

LEXAN™ XHT4141 resin

Polycarbonate

SABIC Innovative Plastics

Message:

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

General Information			
UL YellowCard	E121562-100025116		
Features	Copolymer		
	High Flow		
	High Heat Resistance		
Appearance	Clear/Transparent		
	Opaque		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.20	g/cm ³	ASTM D792
--	1.21	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (330°C/2.16 kg)	25	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (330°C/2.16 kg)	24.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.60 to 0.95	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.25	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2730	MPa	ASTM D638
--	2750	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	77.0	MPa	ASTM D638
Yield	78.0	MPa	ISO 527-2/50
Break ³	69.0	MPa	ASTM D638
Break	67.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	7.0	%	ASTM D638
Yield	7.0	%	ISO 527-2/50
Break ⁵	50	%	ASTM D638

Break	50	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2600	MPa	ASTM D790
-- ⁷	2600	MPa	ISO 178
Flexural Stress			
--	80.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	120	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	9.0	kJ/m ²	
23°C	11	kJ/m ²	
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	76	J/m	ASTM D256
23°C	93	J/m	ASTM D256
-30°C ¹¹	8.0	kJ/m ²	ISO 180/1A
23°C ¹²	10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹³			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact (23°C, Total Energy)	72.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	174	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁴	173	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	165	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁵	162	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	183	°C	ASTM D1525, ISO 306/B50 ¹⁶
--	181	°C	ISO 306/B120
Ball Pressure Test			IEC 60695-10-2
125°C	Pass		
165°C	Pass		
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	6.0E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.0E-5	cm/cm/°C	
Thermal Conductivity (25°C)	0.20	W/m/K	ASTM C177
RTI Elec	150	°C	UL 746
RTI Imp	130	°C	UL 746

RTI Str	150	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+17	ohms	ASTM D257
Volume Resistivity	> 1.0E+17	ohms·cm	ASTM D257
Dielectric Constant			ASTM D150
100 Hz	3.12		
1 MHz	3.02		
High Amp Arc Ignition (HAI)	PLC 0		UL 746
Hot-wire Ignition (HWI)	PLC 3		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	HB		
3.00 mm	HB		
Glow Wire Flammability Index (3.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (3.00 mm)	875	°C	IEC 60695-2-13
Additional Information	Nominal Value	Unit	Test Method
Metallized Haze Onset	175	°C	Internal Method
Injection	Nominal Value	Unit	
Drying Temperature	135	°C	
Drying Time	4.0 to 6.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	280 to 315	°C	
Middle Temperature	290 to 335	°C	
Front Temperature	300 to 345	°C	
Nozzle Temperature	285 to 325	°C	
Processing (Melt) Temp	300 to 345	°C	
Mold Temperature	95.0 to 130	°C	
Back Pressure	0.300 to 0.700	MPa	
Screw Speed	40 to 90	rpm	
Vent Depth	0.025 to 0.080	mm	
NOTE			
1.	5.0 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	Type I, 50 mm/min		
5.	Type I, 50 mm/min		
6.	1.3 mm/min		
7.	2.0 mm/min		
8.	1.3 mm/min		
9.	80*10*3 sp=62mm		
10.	80*10*3 sp=62mm		

11.	80*10*3
12.	80*10*3
13.	80*10*3
14.	80*10*4 mm
15.	80*10*4 mm
16.	Rate B (120°C/h), Loading 2 (50 N)

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519
 Phone: +86 13424755533
 Email: sales@su-jiao.com
 No. 215, Lianhe North Road, Fengxian District, Shanghai, China

