

LEXAN™ FST9405 resin

Polycarbonate
SABIC Innovative Plastics

Message:
Lexan® FST9405 resin is a high flow PC Copolymer Resin, suitable for injection molding. This halogen-free flame retardant resin is OSU55/55 and FAR25.583 compliant and an ideal candidate for aircraft interior applications. Available in opaque colors.

General Information			
Features	Copolymer		
	High liquidity		
	Halogen-free		
	Flame retardancy		
Uses	Airplane trim		
Agency Ratings	OSU 55/55		
Appearance	Opacity		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.33	g/cm ³	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)	10.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal method
Flow	0.50 - 0.70	%	Internal method
Transverse flow	0.50 - 0.70	%	Internal method
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
Fracture ³	70.0	MPa	ASTM D638
Fracture	70.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Fracture ⁵	75	%	ASTM D638
Fracture	95	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2700	MPa	ASTM D790

-- ⁷	2500	MPa	ISO 178
Flexural Stress			
--	105	MPa	ISO 178
Yield, 50.0mm span ⁸	115	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	No Break		ISO 179/1eA
23°C	No Break		ISO 179/1eA
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact			
-30°C	85	J/m	ASTM D256
23°C	130	J/m	ASTM D256
-30°C ¹¹	9.0	kJ/m ²	ISO 180/1A
23°C ¹²	12	kJ/m ²	ISO 180/1A
23°C ¹³	11	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹⁴			ISO 180/1U
-30°C	No Break		ISO 180/1U
23°C	No Break		ISO 180/1U
Instrumented Dart Impact			
23°C, Total Energy	60.0	J	ASTM D3763
--	130	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	105	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ¹⁵	94.0	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	95.0	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁶	104	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	114	°C	ASTM D1525 ¹⁷
--	113	°C	ISO 306/B120
Linear thermal expansion coefficient			ISO 11359-2
Flow: -40 to 40°C	6.0E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	6.0E-5	cm/cm/°C	ISO 11359-2
Flammability	Nominal Value	Unit	Test Method
NBS Smoke Density - Flaming, Dmax			ASTM E662
OSU peak heat release rate ¹⁸		kW/m ²	FAR 25.853
OSU total heat release ¹⁹		kW · min/m ²	FAR 25.853
Vertical Burn Test - Test a (60 s), passes at	1.0	sec	FAR 25.853
Injection	Nominal Value	Unit	
Drying Temperature	95 - 100	°C	

Drying Time	6.0 - 8.0	hr
Suggested Shot Size	40 - 60	%
Rear Temperature	230 - 250	°C
Middle Temperature	240 - 270	°C
Front Temperature	250 - 280	°C
Nozzle Temperature	245 - 275	°C
Processing (Melt) Temp	250 - 280	°C
Mold Temperature	50 - 80	°C
Back Pressure	0.300 - 0.700	MPa
Screw Speed	40 - 70	rpm
Vent Depth	0.025 - 0.076	mm

NOTE

1.	5.0 mm/min
2.	Type 1, 50mm/min
3.	Type 1, 50mm/min
4.	Type 1, 50mm/min
5.	Type 1, 50mm/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*3 sp=62mm
11.	80*10*4
12.	80*10*3
13.	80*10*4
14.	80*10*3
15.	80*10*4 mm
16.	80*10*4 mm
17.	标准 B (120°C/h), 载荷2 (50N)
18.	5 minute test
19.	2 minute test

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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