

LEXANTM COPOLYMER XHT2143

REGION EUROPE

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

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
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
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/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)	130	°C	UL 746B
Relative Temp Index, Mech w/o impact (2)	150	°C	UL 746B
PHYSICAL (1)			
Specific Gravity	1.2	-	ASTM D792



Mold Shrinkage, flow, 3.2 mm ⁽³⁾ Mold Shrinkage, flow, 3.2 mm ⁽³⁾ Melt Flow Rate, 330°C/2.16 kgf 46 Density 1.2 1.2 1.2 1.3 Mold Shrinkage, flow, 3.2 mm ⁽³⁾ Mold Shrinkage, flow, 3.2 mm ⁽³⁾ Mold Shrinkage, flow, 3.2 mm ⁽³⁾ 1.2 1.2 1.2 1.2 1.3 1.3 1.5 1.5 1.5 1.5 1.5 1.5				
Met Flow Rate, 330°C/2.16 kgf 46 g/10 min ASTM D1238 Density 1.2 g/cm² ISO 1183 Water Absorption, (23°C/saturated) 0.3 % ISO 62-1 Moisture Absorption (23°C/saturated) 2.23 "m²/10 min ISO 62-1 Melt Volume Rate, MVR at 330°C/2.16 kg 43 "m²/10 min ISO 133 ELECTRICAL. (**) "W LC Code U. 746A Brown Fracking Index (UL) {PLC} 3 PLC Code U. 746A High Amp Arc Ignition (HMI), PLC 3 ≥1.5 mm U. 746A High Amp Arc Ignition (HMI), PLC 0 ≥1.5 mm U. 746A LU Yellow Card Link E45329-100321023 * * * UV Yellow Card Link E45329-100321023 * * * * * * UV Yellow Card Link 1 5 mm U. 94 * * * * * * * * * * * * * * * * * * <th>PROPERTIES</th> <th>TYPICAL VALUES</th> <th>UNITS</th> <th>TEST METHODS</th>	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Density 1.2 g/cm³ ISO 1183 Water Absorption, (23°C/saturated) 0.3 % ISO 62-1 Molsture Absorption (23°C / 50% RH) 0.23 % ISO 62-1 Melt Volume Rate, MNR at 330°C/2.16kg 43 cm³/10 min ISO 1133 ELECTRICAL (1°) V UC Code UL 746A Herb-Wire Ignition (HM), PLC 3 21.5 mm UL 746A High Amp Arc Ignition (HM), PLC 0 21.5 mm UL 746A Heb-Wire Ignition (HM), PLC 0 21.5 mm UL 94 ELECTRICAL (1°) W UL 746A Well Codes UL 746A Melton UL 746A Heb-Wire Ignition (HM), PLC 0 21.5 mm UL 746A ELECTRICAL (1°) W UL 746A UL 746A BLC Googlazed, 94HB Flame Class Rating 21.5 mm UL 94 Glow Wire Ignitiability Temperature, 3.0 mm 87.5 C EC 60695-2-13 BLC Googlazed, 94HB Flame Class Rating 135 C C UNICETION MOLDING (1°) W C <th>Mold Shrinkage, flow, 3.2 mm ⁽³⁾</th> <th>0.6 - 0.9</th> <th>%</th> <th>SABIC method</th>	Mold Shrinkage, flow, 3.2 mm ⁽³⁾	0.6 - 0.9	%	SABIC method
Water Absorption, (23°C / 50% RH) 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 cm²/10 min ISO 1133 ELECTRICAL (1) Underwich (UIL) (PLC) 3 PLC Ode UL 746A Hot-Wire Ignition (HWI), PLC 0 21.5 mm UL 746A Hot-Wire Ignition (HMI), PLC 0 21.5 mm UL 746A Hot Water Ignition (HMI), PLC 0 21.5 mm UL 746A Hot Water Ignition (HMI), PLC 0 21.5 mm UL 746A Hot Water Ignition (HMI), PLC 0 21.5 mm UL 746A Hot Water Ignition (HMI), PLC 0 21.5 mm UL 746A Hot Water Ignition (HMI), PLC 0 21.5 mm UL 746A Hot Water Ignition (HMI), PLC 0 21.5 mm UL 746A Hot Water Ignition (HMI), PLC 0 21.5 mm UL 94 Hot Water Ignition (HMI), PLC 0 21.5	Melt Flow Rate, 330°C/2.16 kgf	46	g/10 min	ASTM D1238
