

LEXAN™ XHT2146 resin

Polycarbonate
SABIC Innovative Plastics

Message:
XHT2146 resin is a high flow, high heat polycarbonate copolymer with improved release performance compared to LEXAN XHT2141 resin. It is available in a range of opaque and limited transparent colors.

General Information			
Features	Copolymer		
	Good Mold Release		
	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, ISO 1183
Melt Mass-Flow Rate (MFR) (330°C/2.16 kg)	46	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (330°C/2.16 kg)	43.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.60 to 0.90	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.30	%	
Equilibrium, 23°C, 50% RH	0.23	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2600	MPa	ASTM D638
--	2600	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	70.0	MPa	ASTM D638
Yield	70.0	MPa	ISO 527-2/50
Break ³	60.0	MPa	ASTM D638
Break	60.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.5	%	ASTM D638
Yield	6.5	%	ISO 527-2/50
Break ⁵	90	%	ASTM D638
Break	90	%	ISO 527-2/50

Flexural Modulus			
50.0 mm Span ⁶	2550	MPa	ASTM D790
-- ⁷	2450	MPa	ISO 178
Flexural Stress			
--	100	MPa	ISO 178
Yield, 50.0 mm Span ⁸	110	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	12	kJ/m ²	
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	75	J/m	ASTM D256
23°C	120	J/m	ASTM D256
-30°C ¹¹	9.0	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)	68.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	155	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	145	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁴	142	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	161	°C	ASTM D1525 ¹⁵
--	160	°C	ISO 306/B50
--	162	°C	ISO 306/B120
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	
Injection	Nominal Value	Unit	
Drying Temperature	125	°C	
Drying Time	4.0 to 6.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	270 to 300	°C	
Middle Temperature	280 to 320	°C	

Front Temperature	290 to 330	°C
Nozzle Temperature	285 to 330	°C
Processing (Melt) Temp	290 to 330	°C
Mold Temperature	85.0 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.	Rate B (120°C/h), Loading 2 (50 N)

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