

LEXAN™ XHT5146 resin

Polycarbonate
SABIC Innovative Plastics

Message:
XHT5146 is a high flow, high heat polycarbonate copolymer with a haze onset of 185C. It is available in a range of opaque colors.

General Information			
Features	Copolymer		
	High liquidity		
	Heat resistance, high		
Appearance	Opacity		
	Available colors		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (330°C/2.16 kg)	16	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (330°C/2.16 kg)	15.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.60 - 0.95	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.50	%	ISO 62
Equilibrium, 23°C, 50% RH	0.25	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2600	MPa	ASTM D638
--	2500	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	80.0	MPa	ASTM D638
Yield	80.0	MPa	ISO 527-2/50
Fracture ³	65.0	MPa	ASTM D638
Fracture	65.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	7.5	%	ASTM D638
Yield	7.0	%	ISO 527-2/50
Fracture ⁵	45	%	ASTM D638
Fracture	45	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2650	MPa	ASTM D790

-- ⁷	2550	MPa	ISO 178
Flexural Stress			
--	120	MPa	ISO 178
Yield, 50.0mm span ⁸	125	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	8.0	kJ/m ²	ISO 179/1eA
23°C	11	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact			
-30°C	35	J/m	ASTM D256
23°C	80	J/m	ASTM D256
-30°C ¹¹	8.0	kJ/m ²	ISO 180/1A
23°C ¹²	11	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹³			ISO 180/1U
-30°C	No Break		ISO 180/1U
23°C	No Break		ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	65.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	185	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ¹⁴	183	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	174	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁵	170	°C	ISO 75-2/Af
Vicat Softening Temperature	190	°C	ASTM D1525, ISO 306/B50, ISO 306/B120 ¹⁶
Ball Pressure Test			IEC 60695-10-2
125°C	Pass		IEC 60695-10-2
165°C	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			
Flow: -40 to 40°C	6.0E-5	cm/cm/°C	ASTM E831
Flow: -40 to 40°C	7.0E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	6.0E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	6.5E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity (25°C)	0.20	W/m/K	ASTM C177
Additional Information	Nominal Value	Unit	Test Method
Metallized Haze Onset	180	°C	Internal method
Injection	Nominal Value	Unit	
Drying Temperature	135	°C	
Drying Time	5.0 - 6.0	hr	

Drying Time, Maximum	48	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 - 60	%
Rear Temperature	300 - 325	°C
Middle Temperature	310 - 335	°C
Front Temperature	320 - 345	°C
Nozzle Temperature	315 - 340	°C
Processing (Melt) Temp	320 - 345	°C
Mold Temperature	110 - 140	°C
Back Pressure	0.300 - 0.700	MPa
Screw Speed	40 - 70	rpm
Vent Depth	0.025 - 0.076	mm

NOTE

1.	5.0 mm/min
2.	Type 1, 50mm/min
3.	Type 1, 50mm/min
4.	Type 1, 50mm/min
5.	Type 1, 50mm/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.	标准 B (120°C/h), 载荷2 (50N)

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