

LEXAN™ FST3403 resin

Polycarbonate
SABIC Innovative Plastics

Message:

LEXAN FST3403 resin is a high flow PC Copolymer Resin, suitable for injection molding. This halogen-free flame retardant resin is EN45545 R6 HL3 compliant and an ideal candidate for train interior applications (category R6). It also meets requirements of DIN5510-2, NFPA-130 and PN-K-02511 standards. Available in opaque colors.

General Information			
Features	Copolymer		
	Flame Retardant		
	Halogen Free		
	High Flow		
Agency Ratings	EN 45545 R6 HL3		
Appearance	Colors Available		
	Opaque		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.33	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	12	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	10.0	cm³/10min	ISO 1133
Molding Shrinkage			Internal Method
Flow	0.50 to 0.70	%	
Across Flow	0.50 to 0.70	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2600	MPa	ASTM D638
--	2600	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	77.0	MPa	ASTM D638
Yield	77.0	MPa	ISO 527-2/50
Break ³	70.0	MPa	ASTM D638
Break	70.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁵	80	%	ASTM D638
Break	80	%	ISO 527-2/50

Flexural Modulus			
50.0 mm Span ⁶	2500	MPa	ASTM D790
-- ⁷	2700	MPa	ISO 178
Flexural Stress			
--	110	MPa	ISO 178
Yield, 50.0 mm Span ⁸	115	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C ⁹	10	kJ/m ²	
-30°C ¹⁰	5.0	kJ/m ²	
23°C ¹¹	14	kJ/m ²	
23°C ¹²	13	kJ/m ²	
Charpy Unnotched Impact Strength ¹³			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	90	J/m	ASTM D256
23°C	130	J/m	ASTM D256
-30°C ¹⁴	10	kJ/m ²	ISO 180/1A
-30°C ¹⁵	6.0	kJ/m ²	ISO 180/1A
23°C ¹⁶	12	kJ/m ²	ISO 180/1A
23°C ¹⁷	13	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹⁸			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact			
23°C, Total Energy	80.0	J	ASTM D3763
--	125	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	104	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁹	105	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	93.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ²⁰	95.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	114	°C	ASTM D1525, ISO 306/B50 12 ²¹
--	115	°C	ISO 306/B120
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	6.0E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.0E-5	cm/cm/°C	
Flammability	Nominal Value	Unit	Test Method

Fire Safety Hazard Level - Requirement set R6	HL3	EN 45545-2
Heat Release, MAHRE - 50 kW/m ² (3.00 mm)	< 60.0	kW/m ² ISO 5660-1
Smoke Density		ISO 5659-2
DS-4, 50 kW/m ² : 3.00 mm	< 150	
VOF4, 50 kW/m ² : 3.00 mm	< 300	
Smoke Toxicity - CITG (8 min), 50 kW/m ² (3.00 mm)	0.100	ISO 5659-2
Injection	Nominal Value	Unit
Drying Temperature	95.0 to 102	°C
Drying Time	6.0 to 8.0	hr
Suggested Shot Size	40 to 60	%
Rear Temperature	230 to 260	°C
Middle Temperature	240 to 280	°C
Front Temperature	250 to 290	°C
Nozzle Temperature	245 to 285	°C
Processing (Melt) Temp	250 to 290	°C
Mold Temperature	50.0 to 80.0	°C
Back Pressure	0.300 to 0.700	MPa
Screw Speed	40 to 70	rpm
Vent Depth	0.025 to 0.076	mm
NOTE		
1.	5.0 mm/min	
2.	Type I, 50 mm/min	
3.	Type I, 50 mm/min	
4.	Type I, 50 mm/min	
5.	Type I, 50 mm/min	
6.	1.3 mm/min	
7.	2.0 mm/min	
8.	1.3 mm/min	
9.	80*10*4 sp=62mm	
10.	80*10*3 sp=62mm	
11.	80*10*4 sp=62mm	
12.	80*10*3 sp=62mm	
13.	80*10*4 sp=62mm	
14.	80*10*4	
15.	80*10*3	
16.	80*10*4	
17.	80*10*3	
18.	80*10*4	
19.	80*10*4 mm	
20.	80*10*4 mm	

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