horizontal burn rate	ASTM D 635	In/min	1.1
Self-ignition temperature	ASTM D 1929	°C	480
Flammability classification	UL 94	HB	-
ELECTRICAL			
Dielectric strength	ASTM D 149	KV/mm	18
Dissipation factor – 60 Hz	ASTM D 150	-	0.06
Dissipation factor – 1000 Hz	ASTM D 150	-	0.04
Volume resistivity	ASTM D 257	Ωm ⁻²	>10 ¹⁴
Surface resistivity	ASTM D 257	Ωm ⁻²	>10 ¹⁴
OPTICAL			
Refractive index	ASTM D 542	-	1.49
Light transmission	ASTM D 1003	%	>92
Haze	ASTM D 1003	%	<1

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determines the suitability of our materials and suggestions before adopting them on a commercial scale.