

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		
	High liquidity		
	Heat resistance, high		
	Good demoulding performance		
Appearance	Opacity		
	Clear/transparent		
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 - 0.90	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.30	%	ISO 62
Equilibrium, 23°C, 50% RH	0.23	%	ISO 62
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
Fracture ³	60.0	MPa	ASTM D638
Fracture	60.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.5	%	ASTM D638
Yield	6.5	%	ISO 527-2/50
Fracture ⁵	90	%	ASTM D638
Fracture	90	%	ISO 527-2/50

Flexural Modulus			
50.0mm span ⁶	2550	MPa	ASTM D790
-- ⁷	2450	MPa	ISO 178
Flexural Stress			
--	100	MPa	ISO 178
Yield, 50.0mm span ⁸	110	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C ⁹	9.0	kJ/m ²	ISO 179/1eA
23°C ¹⁰	12	kJ/m ²	ISO 179/1eA
23°C ¹¹	20	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ¹²			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact			
-30°C	75	J/m	ASTM D256
23°C	120	J/m	ASTM D256
-30°C ¹³	9.0	kJ/m ²	ISO 180/1A
-30°C ¹⁴	10	kJ/m ²	ISO 180/1A
23°C ¹⁵	10	kJ/m ²	ISO 180/1A
23°C ¹⁶	11	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹⁷			ISO 180/1U
-30°C	No Break		ISO 180/1U
23°C	No Break		ISO 180/1U
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, 3.20mm	155	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ¹⁸	155	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	145	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁹	142	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	161	°C	ASTM D1525 ²⁰
--	160	°C	ISO 306/B50
--	162	°C	ISO 306/B120
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	6.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	6.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Additional Information	Nominal Value	Unit	Test Method
Metallized Haze Onset	155	°C	Internal method
Injection	Nominal Value	Unit	

Drying Temperature	125	°C
Drying Time	4.0 - 6.0	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 - 60	%
Rear Temperature	270 - 300	°C
Middle Temperature	280 - 320	°C
Front Temperature	290 - 330	°C
Nozzle Temperature	285 - 330	°C
Processing (Melt) Temp	290 - 330	°C
Mold Temperature	85.0 - 130	°C
Back Pressure	0.300 - 0.700	MPa
Screw Speed	40 - 90	rpm
Vent Depth	0.025 - 0.080	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*4 sp=62mm
12. 80*10*3 sp=62mm
13. 80*10*3
14. 80*10*4
15. 80*10*3
16. 80*10*4
17. 80*10*3
18. 80*10*4 mm
19. 80*10*4 mm
20. 标准 B (120°C/h), 载荷2 (50N)

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