

# LEXAN™ VISUALFX™ RESIN FXD173R

## DESCRIPTION

LEXAN FXD173R resin is based on Polycarbonate (PC) and is a UV stabilized translucent high flow grade for light diffusion special effects. The color package may affect performance.

GENERAL INFORMATION	
Features	High Flow, Aesthetics/Visual effects, Transparent/Translucent, Enhanced mold release, Weatherable/UV stable, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

  

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Lighting
Electrical and Electronics	Mobile Phone - Computer - Tablets, Lighting
Industrial	Electrical

## TYPICAL PROPERTY VALUES

Revision 20241028

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	70	%	ISO 527
Tensile Modulus, 1 mm/min	2350	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
Ball Indentation Hardness, H358/30	95	MPa	ISO 2039-1
<b>IMPACT <sup>(1)</sup></b>			
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	60	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	11	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	60	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	12	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
<b>THERMAL <sup>(1)</sup></b>			
CTE, 23°C to 80°C, flow	7.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	139	°C	ISO 306

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/120	140	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	133	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	121	°C	ISO 75/Ae
Relative Temp Index, Elec <sup>(2)</sup>	130	°C	UL 746B
Relative Temp Index, Mech w/impact <sup>(2)</sup>	130	°C	UL 746B
Relative Temp Index, Mech w/o impact <sup>(2)</sup>	130	°C	UL 746B
<b>PHYSICAL <sup>(1)</sup></b>			
Mold Shrinkage on Tensile Bar, flow <sup>(3)</sup>	0.5 – 0.7	%	SABIC method
Density	1.2	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/saturated)	0.35	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	26	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL <sup>(1)</sup></b>			
Comparative Tracking Index <sup>(4)</sup>	275	V	IEC 60112
<b>FLAME CHARACTERISTICS <sup>(2)</sup></b>			
UL Yellow Card Link	<a href="#">E121562-100108309</a>	-	-
UL Yellow Card Link 2	<a href="#">E45329-104344114</a>	-	-
UL Yellow Card Link 3	<a href="#">E207780-100791802</a>	-	-
UL Recognized, 94V-2 Flame Class Rating	≥1.2	mm	UL 94
Glow Wire Flammability Index, 1.0 mm	875	°C	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	900	°C	IEC 60695-2-13
<b>INJECTION MOLDING <sup>(3)</sup></b>			
Drying Temperature	120	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	280 – 300	°C	
Nozzle Temperature	270 – 290	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	80 – 100	°C	

(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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(3) 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.

(4) Value shown here is based on internal measurement.

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