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 ELECTRICAL (**) Comparative Tracking Index (UL) (PLC) 3 PLC Code UL 746A Hot-Wire Ignition (HWI), PLC 3 21.5 mm UL 746A High Amp Arc Ignition (HMI), PLC 0 24.5 mm U. 746A ELAME CHARACTERISTICS (**) UL 746A LU Vellow Card Link E45329-100321023 * * * UL Recognized, 94HB Flame Class Rating 87.5 mm UL 94 Glow Wire Egintability Temperature, 3.0 mm 87.0 * * * Glow Wire Flammability Index, 3.0 mm 87.0 * <t< th=""><th>Density</th><th>1.2</th><th>g/cm³</th><th>ISO 1183</th></t<>	Density	1.2	g/cm³	ISO 1183
Melt Volume Rate, MVR at 330°C/2.16kg 43 cm³/10 min ISO 1133 ELECTRICAL ⁽¹⁾ U. 746A U. 746A Comparative Tracking Index (UL) (PLC) 3 PLC Code U. 746A Hot-Wire Ignition (HWI), PLC 3 ≥1.5 mm U. 746A High Amp Arc Ignition (HAI), PLC 0 ≥1.5 mm U. 746A ELME CHARACTERISTICS ⁽²⁾ U. Yelow Card Link ½5.5 mm U. 94 Glow Wire Ignitability Temperature, 3.0 mm 25.5 mm U. 94 Glow Wire Ignitability Temperature, 3.0 mm 960 °C EC 60695-2-13 Glow Wire Flammability Index, 3.0 mm 960 °C EC 60695-2-12 INJECTION MOLDING ⁽⁴⁾ ** ** ** Unyling Temperature 1.5 ** ** ** Drying Temperature 4.6 Hrs **	Water Absorption, (23°C/saturated)	0.3	%	ISO 62-1
ELECTRICAL ⁽¹⁾ Comparative Tracking Index (UL) (PLC) 3 3 7.5 mm	Moisture Absorption (23°C / 50% RH)	0.23	%	ISO 62
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 VEIIOW Card Link E45329-100321023 - - 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 INJURITY Transportature 135 °C IEC 60695-2·12 Drying Temperature 4 - 6 Hrs IEC 60695-2·12 Maximum Moisture Content 4.6 Hrs IEC 60695-2·12 Melt Temperature 290 - 330 °C IEC 60695-2·12 Nozzle Temperature 290 - 330 °C IEC 60695-2·12 Mold Temperature 290 - 330 °C IEC 60695-2·12 Mold Temperature 290 - 330 °C IEC 60695-2·12 Rear-Zone 1 Temperature 290 - 330	Melt Volume Rate, MVR at 330°C/2.16kg	43	cm³/10 min	ISO 1133
Hot-Wire Ignition (HWI), PLC 3 ≥1.5 mm 0 UL 746A High Amp Arc Ignition (HAI), PLC 0 ≥1.5 mm 0 UL 746A FEAME CHARACTERISTICS (2) UL Yellow Card Link F45329-100321023	ELECTRICAL (1)			
High Amp Arc Ignition (HAI), PLC 0	Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
FLAME CHARACTERISTICS (2) UL Yellow Card Link	Hot-Wire Ignition (HWI), PLC 3	≥1.5	mm	UL 746A
UL Yellow Card Link E45329-100321023 -	High Amp Arc Ignition (HAI), PLC 0	≥1.5	mm	UL 746A
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 INJECTION MOLDING (*) Typing Temperature Drying Time 4 − 6 Hrs Maximum Moisture Content 0.02 % Melt Temperature 290 − 330 °C Nozzle Temperature 285 − 325 °C Front - Zone 3 Temperature 290 − 330 °C Middle - Zone 2 Temperature 280 − 320 °C Rear - Zone 1 Temperature 270 − 310 °C Mold Temperature 85 − 130 °C Back Pressure 0.3 − 0.7 MPa Steew Speed 40 − 90 rpm	FLAME CHARACTERISTICS (2)			
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 INJECTION MOLDING ⁽⁴⁾ Drying Temperature 135 °C Drying Time 4 - 6 Hrs Maximum Moisture Content 0.02 % Melt Temperature 290 - 330 °C Nozzle Temperature 285 - 325 °C Front - Zone 3 Temperature 290 - 330 °C Middle - Zone 2 Temperature 280 - 320 °C Rear - Zone 1 Temperature 270 - 310 °C Mold Temperature 85 - 130 °C Back Pressure 0.3 - 0.7 MPa Strew Speed 40 - 90 rpm	UL Yellow Card Link	E45329-100321023	-	
Signatur Signatur	UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
