

LEXAN* XHT4141 Resin

Polycarbonate

SABIC Innovative Plastics

Product Description

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

General

Features	• Copolymer	• High Flow	• High Heat Resistance
Appearance	• Clear/Transparent	• Opaque	
Forms	• Pellets		
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	%	ASTM D955
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.25	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	2730	MPa	ASTM D638
--	2750	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	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 ³	7.0	%	ASTM D638
Yield	7.0	%	ISO 527-2/50
Break ³	50	%	ASTM D638
Break	50	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁴	2600	MPa	ASTM D790
-- ⁵	2600	MPa	ISO 178
Flexural Strength			
-- ^{5, 6}	80.0	MPa	ISO 178
Yield, 50.0 mm Span ⁴	120	MPa	ASTM D790

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁷			ISO 179/1eA
-30°C	9.0	kJ/m ²	
23°C	11	kJ/m ²	
Charpy Unnotched Impact Strength ⁷			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	76.0	J/m	ASTM D256
23°C	93.0	J/m	ASTM D256
-30°C ⁸	8.00	kJ/m ²	ISO 180/1A
23°C ⁸	10.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ⁸			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact			ASTM D3763
23°C, Total Energy	72.0	J	
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 ⁹	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 ⁹	162	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	183	°C	ASTM D1525 ¹⁰ ISO 306/B50 ¹⁰
--	181	°C	ISO 306/B120
CLTE			ASTM E831 ISO 11359-2
Flow: -40 to 40°C	0.000060	cm/cm/°C	
Transverse: -40 to 40°C	0.000060	cm/cm/°C	
Thermal Conductivity (25°C)	0.20	W/m/K	ASTM C177
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+17	ohms	ASTM D257
Volume Resistivity	> 1.0E+17	ohm·cm	ASTM D257
Dielectric Constant			ASTM D150
100 Hz	3.12		
1E+6 Hz	3.02		
Flammability	Nominal Value	Unit	Test Method
Flame Rating - UL			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
UL 746	Nominal Value	Unit	Test Method
RTI Str	150	°C	UL 746
RTI Imp	130	°C	UL 746
RTI Elec	150	°C	UL 746
Hot-wire Ignition (HWI) (PLC)	PLC 3		UL 746
High Amp Arc Ignition (HAI) (PLC)	PLC 0		UL 746
Additional Information	Nominal Value	Unit	Test Method
Metallized Haze Onset	175	°C	Internal Method
Injection	Nominal Value	Unit	Test Method
Drying Temperature	135	°C	

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Injection	Nominal Value	Unit
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 to 60	%
Rear Temperature	305 to 330	°C
Middle Temperature	310 to 345	°C
Front Temperature	310 to 355	°C
Nozzle Temperature	305 to 350	°C
Processing (Melt) Temp	310 to 355	°C
Mold Temperature	95.0 to 150	°C
Back Pressure	0.300 to 0.700	MPa
Screw Speed	40 to 90	rpm
Vent Depth	0.025 to 0.076	mm