

ULTEM™ RESIN 6202

REGION EUROPE

DESCRIPTION

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

INDUSTRY	SUB INDUSTRY
Automotive	Aerospace

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	35	mg/1000cy	SABIC method
Tensile Stress, yield, 5 mm/min	90	MPa	ISO 527
Tensile Stress, break, 5 mm/min	90	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	5	%	ISO 527
Tensile Strain, break, 5 mm/min	7	%	ISO 527
Tensile Modulus, 1 mm/min	3700	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	150	MPa	ISO 178
Flexural Modulus, 2 mm/min	3800	MPa	ISO 178
Ball Indentation Hardness, H358/30	160	MPa	ISO 2039-1
IMPACT			
Izod Impact, unnotched 80*10*4 +23°C	40	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	45	kJ/m ²	ISO 180/1U
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	50	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	25	kJ/m ²	ISO 179/1eU
THERMAL			
Thermal Conductivity	0.28	W/m·°C	ISO 8302
CTE, 23°C to 80°C, flow	4.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, flow	4.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	4.5E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	222	°C	ISO 306
Vicat Softening Temp, Rate B/120	225	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	215	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	202	°C	ISO 75/Ae
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			
Mold Shrinkage on Tensile Bar, flow	0.5 – 0.7	%	SABIC method
Density	1.36	g/cm ³	ISO 1183
Melt Volume Rate, MVR at 360°C/5.0 kg	8	cm ³ /10 min	ISO 1133
ELECTRICAL			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Dielectric Strength, in oil, 1.6 mm	21	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	17	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.8	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.004	-	IEC 60250
Dissipation Factor, 1 MHz	0.003	-	IEC 60250
Comparative Tracking Index ⁽²⁾	150	V	IEC 60112
Relative Permittivity, 50/60 Hz	2.9	-	IEC 60250
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	%	ISO 4589
INJECTION MOLDING			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	370 – 410	°C	
Nozzle Temperature	350 – 405	°C	
Front - Zone 3 Temperature	360 – 415	°C	
Middle - Zone 2 Temperature	350 – 405	°C	
Rear - Zone 1 Temperature	340 – 395	°C	
Hopper Temperature	80 – 120	°C	
Mold Temperature	140 – 180	°C	

(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.

(2) Value shown here is based on internal measurement.

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