

LEXAN™ HF503R resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

LEXAN resin HF503R is a polycarbonate grade with 10% glass fiber reinforcement.

General Information			
UL YellowCard	E207780-102180112		
Filler / Reinforcement	Glass Fiber,10% Filler by Weight		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.25	g/cm ³	ASTM D792
Specific Volume	0.800	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	21	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.20 to 0.40	%	Internal Method
Water Absorption (Equilibrium, 23°C)	0.31	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Break)	53.0	MPa	ASTM D638
Tensile Elongation ² (Break)	15	%	ASTM D638
Flexural Modulus ³ (50.0 mm Span)	3440	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	100	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	100	J/m	ASTM D256
-30°C ⁵	9.0	kJ/m ²	ISO 180/1A
23°C ⁶	10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact (23°C)	2100	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	146	°C	
1.8 MPa, Unannealed, 6.40 mm	142	°C	
Vicat Softening Temperature	154	°C	ASTM D1525 ⁷
CLTE - Flow (-40 to 95°C)	3.2E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.20	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+17	ohms · cm	ASTM D257
Dielectric Strength (3.20 mm, in Air)	18	kV/mm	ASTM D149
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 to 4.0	hr	

Drying Time, Maximum	48	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 to 60	%
Rear Temperature	288 to 310	°C
Middle Temperature	299 to 321	°C
Front Temperature	310 to 332	°C
Nozzle Temperature	304 to 327	°C
Processing (Melt) Temp	310 to 332	°C
Mold Temperature	82.0 to 116	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	40 to 70	rpm
Vent Depth	0.025 to 0.076	mm

NOTE

1. Type I, 5.0 mm/min
2. Type I, 5.0 mm/min
3. 1.3 mm/min
4. 1.3 mm/min
5. 80*10*3
6. 80*10*3
7. Rate B (120°C/h), Loading 2 (50 N)

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