

LEXAN™ XHT3146 resin

Polycarbonate
SABIC Innovative Plastics Europe

Message:

XHT3146 is a high mold release version of XHT3141 high heat polycarbonate copolymer. It is available in a range of opaque and limited transparent colors.

General Information			
Features	Copolymer		
	Good Mold Release		
	High Heat Resistance		
RoHS Compliance	RoHS Compliant		
Appearance	Clear/Transparent		
	Colors Available		
	Opaque		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR)			ISO 1133
300°C/1.2 kg	16.0	cm ³ /10min	
330°C/2.16 kg	30.0	cm ³ /10min	
Water Absorption			ISO 62
Saturation, 23°C	0.30	%	
Equilibrium, 23°C, 50% RH	0.30	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2700	MPa	ASTM D638
--	2500	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	70.0	MPa	ASTM D638
Yield	70.0	MPa	ISO 527-2/50
Break ³	55.0	MPa	ASTM D638
Break	60.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁵	70	%	ASTM D638
Break	70	%	ISO 527-2/50

Flexural Modulus			
50.0 mm Span ⁶	2600	MPa	ASTM D790
-- ⁷	2500	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	55	J/m	ASTM D256
23°C	97	J/m	ASTM D256
-30°C ¹¹	9.0	kJ/m ²	ISO 180/1A
23°C ¹²	9.0	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)	68.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	166	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁴	164	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	156	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁵	152	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	170	°C	ASTM D1525, ISO 306/B120 10 ¹⁶
--	168	°C	ISO 306/B50
CLTE			
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
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	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

NOTE

1.	50 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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