

# LEXAN™ COPOLYMER FST3403

REGION AMERICAS

## DESCRIPTION

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

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, yld, Type I, 50 mm/min	77	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	70	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	80	%	ASTM D638
Tensile Modulus, 5 mm/min	2600	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	115	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2500	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	77	MPa	ISO 527
Tensile Stress, break, 50 mm/min	70	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	80	%	ISO 527
Tensile Modulus, 1 mm/min	2600	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	110	MPa	ISO 178
Flexural Modulus, 2 mm/min	2700	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, notched, 23°C	130	J/m	ASTM D256
Izod Impact, notched, -30°C	90	J/m	ASTM D256
Multiaxial Impact	125	J	ISO 6603
Instrumented Dart Impact Total Energy, 23°C	80	J	ASTM D3763
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	13	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	6	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	12	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	13	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	5	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	14	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m <sup>2</sup>	ISO 179/1eU

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m²	ISO 179/1eU
THERMAL <sup>(1)</sup>			
Vicat Softening Temp, Rate B/50	114	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	104	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	93	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	6.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	114	°C	ISO 306
Vicat Softening Temp, Rate B/120	115	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	105	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	95	°C	ISO 75/Af
PHYSICAL <sup>(1)</sup>			
Specific Gravity	1.33	-	ASTM D792
Mold Shrinkage, flow <sup>(2)</sup>	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow <sup>(2)</sup>	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	12	g/10 min	ASTM D1238
Density	1.33	g/cm³	ISO 1183
Melt Volume Rate, MVR at 300°C/1.2 kg	10	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS <sup>(1)</sup>			
Heat release, MAHRE, 50 kW/m² <sup>(3)</sup>	<60	kW/m²	ISO 5660-1
Smoke density, DS-4, 50 kW/m² <sup>(3)</sup>	<150	-	ISO 5659-2
Smoke density, VOF4, 50 kW/m² <sup>(3)</sup>	<300	-	ISO 5659-2
Smoke toxicity, CITG (8 min), 50 kW/m² <sup>(3)</sup>	0.1	-	ISO 5659-2
Fire Safety Hazard Level - Requirement set R6 <sup>(4)</sup>	HL3	-	EN 45545-2
INJECTION MOLDING <sup>(5)</sup>			
Drying Temperature	95 – 100	°C	
Drying Time	6 – 8	Hrs	
Melt Temperature	250 – 290	°C	
Nozzle Temperature	245 – 285	°C	
Front - Zone 3 Temperature	250 – 290	°C	
Middle - Zone 2 Temperature	240 – 280	°C	
Rear - Zone 1 Temperature	230 – 260	°C	
Mold Temperature	50 – 80	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	

- (1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article. The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (3) 3 mm
- (4) based on EN 45545-2: 2013 revision
- (5) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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