



**LEXAN™ Resin XHT3143**  
**Americas: COMMERCIAL**

XHT3143 is a high flow, UV stabilized, 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	710	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	560	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	70	%	ASTM D 638
Tensile Modulus, 5 mm/min	27500	kgf/cm <sup>2</sup>	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1220	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	26500	kgf/cm <sup>2</sup>	ASTM D 790
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	%	ISO 527
Tensile Strain, break, 50 mm/min	70	%	ISO 527
Tensile Modulus, 1 mm/min	2500	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2500	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, notched, 23°C	9	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	5	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	693	cm-kgf	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	9	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	9	kJ/m <sup>2</sup>	ISO 180/1A

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.  
 (3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(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 updated:

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>IMPACT</b>			
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
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	170	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	166	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	156	°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
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	168	°C	ISO 306
Vicat Softening Temp, Rate B/120	170	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	152	°C	ISO 75/Af
<b>PHYSICAL</b>			
Specific Gravity	1.2	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.6 - 0.9	%	SABIC Method
Melt Flow Rate, 330°C/2.16 kgf	33	g/10 min	ASTM D 1238
Density	1.2	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.3	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.3	%	ISO 62
Melt Volume Rate, MVR at 330°C/2.16kg	30	cm <sup>3</sup> /10 min	ISO 1133

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(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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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 - 325	°C
Nozzle Temperature	295 - 320	°C
Front - Zone 3 Temperature	300 - 325	°C
Middle - Zone 2 Temperature	290 - 310	°C
Rear - Zone 1 Temperature	280 - 300	°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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