Drying Temperature 135 °C Drying Time 4 - 6 Hrs Maximum Moisture Content 0.02 % Melt Temperature 290 - 330 °C Nozzle Temperature 285 - 325 °C Front - Zone 3 Temperature 290 - 330 °C Middle - Zone 2 Temperature 280 - 320 °C Rear - Zone 1 Temperature 270 - 310 °C Mold Temperature 85 - 130 °C Back Pressure 0.3 - 0.7 MPa Screw Speed 40 - 90 rpm	Glow Wire Ignitability Temperature, 3.0 mm	875	°C	IEC 60695-2-13
Drying Temperature 135 °C Drying Time 4 – 6 Hrs Maximum Moisture Content 0.02 % Melt Temperature 290 – 330 °C Nozzle Temperature 285 – 325 °C Front - Zone 3 Temperature 290 – 330 °C Middle - Zone 2 Temperature 280 – 320 °C Rear - Zone 1 Temperature 270 – 310 °C Mold Temperature 85 – 130 °C Back Pressure 0.3 – 0.7 MPa Serew Speed 40 – 90 rpm	Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
Drying Time 4 – 6 Hrs Maximum Moisture Content 0.02 % Melt Temperature 290 – 330 °C Nozzle Temperature 285 – 325 °C Front - Zone 3 Temperature 290 – 330 °C Middle - Zone 2 Temperature 280 – 320 °C Rear - Zone 1 Temperature 270 – 310 °C Mold Temperature 85 – 130 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 90 rpm	INJECTION MOLDING (4)			
Maximum Moisture Content 0.02 % Melt Temperature 290 – 330 °C Nozzle Temperature 285 – 325 °C Front - Zone 3 Temperature 290 – 330 °C Middle - Zone 2 Temperature 280 – 320 °C Rear - Zone 1 Temperature 270 – 310 °C Mold Temperature 85 – 130 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 90 rpm	Drying Temperature	135	°C	
Melt Temperature 290 – 330 °C Nozzle Temperature 285 – 325 °C Front - Zone 3 Temperature 290 – 330 °C Middle - Zone 2 Temperature 280 – 320 °C Rear - Zone 1 Temperature 270 – 310 °C Mold Temperature 85 – 130 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 90 rpm	Drying Time	4 – 6	Hrs	
Nozzle Temperature 285 – 325 °C Front - Zone 3 Temperature 290 – 330 °C Middle - Zone 2 Temperature 280 – 320 °C Rear - Zone 1 Temperature 270 – 310 °C Mold Temperature 85 – 130 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 90 rpm	Maximum Moisture Content	0.02	%	
Front - Zone 3 Temperature 290 – 330 °C Middle - Zone 2 Temperature 280 – 320 °C Rear - Zone 1 Temperature 270 – 310 °C Mold Temperature 85 – 130 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 90 rpm	Melt Temperature	290 – 330	°C	
Middle - Zone 2 Temperature 280 – 320 °C Rear - Zone 1 Temperature 270 – 310 °C Mold Temperature 85 – 130 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 90 rpm	Nozzle Temperature	285 – 325	°C	
Rear - Zone 1 Temperature 270 – 310 °C Mold Temperature 85 – 130 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 90 rpm	Front - Zone 3 Temperature	290 – 330	°C	
Mold Temperature 85 – 130 °C Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 90 rpm	Middle - Zone 2 Temperature	280 – 320	°C	
Back Pressure 0.3 – 0.7 MPa Screw Speed 40 – 90 rpm	Rear - Zone 1 Temperature	270 – 310	°C	
Screw Speed 40 – 90 rpm	Mold Temperature	85 – 130	°C	
·	Back Pressure	0.3 – 0.7	MPa	
Shot to Cylinder Size 40 – 60 %	Screw Speed	40 – 90	rpm	
· · · · · · · · · · · · · · · · · · ·	Shot to Cylinder Size	40 – 60	%	
Vent Depth 0.025 – 0.08 mm	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.

MORE INFORMATION

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

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⁽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.