

LEXAN™ FST3002 resin

Polycarbonate

SABIC Innovative Plastics Europe

Message:

LEXAN FST3002 resin is a halogen-free flame retardant PC Copolymer Resin with MVR of 8, suitable for injection molding. This resin is EN45545 R6 HL2 compliant and an ideal candidate for train interior applications (category R6). Available in opaque colors

General Information			
Additive	Flame Retardant		
Features	Copolymer		
	Flame Retardant		
	Halogen Free		
Agency Ratings	EN 45545 R6 HL2		
RoHS Compliance	RoHS Compliant		
Appearance	Opaque		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.22	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	9.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	8.00	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	2450	MPa	ASTM D638
--	2450	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	75.0	MPa	ASTM D638
Yield	74.0	MPa	ISO 527-2/50
Break ³	63.0	MPa	ASTM D638
Break	59.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁵	> 50	%	ASTM D638
Break	> 50	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2600	MPa	ASTM D790

-- ⁷	2400	MPa	ISO 178
Flexural Stress			
--	107	MPa	ISO 178
Yield, 50.0 mm Span ⁸	110	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C ⁹	7.0	kJ/m ²	
23°C ¹⁰	9.0	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C ¹¹	No Break		
23°C ¹²	No Break		
Notched Izod Impact			
-30°C	60	J/m	ASTM D256
23°C	70	J/m	ASTM D256
-30°C ¹³	6.0	kJ/m ²	ISO 180/1A
23°C ¹⁴	7.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength			ISO 180/1U
-30°C ¹⁵	No Break		
23°C ¹⁶	No Break		
Instrumented Dart Impact			
23°C, Total Energy	70.0	J	ASTM D3763
--	130	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	121	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁷	125	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	108	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁸	111	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	130	°C	ASTM D1525, ISO 306/B50, ISO 306/B120 ¹⁹
--	141	°C	ISO 306/A120
CLTE			ASTM E831
Flow : -40 to 40°C	6.2E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.2E-5	cm/cm/°C	
Flammability	Nominal Value	Unit	Test Method
Fire Safety Hazard Level - Requirement set R6	HL2		EN 45545-2
Heat Release, MAHRE - 50 kW/m ² (3.00 mm)	< 90.0	kW/m ²	ISO 5660-1
Smoke Density			ISO 5659-2
DS-4, 50 kW/m ² : 3.00 mm	< 300		
VOF4, 50 kW/m ² : 3.00 mm	< 600		

Smoke Toxicity - CITG (8 min), 50 kW/m²
(3.00 mm)

< 0.900

ISO 5659-2

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. | 50 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*3 sp=62mm |
| 10. | 80*10*4 sp=62mm |
| 11. | 80*10*3 sp=62mm |
| 12. | 80*10*4 sp=62mm |
| 13. | 80*10*3 |
| 14. | 80*10*4 |
| 15. | 80*10*3 |
| 16. | 80*10*4 |
| 17. | 80*10*4 mm |
| 18. | 80*10*4 mm |
| 19. | Rate B (120°C/h), Loading 2 (50 N) |

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