LEXAN™ COPOLYMER XHT5146

REGION AMERICAS

DESCRIPTION

XHT5146 is a high flow, high heat polycarbonate copolymer with a haze onset of 185C. It is available in a range of opaque colors.

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	80	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	65	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	7.5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	45	%	ASTM D638
Tensile Modulus, 5 mm/min	2600	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	125	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2650	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	80	MPa	ISO 527
Tensile Stress, break, 50 mm/min	65	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	7	%	ISO 527
Tensile Strain, break, 50 mm/min	45	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	120	MPa	ISO 178
Flexural Modulus, 2 mm/min	2550	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	80	J/m	ASTM D256
Izod Impact, notched, -30°C	35	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	65	J	ASTM D3763
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	11	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	8	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	11	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	8	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	190	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	185	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	174	°C	ASTM D648
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	7.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.5E-05	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Ball Pressure Test, 165°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	190	°C	ISO 306
Vicat Softening Temp, Rate B/120	190	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	183	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	170	°C	ISO 75/Af
Metallized Haze Onset	180	°C	SABIC method
PHYSICAL (1)			
Specific Gravity	1.2	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm (2)	0.6 – 0.95	%	SABIC method
Melt Flow Rate, 330°C/2.16 kgf	16	g/10 min	ASTM D1238
Density	1.2	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.5	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.25	%	ISO 62
Melt Volume Rate, MVR at 330°C/2.16kg	15	cm³/10 min	ISO 1133
INJECTION MOLDING (3)			
Drying Temperature	135	°C	
Drying Time	4 – 6	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 – 335	°C	
Rear - Zone 1 Temperature	300 – 325	°C	
Mold Temperature	110 – 140	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	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.

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