

LEXAN™ HF500R resin

Polycarbonate

SABIC Innovative Plastics Europe

Message:

LEXAN HF500R is an easy flow, 9% glass reinforced, flame retardant grade, especially designed for applications requiring high rigidity together with high heat resistance and impact performance.

General Information			
UL YellowCard	E45329-236680		
Filler / Reinforcement	Glass Fiber,9.0% Filler by Weight		
Additive	Flame Retardant		
Features	Flame Retardant		
	Good Flow		
	High Heat Resistance		
	High Impact Resistance		
	High Rigidity		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.25	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	16.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ¹	0.20 to 0.60	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.31	%	
Equilibrium, 23°C, 50% RH	0.13	%	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	115	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3300	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/5
Yield	60.0	MPa	
Break	45.0	MPa	
Tensile Strain			ISO 527-2/5
Yield	5.0	%	
Break	7.0	%	
Flexural Modulus ²	3400	MPa	ISO 178
Flexural Stress	95.0	MPa	ISO 178
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	11.0	mg	Internal Method

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ³			ISO 179/1eA
-30°C	7.0	kJ/m ²	
23°C	8.0	kJ/m ²	
Charpy Unnotched Impact Strength ⁴			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength ⁵			ISO 180/1A
-30°C	7.0	kJ/m ²	
23°C	8.0	kJ/m ²	
Unnotched Izod Impact Strength ⁶			ISO 180/1U
-30°C	110	kJ/m ²	
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁷			
0.45 MPa, Unannealed, 100 mm Span	140	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 100 mm Span	132	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	147	°C	ISO 306/A50
--	141	°C	ISO 306/B50
--	143	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE - Flow (23 to 80°C)	4.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.21	W/m/K	ISO 8302
RTI Elec	130	°C	UL 746
RTI Imp	125	°C	UL 746
RTI Str	125	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Electric Strength			IEC 60243-1
0.800 mm, in Oil	33	kV/mm	
1.60 mm, in Oil	25	kV/mm	
3.20 mm, in Oil	16	kV/mm	
Relative Permittivity			IEC 60250
50 Hz	2.90		
60 Hz	2.90		
1 MHz	2.80		
Dissipation Factor			IEC 60250
50 Hz	1.0E-3		
60 Hz	1.0E-3		
1 MHz	0.010		

Comparative Tracking Index	175	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	V-0		UL 94
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Oxygen Index	35	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 to 80.0	°C	
Rear Temperature	260 to 280	°C	
Middle Temperature	270 to 290	°C	
Front Temperature	280 to 300	°C	
Nozzle Temperature	270 to 290	°C	
Processing (Melt) Temp	280 to 300	°C	
Mold Temperature	80.0 to 100	°C	
NOTE			
1.	Tensile Bar		
2.	2.0 mm/min		
3.	80*10*3 sp=62mm		
4.	80*10*3 sp=62mm		
5.	80*10*3		
6.	80*10*3		
7.	120*10*4 mm		

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