

LEXAN™ XHT3171 resin

Polycarbonate

SABIC Innovative Plastics

Message:

XHT3171 is a 38 MVR high flow, high heat polycarbonate copolymer enabling high aesthetics, thin wall and complex designs. It is available in a range of opaque colors.

General Information			
Features	Copolymer		
	High liquidity		
	Heat resistance, high		
Uses	Thin wall parts		
Appearance	Opacity		
	Available colors		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
300°C/2.16 kg	14	g/10 min	ASTM D1238
330°C/2.16 kg	42	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR)			ISO 1133
300°C/2.16 kg	12.0	cm ³ /10min	ISO 1133
330°C/2.16 kg	38.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.70 - 1.0	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.35	%	ISO 62
Equilibrium, 23°C, 50% RH	0.35	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	125		ISO 2039-2
Ball Indentation Hardness (H 358/30)	152	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2500	MPa	ASTM D638
--	2500	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	75.0	MPa	ASTM D638
Yield	75.0	MPa	ISO 527-2/50
Fracture ³	60.0	MPa	ASTM D638

Fracture	60.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	7.0	%	ASTM D638
Yield	7.0	%	ISO 527-2/50
Fracture ⁵	> 30	%	ASTM D638
Fracture	> 50	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2700	MPa	ASTM D790
-- ⁷	2400	MPa	ISO 178
Flexural Stress			
--	110	MPa	ISO 178
Yield, 50.0mm span ⁸	120	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	9.0	kJ/m ²	ISO 179/1eA
23°C	10	kJ/m ²	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	75	J/m	ASTM D256
23°C	80	J/m	ASTM D256
-30°C ¹¹	9.0	kJ/m ²	ISO 180/1A
23°C ¹²	9.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			ASTM D4812, ISO 180/1U
-30°C	No Break		ASTM D4812, ISO 180/1U
23°C	No Break		ASTM D4812, ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	167	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ¹³	167	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	154	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁴	154	°C	ISO 75-2/Af
Vicat Softening Temperature			
	172		
--	173	°C	ASTM D1525 ¹⁵
--	173	°C	ISO 306/B50
--	175	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2

Flow: -40 to 40°C	6.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	6.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Thermal Conductivity (25°C)	0.20	W/m/K	ASTM C177
Additional Information	Nominal Value	Unit	Test Method
Metallized Haze (1.50 mm)	160	°C	Internal method
Injection	Nominal Value	Unit	
Drying Temperature	130	°C	
Drying Time	4.0 - 6.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 60	%	
Rear Temperature	270 - 330	°C	
Middle Temperature	280 - 340	°C	
Front Temperature	290 - 350	°C	
Nozzle Temperature	285 - 345	°C	
Processing (Melt) Temp	290 - 350	°C	
Mold Temperature	85 - 120	°C	
Back Pressure	0.300 - 0.700	MPa	
Screw Speed	40 - 90	rpm	
Vent Depth	0.025 - 0.080	mm	
NOTE			
1.	50 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*3		
12.	80*10*3		
13.	80*10*4 mm		
14.	80*10*4 mm		
15.	标准 B (120°C/h), 载荷2 (50N)		

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