

# LEXAN™ COPOLYMER XHT2143

**REGION ASIA** 

### DESCRIPTION

XHT2143 is a high flow, UV stabilized, high heat polycarbonate copolymer with an HDT/Af of 142 C. It is available in a range of opaque and limited transparent colors.

## TYPICAL PROPERTY VALUES

PROPERTIES **TYPICAL VALUES** UNITS **TEST METHODS** MECHANICAL<sup>(1)</sup> 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 ASTM D790 110 MPa Flexural Modulus, 1.3 mm/min, 50 mm span 2550 MPa ASTM D790 70 ISO 527 Tensile Stress, yield, 50 mm/min MPa Tensile Stress, break, 50 mm/min 60 MPa ISO 527 Tensile Strain, yield, 50 mm/min 150 527 65 % 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) ASTM D256 Izod Impact, notched, 23°C 115 J/m Izod Impact, notched, -30°C 75 J/m ASTM D256 68 Instrumented Dart Impact Total Energy, 23°C ASTM D3763 I Izod Impact, notched 80\*10\*4 +23°C 11 ISO 180/1A kJ/m² Izod Impact, notched 80\*10\*4 -30°C 10 kJ/m² ISO 180/1A Charpy 23°C, V-notch Edgew 80\*10\*4 sp=62mm 20 kJ/m² ISO 179/1eA THERMAL (1) °C Vicat Softening Temp, Rate B/50 161 ASTM D1525 HDT, 0.45 MPa, 3.2 mm, unannealed 155 °C ASTM D648 °C HDT, 1.82 MPa, 3.2mm, unannealed ASTM D648 145 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 CTF. -40°C to 40°C, flow 6 F-05 1/°C 150 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 °C Vicat Softening Temp, Rate B/120 162 ISO 306 HDT/Af, 1.8 MPa Flatw 80\*10\*4 sp=64mm 142 °C ISO 75/Af Relative Temp Index, Elec (2) 150 °C UL 746B Relative Temp Index, Mech w/impact (2) °C UL 746B 130

