

LEXAN™ RESIN PK2870

REGION AMERICAS

DESCRIPTION

LEXAN™ PK2870 resin is a 2.5 MFR branched polycarbonate, MVR of 2. High viscosity. For blow molding, with high melt strength and high impact resistance. Excellent candidate for water bottle applications. Available in transparent colors only. This material is food contact compliant in most jurisdictions – exceptions may exist, request a declaration for details.

TYPICAL PROPERTY VALUES

Revision 20250819

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	65	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	7	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	>70	%	ASTM D638
Tensile Modulus, 50 mm/min	2350	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	95	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2300	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	65	MPa	ISO 527
Tensile Stress, break, 50 mm/min	70	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	7	%	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	95	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
Hardness, Rockwell R	120	-	ISO 2039-2
IMPACT			
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	NB	J/m	ASTM D4812
Izod Impact, notched, 23°C	750	J/m	ASTM D256
Izod Impact, notched, -30°C	150	J/m	ASTM D256
Falling Dart Impact (D 3029), 23°C	170	J	ASTM D3029
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	75	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	55	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	70	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	50	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	150	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm	145	°C	ASTM D648
HDT, 1.82 MPa, 3.2 mm	130	°C	ASTM D648
CTE, -40°C to 95°C, flow	7.E-05	1/°C	ASTM E831

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Specific Heat	1.25	J/g·°C	ASTM C351
Thermal Conductivity	0.2	W/m·°C	ASTM C177
Thermal Conductivity	0.2	W/m·°C	ISO 8302
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	149	°C	ISO 306
Vicat Softening Temp, Rate B/120	150	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	145	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	130	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.2	-	ASTM D792
Water Absorption, (23°C/Saturated)	0.35	%	ASTM D570
Water Absorption, equilibrium, 100°C	0.58	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	2.5	g/10 min	ASTM D1238
Density	1.2	g/cm³	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	2	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/2.16 kg	4	cm³/10 min	ISO 1133
OPTICAL			
Light Transmission, 2.54 mm	88	%	ASTM D1003
Haze, 2.54 mm	<0.8	%	ASTM D1003
Refractive Index	1.586	-	ISO 489
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-220998	-	-
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	320 – 345	°C	
Nozzle Temperature	315 – 340	°C	
Front - Zone 3 Temperature	320 – 345	°C	
Middle - Zone 2 Temperature	310 – 330	°C	
Rear - Zone 1 Temperature	300 – 320	°C	
Mold Temperature	80 – 115	°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	
EXTRUSION BLOW MOLDING			
Drying Temperature	115 – 120	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	48	Hrs	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Maximum Moisture Content	0.02	%	
Minimum Moisture Content	0.01	%	
Melt Temperature (Parison)	265 – 275	°C	
Barrel - Zone 1 Temperature	260 – 275	°C	
Barrel - Zone 2 Temperature	260 – 275	°C	
Barrel - Zone 3 Temperature	260 – 275	°C	
Barrel - Zone 4 Temperature	260 – 275	°C	
Adapter - Zone 5 Temperature	260 – 275	°C	
Head - Zone 6 - Top Temperature	260 – 275	°C	
Head - Zone 7 - Bottom Temperature	260 – 275	°C	
Screw Speed	15 – 50	rpm	
Mold Temperature	65 – 95	°C	
Die Temperature	270 – 280	°C	

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