ULTEM™ RESIN 6202

REGION AMERICAS

DESCRIPTION

12% Silica filled, standard flow Polyetherimide Copolymer (Tg 235C). ECO Conforming, UL94 VO Listing.

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electrical Devices and Displays, Electrical Components and Infrastructure
Industrial	Electronic Material Handling, Electronic Material

TYPICAL PROPERTY VALUES

Revision 20190717

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	96	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	92	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	10	%	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	144	MPa	ASTM D 790
Flexural Stress, brk, 2.6 mm/min, 100 mm span	144	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	4410	MPa	ASTM D 790
Hardness, Rockwell M	110	-	ASTM D 785
Taber Abrasion, CS-17, 1 kg	11	mg/1000cy	ASTM D 1044
IMPACT			
Izod Impact, unnotched, 23°C	373	J/m	ASTM D 4812
Izod Impact, notched, 23°C	42	J/m	ASTM D 256
THERMAL			
Vicat Softening Temp, Rate B/50	237	°C	ASTM D 1525
HDT, 1.82 MPa, 6.4 mm, unannealed	214	°C	ASTM D 648
CTE, -20°C to 150°C, flow	4.5E-05	1/°C	ASTM E 831
CTE, -20°C to 150°C, xflow	4.86E-05	1/°C	ASTM E 831
Relative Temp Index, Elec [1]	105	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	105	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	105	°C	UL 746B
PHYSICAL			
Specific Gravity	1.42	-	ASTM D 792
Water Absorption, 24 hours	0.22	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 367°C/6.6 kgf	14.7	g/10 min	ASTM D 1238
ELECTRICAL			
Volume Resistivity	1.E+17	Ohm-cm	ASTM D 257
Dielectric Strength, in oil, 1.6 mm	20.8	kV/mm	ASTM D 149
Relative Permittivity, 1 kHz	3.1	-	ASTM D 150
Dissipation Factor, 1 kHz	0.001	-	ASTM D 150

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E121562-221112	-	-
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
Oxygen Index (LOI)	48	%	ASTM D 2863
INJECTION MOLDING			
Drying Temperature	150	°C	
Drying Time	4 – 6	hrs	
Drying Time (Cumulative)	24	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	380 – 405	°C	
Nozzle Temperature	375 – 400	°C	
Front - Zone 3 Temperature	380 – 405	°C	
Middle - Zone 2 Temperature	370 – 395	°C	
Rear - Zone 1 Temperature	360 – 380	°C	
Mold Temperature	135 – 165	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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