



LEXAN™ 4704 resin

General Information

Product Description

High heat resistant polycarbonate copolymer, provides of 165 C at 1.82 MPa. FDA food contact compliant in limited colors. Effective January 15th, 2008 this grade will no longer be supported with biocompatibility information and should not be used for medical applications which require biocompatibility. Alternative grade HPH4704.

General

Material Status	• Commercial: Active
Availability	• Europe
Features	• Copolymer • Food Contact Acceptable • High Heat Resistance
Agency Ratings	• FDA Food Contact, Unspecified Rating
RoHS Compliance	• RoHS Compliant
Processing Method	• Injection Molding

ASTM and ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/5.0 kg)	0.366	in ³ /10min	ISO 1133
Molding Shrinkage - Flow ²	0.0090	in/in	Internal Method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	334000	psi	ISO 527-2/1
Tensile Stress (Yield)	10200	psi	ISO 527-2/50
Tensile Strain (Yield)	7.0	%	ISO 527-2/50
Tensile Strain (Break)	> 50	%	ISO 527-2/50
Flexural Modulus ³	334000	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁴			ISO 179/1eA
-22°F	5.7	ft-lb/in ²	
73°F	21	ft-lb/in ²	
Charpy Unnotched Impact Strength ⁴			ISO 179/1eU
-22°F	No Break		
73°F	No Break		
Notched Izod Impact Strength ⁵			ISO 180/1A
-22°F	5.2	ft-lb/in ²	
73°F	21	ft-lb/in ²	
Unnotched Izod Impact Strength ⁵			ISO 180/1U
-22°F	No Break		
73°F	No Break		

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SABIC Innovative Plastics Europe - Polycarbonate

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	127		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁶ 66 psi, Unannealed, 3.94 in Span	329	°F	ISO 75-2/Be
Heat Deflection Temperature ⁶ 264 psi, Unannealed, 3.94 in Span	302	°F	ISO 75-2/Ae
Vicat Softening Temperature			
--	365	°F	ISO 306/A50
--	347	°F	ISO 306/B50
--	338	°F	ISO 306/B120
Ball Pressure Test (257°F)	Pass		IEC 60695-10-2
CLTE - Flow (73 to 176°F)	0.000044	in/in/°F	ISO 11359-2
Thermal Conductivity	1.5	Btu·in/hr/ft²/°F	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Relative Permittivity (1 MHz)	3.10		IEC 60250
Dissipation Factor (100 Hz)	0.026		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Glow Wire Flammability Index (0.0787 in)	1560	°F	IEC 60695-2-12

Processing Information			
Injection	Nominal Value	Unit	
Drying Temperature	257 to 275	°F	
Drying Time	3.0 to 4.0	hr	
Hopper Temperature	140 to 176	°F	
Rear Temperature	572 to 608	°F	
Middle Temperature	590 to 626	°F	
Front Temperature	608 to 644	°F	
Nozzle Temperature	608 to 644	°F	
Processing (Melt) Temp	617 to 680	°F	
Mold Temperature	212 to 257	°F	

Notes

¹ Typical properties: these are not to be construed as specifications.
² Tensile Bar
³ 0.079 in/min
⁴ 80*10*3 sp=62mm
⁵ 80*10*3
⁶ 120*10*4 mm