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## CHEMISTRY THAT MATTERS

Revision 20230607



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Temp Index, Mech w/o impact <sup>(2)</sup>	150	°C	UL 746B
PHYSICAL <sup>(1)</sup>			
Specific Gravity	1.2		ASTM D792
Mold Shrinkage, flow, 3.2 mm <sup>(3)</sup>	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
OPTICAL <sup>(1)</sup>			
Light Transmission at 3.0 mm	84	%	ASTM D1003
ELECTRICAL <sup>(1)</sup>			
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 (2)			
UL Yellow Card Link	E207780-100321024		
UL Yellow Card Link UL Recognized, 94HB Flame Class Rating	<u>E207780-100321024</u> ≥1.5	- mm	- UL 94
		- mm °C	- UL 94 IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating	≥1.5		
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm	≥1.5 875	°C	IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm Glow Wire Flammability Index, 3.0 mm	≥1.5 875	°C	IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm Glow Wire Flammability Index, 3.0 mm INJECTION MOLDING <sup>(4)</sup>	≥1.5 875 960	°C °C	IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm Glow Wire Flammability Index, 3.0 mm INJECTION MOLDING <sup>(4)</sup> Drying Temperature	≥1.5 875 960 135	°C °C	IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm Glow Wire Flammability Index, 3.0 mm INJECTION MOLDING <sup>(4)</sup> Drying Temperature Drying Time	≥1.5 875 960 135 4 - 6	°C °C °C Hrs	IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm Glow Wire Flammability Index, 3.0 mm INJECTION MOLDING <sup>(4)</sup> Drying Temperature Drying Time Maximum Moisture Content	≥1.5 875 960 135 4 - 6 0.02	°C °C Hrs %	IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm Glow Wire Flammability Index, 3.0 mm INJECTION MOLDING <sup>(4)</sup> Drying Temperature Drying Time Maximum Moisture Content Melt Temperature	<ul> <li>≥1.5</li> <li>875</li> <li>960</li> <li>135</li> <li>4 - 6</li> <li>0.02</li> <li>290 - 330</li> </ul>	°C °C Hrs %	IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm Glow Wire Flammability Index, 3.0 mm INJECTION MOLDING <sup>(4)</sup> Drying Temperature Drying Time Maximum Moisture Content Melt Temperature Nozzle Temperature	<ul> <li>≥1.5</li> <li>875</li> <li>960</li> <li>135</li> <li>4 - 6</li> <li>0.02</li> <li>290 - 330</li> <li>285 - 325</li> </ul>	°C °C Hrs % °C	IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm Glow Wire Flammability Index, 3.0 mm INJECTION MOLDING <sup>(4)</sup> Drying Temperature Drying Time Maximum Moisture Content Melt Temperature Nozzle Temperature Front - Zone 3 Temperature	<ul> <li>≥1.5</li> <li>875</li> <li>960</li> <li>135</li> <li>4 - 6</li> <li>0.02</li> <li>290 - 330</li> <li>285 - 325</li> <li>290 - 330</li> </ul>	°C °C Hrs % °C °C	IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm Glow Wire Flammability Index, 3.0 mm INJECTION MOLDING <sup>(4)</sup> Drying Temperature Drying Time Maximum Moisture Content Melt Temperature Nozzle Temperature Front - Zone 3 Temperature Middle - Zone 2 Temperature	<ul> <li>≥1.5</li> <li>875</li> <li>960</li> <li>135</li> <li>4 - 6</li> <li>0.02</li> <li>290 - 330</li> <li>285 - 325</li> <li>290 - 330</li> <li>280 - 320</li> </ul>	°C °C Hrs % °C °C °C °C	IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm Glow Wire Flammability Index, 3.0 mm INJECTION MOLDING <sup>(4)</sup> Drying Temperature Drying Time Maximum Moisture Content Melt Temperature Nozzle Temperature Front - Zone 3 Temperature Middle - Zone 2 Temperature Rear - Zone 1 Temperature	<ul> <li>≥1.5</li> <li>875</li> <li>960</li> <li>135</li> <li>4 - 6</li> <li>0.02</li> <li>290 - 330</li> <li>285 - 325</li> <li>290 - 330</li> <li>280 - 320</li> <li>270 - 310</li> </ul>	°C         °C         Hrs         %         °C	IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm Glow Wire Flammability Index, 3.0 mm INJECTION MOLDING <sup>(4)</sup> Drying Temperature Drying Time Maximum Moisture Content Melt Temperature Nozzle Temperature Front - Zone 3 Temperature Middle - Zone 2 Temperature Rear - Zone 1 Temperature Mold Temperature	<ul> <li>≥1.5</li> <li>875</li> <li>960</li> <li>135</li> <li>4 - 6</li> <li>0.02</li> <li>290 - 330</li> <li>285 - 325</li> <li>290 - 330</li> <li>280 - 320</li> <li>270 - 310</li> <li>85 - 130</li> </ul>	°C         °C         Hrs         %         °C         °C	IEC 60695-2-13
UL Recognized, 94HB Flame Class Rating Glow Wire Ignitability Temperature, 3.0 mm Glow Wire Flammability Index, 3.0 mm INJECTION MOLDING <sup>(4)</sup> Drying Temperature Drying Time Maximum Moisture Content Melt Temperature Nozzle Temperature Front - Zone 3 Temperature Middle - Zone 2 Temperature Rear - Zone 1 Temperature Mold Temperature Back Pressure	≥1.5 $875$ $960$ 135 $4 - 6$ $0.02$ $290 - 330$ $285 - 325$ $290 - 330$ $280 - 320$ $270 - 310$ $85 - 130$ $0.3 - 0.7$	°С °С '°С Hrs % °С °С °С °С °С °С °С °С ?С ?С ?С ?С ?С ?С ?С ?С ?С ?С ?С ?С ?С	IEC 60695-2-13

(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) 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.

(3) 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.

(4) 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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#### MORE INFORMATION

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