LEXAN™ COPOLYMER XHT2171

REGION AMERICAS

DESCRIPTION

XHT2171 is a 55 MVR high flow, high heat polycarbonate copolymer enabling high aesthetics, thin wall and complex designs. It is available in a range of opaque colors.

TYPICAL PROPERTY VALUES

Revision 20231130

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	73	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	60	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	7	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	>30	%	ASTM D638
Tensile Modulus, 5 mm/min	2450	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	2600	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	74	MPa	ISO 527
Tensile Stress, break, 50 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	7	%	ISO 527
Tensile Strain, break, 50 mm/min	>50	%	ISO 527
Tensile Modulus, 1 mm/min	2450	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	107	MPa	ISO 178
Flexural Modulus, 2 mm/min	2400	MPa	ISO 178
Ball Indentation Hardness, H358/30	147	MPa	ISO 2039-1
Hardness, Rockwell R	125	-	ISO 2039-2
IMPACT [1]			
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	80	J/m	ASTM D256
Izod Impact, notched, -30°C	75	J/m	ASTM D256
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	9	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	9	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	10	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 [1]			
Vicat Softening Temp, Rate B/50	164	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	165	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	160	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	147	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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
Thermal Conductivity @ 25 °C	0.2	W/m-°C	ASTM C177
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
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	165	°C	ISO 306
Vicat Softening Temp, Rate B/120	167	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	159	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	146	°C	ISO 75/Af
Metallized Haze pass at 1.5mm	155	°C	SABIC method
PHYSICAL [1]			
Specific Gravity	1.2	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm [2]	0.6 – 0.9	%	SABIC method
Melt Flow Rate, 300°C/2.16 kgf	22	g/10 min	ASTM D1238
Melt Flow Rate, 330°C/2.16 kgf	60	g/10 min	ASTM D1238
Density	1.2	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.3	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.3	%	ISO 62
Melt Volume Rate, MVR at 300°C/2.16 kg	19	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 330°C/2.16kg	55	cm³/10 min	ISO 1133
INJECTION MOLDING [3]			
Drying Temperature	130	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	290 – 350	°C	
Nozzle Temperature	285 – 345	°C	
Front - Zone 3 Temperature	290 – 350	°C	
Middle - Zone 2 Temperature	280 – 340	°C	
Rear - Zone 1 Temperature	270 – 330	°C	
Mold Temperature	85 – 130	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 90	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.08	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) 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.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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