



LEXAN™ Resin FST3403
Americas: COMMERCIAL

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.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	780	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	710	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	80	%	ASTM D 638
Tensile Modulus, 5 mm/min	26500	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1170	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	25400	kgf/cm ²	ASTM D 790
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
IMPACT			
Izod Impact, notched, 23°C	13	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	9	cm-kgf/cm	ASTM D 256
Multiaxial Impact	1274	cm-kgf	ISO 6603
Instrumented Impact Total Energy, 23°C	815	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80°10*3 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80°10*3 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80°10*3 +23°C	13	kJ/m ²	ISO 180/1A

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.
 (3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.
 (5) 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.
 (6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
IMPACT			
Izod Impact, notched 80*10*3 -30°C	6	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	12	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	13	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	5	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	14	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m ²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	114	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	104	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	93	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ASTM E 831
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

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(4) Internal measurements according to UL standards.

(5) 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.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	95	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.33	-	ASTM D 792
Mold Shrinkage, flow (5)	0.5 - 0.7	%	SABIC Method
Mold Shrinkage, xflow (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	12	g/10 min	ASTM D 1238
Density	1.33	g/cm ³	ISO 1183
Melt Volume Rate, MVR at 300°C/1.2 kg	10	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
Heat release, MAHRE, 50 kW/m ² , 3 mm	<60	kW/m ²	ISO 5660-1
Smoke density, DS-4, 50 kW/m ² , 3mm	<150	-	ISO 5659-2
Smoke density, VOF4, 50 kW/m ² , 3mm	<300	-	ISO 5659-2
Smoke toxicity, CITG (8 min), 50 kW/m ² , 3 mm	0.1	-	ISO 5659-2
Fire Safety Hazard Level - Requirement set R6	HL3	-	EN EN 45545-2:2013

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
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

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