

LEXAN™ HPH4304 resin

Polycarbonate + PPC

SABIC Innovative Plastics

Message:

LEXAN HPH4304 is a high heat resistant poly (ester) carbonate resin for injection molding

General Information			
Features	High Heat Resistance		
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) (300°C/1.2 kg)	8.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (330°C/2.16 kg)	40.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.60 to 0.80	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.16	%	
Equilibrium, 23°C, 50% RH	0.35	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2100	MPa	ASTM D638
--	2150	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	64.0	MPa	ASTM D638
Yield	65.0	MPa	ISO 527-2/50
Break ³	69.0	MPa	ASTM D638
Break	60.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	7.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁵	> 50	%	ASTM D638
Break	85	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2200	MPa	ASTM D790
-- ⁷	2300	MPa	ISO 178
Flexural Stress			
--	100	MPa	ISO 178
Yield, 50.0 mm Span ⁸	95.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA

-30°C	12	kJ/m ²	
23°C	50	kJ/m ²	
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	130	J/m	ASTM D256
23°C	600	J/m	ASTM D256
-30°C ¹¹	11	kJ/m ²	ISO 180/1A
23°C ¹²	45	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)			
	120	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	139	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁴	134	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	162	°C	ASTM D1525 ¹⁵
--	151	°C	ISO 306/B50
--	153	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	8.0E-5	cm/cm/°C	
Transverse : -40 to 40°C	8.0E-5	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	2.0 to 4.0	hr	
Processing (Melt) Temp	300 to 330	°C	
Mold Temperature	100 to 120	°C	
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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