

LEXANTM COPOLYMER XHT4141

REGION AMERICAS

DESCRIPTION

XHT4141 is a high flow, high heat polycarbonate copolymer. It is available in a range of opaque and limited transparent colors.

TYPICAL PROPERTY VALUES

Revision 20200610

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	77	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	69	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	50	%	ASTM D 638
Tensile Modulus, 5 mm/min	2730	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	120	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2600	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	78	MPa	ISO 527
Tensile Stress, break, 50 mm/min	67	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	2750	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2600	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	93	J/m	ASTM D 256
Izod Impact, notched, -30°C	76	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	72	J	ASTM D 3763
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	10	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	8	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	11	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	9	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	183	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	174	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	165	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ASTM E 831
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

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Ball Pressure Test, 125°C +/- 2°C	Pass	-	IEC 60695-10-2
Ball Pressure Test, 165°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	183	°C	ISO 306
Vicat Softening Temp, Rate B/120	181	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	173	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	162	°C	ISO 75/Af
Metallized Haze Onset	175	°C	SABIC method
Relative Temp Index, Elec ⁽¹⁾	150	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽¹⁾	130	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽¹⁾	150	°C	UL 746B
PHYSICAL			
Specific Gravity	1.2	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.6 – 0.95	%	SABIC method
Melt Flow Rate, 330°C/2.16 kgf	25	g/10 min	ASTM D 1238
Density	1.21	g/cm ³	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	24	cm ³ /10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	>1.E+17	Ohm-cm	ASTM D 257
Surface Resistivity	>1.E+17	Ohm	ASTM D 257
Relative Permittivity, 100 Hz	3.12	-	ASTM D 150
Relative Permittivity, 1 MHz	3.02	-	ASTM D 150
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 3	1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	1.5	mm	UL 746A
FLAME CHARACTERISTICS ⁽¹⁾			
UL Yellow Card Link	E121562-100025116	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
Glow Wire Ignitability Temperature, 3.0 mm	875	°C	IEC 60695-2-13
Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 2.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.0 mm	960	°C	IEC 60695-2-12
INJECTION MOLDING			
Drying Temperature	135	°C	
Drying Time	4 – 6	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	300 – 345	°C	
Nozzle Temperature	295 – 340	°C	
Front - Zone 3 Temperature	300 – 345	°C	
Middle - Zone 2 Temperature	290 – 335	°C	
Rear - Zone 1 Temperature	280 – 325	°C	
Mold Temperature	95 – 130	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 90	rpm	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.08	mm	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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