LEXAN™ FR RESINS 500R

REGION EUROPE

DESCRIPTION

LEXAN™ 500R resin is a 10% glass fiber filled polycarbonate, MFR of 8. Mold release. Flame retardant, UL94 V0 and 5VA rated. UL746C f2 rated. Combination of modulus, impact strength and flame retardancy. Available in natural and opaque colors.

TYPICAL PROPERTY VALUES

Revision 20250820

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	11	mg/1000cy	SABIC method
Tensile Stress, yield, 5 mm/min	60	MPa	ISO 527
Tensile Stress, break, 5 mm/min	45	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	3300	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	95	MPa	ISO 178
Flexural Modulus, 2 mm/min	3400	MPa	ISO 178
Ball Indentation Hardness, H358/30	115	MPa	ISO 2039-1
IMPACT			
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	130	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	10	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	8	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	9	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy Impact, notched, 23°C	15	kJ/m²	ISO 179/2C
THERMAL			
Thermal Conductivity	0.21	W/m-°C	ISO 8302
CTE, 23°C to 80°C, flow	4.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	141	°C	ISO 306
Vicat Softening Temp, Rate B/120	143	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	140	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	132	°C	ISO 75/Ae
HDT/Ae, 1.8 MPa Annealed 120°C, 2hrs	136	°C	ISO 75/Ae
Relative Temp Index, Elec	130	°C	UL 746B
Relative Temp Index, Mech w/impact	125	°C	UL 746B
Relative Temp Index, Mech w/o impact	125	°C	UL 746B
PHYSICAL			
Mold Shrinkage on Tensile Bar, flow	0.2 – 0.6	%	SABIC method
Density	1.25	g/cm³	ISO 1183

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Water Absorption, (23°C/saturated)	0.31	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.13	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	8	cm³/10 min	ISO 1133
OPTICAL			
Haze, 2.54 mm	NA	%	ASTM D1003
Refractive Index	NA	-	ISO 489
ELECTRICAL			
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Dielectric Strength, in oil, 0.8 mm	33	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	25	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	16	kV/mm	IEC 60243-1
Relative Permittivity, 1 MHz	2.8	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.001	-	IEC 60250
Dissipation Factor, 1 MHz	0.01	-	IEC 60250
Comparative Tracking Index	175	V	IEC 60112
Relative Permittivity, 50/60 Hz	2.9	-	IEC 60250
FLAME CHARACTERISTICS			
UL Yellow Card Link	E45329-100755802	-	-
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	3	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	1	mm	IEC 60695-2-12
Oxygen Index (LOI)	35	%	ISO 4589
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	290 – 320	°C	
Nozzle Temperature	280 – 310	°C	
Front - Zone 3 Temperature	290 – 320	°C	
Middle - Zone 2 Temperature	280 – 310	°C	
Rear - Zone 1 Temperature	270 – 300	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	80 – 120	°C	

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