

LEXAN™ HF3454 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

GF filled, Non-brominated/non-chlorinated FR PC. High flow.

General Information			
Filler / Reinforcement	Glass Fiber		
Additive	Flame Retardant		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	High Flow		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.26	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	24	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	22.0	cm ³ /10min	ASTM D1238
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.20 to 0.40	%	
Across Flow : 3.20 mm	0.30 to 0.50	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	4000	MPa	ASTM D638
--	4000	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	60.0	MPa	ASTM D638
Yield	60.0	MPa	ISO 527-2/5
Break ³	40.0	MPa	ASTM D638
Break	45.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	4.1	%	ASTM D638
Yield	4.0	%	ISO 527-2/5
Break ⁵	6.9	%	ASTM D638
Break	6.8	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	3600	MPa	ASTM D790
-- ⁷	4000	MPa	ISO 178

Flexural Stress			
--	108	MPa	ISO 178
--	110	MPa	ISO 178
Yield, 50.0 mm Span ⁸	104	MPa	ASTM D790
Break, 50.0 mm Span ⁹	102	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	4.0	kJ/m ²	ISO 179/2C
Notched Izod Impact			
-30°C	42	J/m	ASTM D256
23°C	45	J/m	ASTM D256
-30°C ¹⁰	5.0	kJ/m ²	ISO 180/1A
-30°C ¹¹	4.0	kJ/m ²	ISO 180/1A
23°C ¹²	6.0	kJ/m ²	ISO 180/1A
23°C ¹³	5.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	700	J/m	ASTM D4812
23°C ¹⁴	57	kJ/m ²	ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	15.9	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	112	°C	ASTM D648
1.8 MPa, Unannealed, 6.40 mm	113	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁵	113	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	121	°C	ASTM D1525 ¹⁶
--	124	°C	ISO 306/B120
CLTE			
Flow : -40 to 40°C	4.7E-5	cm/cm/°C	ASTM E831
Flow : 23 to 80°C	4.9E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	7.1E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	8.2E-5	cm/cm/°C	ISO 11359-2
RTI Elec	80.0	°C	UL 746
RTI Imp	80.0	°C	UL 746
RTI Str	80.0	°C	UL 746
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
1.00 mm	V-1		
1.50 mm	V-0		
Injection	Nominal Value	Unit	
Drying Temperature	82.2 to 87.8	°C	
Drying Time	3.0 to 4.0	hr	

Drying Time, Maximum	24	hr
Suggested Shot Size	40 to 60	%
Rear Temperature	260 to 277	°C
Middle Temperature	271 to 288	°C
Front Temperature	271 to 299	°C
Nozzle Temperature	271 to 299	°C
Processing (Melt) Temp	271 to 310	°C
Mold Temperature	48.9 to 93.3	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	35 to 75	rpm
Vent Depth	0.038 to 0.076	mm

NOTE

1.	5.0 mm/min
2.	Type I, 5.0 mm/min
3.	Type I, 5.0 mm/min
4.	Type I, 5.0 mm/min
5.	Type I, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	1.3 mm/min
10.	80*10*3
11.	80*10*4
12.	80*10*3
13.	80*10*4
14.	80*10*4
15.	80*10*4 mm
16.	Rate B (120°C/h), Loading 2 (50 N)

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