LEXAN™ COPOLYMER XHT2146

REGION EUROPE

DESCRIPTION

XHT2146 resin is a high flow, high heat polycarbonate copolymer with improved release performance compared to LEXAN XHT2141 resin. It is available in a range of opaque and limited transparent colors.

TYPICAL PROPERTY VALUES

Revision 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	70	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	60	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6.5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	90	%	ASTM D638
Tensile Modulus, 5 mm/min	2600	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	110	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2550	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	70	MPa	ISO 527
Tensile Stress, break, 50 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6.5	%	ISO 527
Tensile Strain, break, 50 mm/min	90	%	ISO 527
Tensile Modulus, 1 mm/min	2600	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	100	MPa	ISO 178
Flexural Modulus, 2 mm/min	2450	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	115	J/m	ASTM D256
Izod Impact, notched, -30°C	75	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	68	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	10	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	9	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 +23°C	11	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	12	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	9	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
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	20	kJ/m²	ISO 179/1eA
THERMAL [1]			
Vicat Softening Temp, Rate B/50	161	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	155	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	145	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.E-05	1/°C	ASTM E831

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ASTM E831
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
Vicat Softening Temp, Rate B/50	160	°C	ISO 306
Vicat Softening Temp, Rate B/120	162	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	155	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	142	°C	ISO 75/Af
Metallized Haze Onset	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, 330°C/2.16 kgf	46	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)	0.23	%	ISO 62
Melt Volume Rate, MVR at 330°C/2.16kg	43	cm³/10 min	ISO 1133
INJECTION MOLDING (3)			
Drying Temperature	125	°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.

MORE INFORMATION

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

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