



## LEXAN\* Resin XHT4141

### Asia Pacific: COMMERCIAL

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

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>MECHANICAL</b>			
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
<b>IMPACT</b>			
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 <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	10	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	8	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	11	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	9	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m <sup>2</sup>	ISO 179/1eU

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 3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.  
 4) Own measurement according to UL.  
 5) 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.  
 6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source, GMD, Last Update:11/23/2012

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>THERMAL</b>			
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 C 177
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	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
Relative Temp Index, Elec	150	°C	UL 746B
Relative Temp Index, Mech w/impact	130	°C	UL 746B
Relative Temp Index, Mech w/o impact	150	°C	UL 746B
Metallized Haze Onset	175	°C	SABIC Method
<b>PHYSICAL</b>			
Specific Gravity	1.2	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	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 <sup>3</sup>	ISO 1183

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3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.  
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5) 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.  
6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source, GMD, Last Update: 11/23/2012

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>PHYSICAL</b>			
Water Absorption, (23°C/sat)	0.5	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.25	%	ISO 62
Melt Volume Rate, MVR at 330°C/2.16kg	24	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>			
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
Hot Wire Ignition (PLC)	3	PLC Code	UL 746A
High Ampere Arc Ign, surface (PLC)	0	PLC Code	UL 746A
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94HB Flame Class Rating (3)	1.5	mm	UL 94
UL Recognized, 94HB Flame Class Rating 2nd value (3)	3	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	3	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 3.0 mm	875	°C	IEC 60695-2-13

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
<b>Injection Molding</b>		
Drying Temperature	135	°C
Drying Time	4 - 6	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	300 - 345	°C
Nozzle Temperature	285 - 325	°C
Front - Zone 3 Temperature	300 - 345	°C
Middle - Zone 2 Temperature	290 - 335	°C
Rear - Zone 1 Temperature	280 - 315	°C
Mold Temperature	95 - 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

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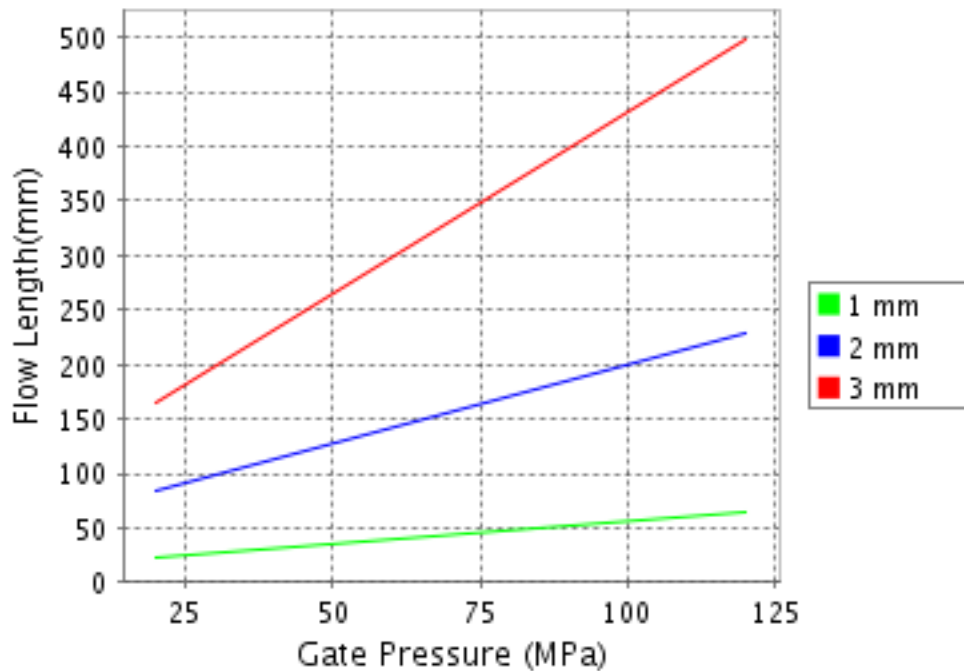
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**CALCULATED FLOW LENGTH INDICATION**  
**Moldflow® Radial Flow Analysis**  
**LEXAN® XHT4141**  
**Melt Temperature : 345°C**  
**Mold Temperature : 115°C**



**Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.**

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