

XYLEX™ HX8300HP resin

Polycarbonate + Polyester

SABIC Innovative Plastics

Message:

Medium flow, Transparent PC/Polyester alloy. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI), food contact compliant. EtO sterilizable.

General Information			
Features	Biocompatible		
	Ethylene Oxide Sterilizable		
	Food Contact Acceptable		
	Medium Flow		
Uses	Medical/Healthcare Applications		
	Pharmaceuticals		
Agency Ratings	ISO 10993		
	USP Class VI		
Appearance	Clear/Transparent		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.20	g/cm ³	ASTM D792
--	1.17	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (265°C/2.16 kg)	15	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (265°C/2.16 kg)	15.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.50 to 0.80	%	
Across Flow : 3.20 mm	0.40 to 0.60	%	
Water Absorption			ISO 62
Saturation, 23°C	0.49	%	
Equilibrium, 23°C, 50% RH	0.15	%	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 10 sec)	74		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	1520	MPa	ASTM D638
--	1600	MPa	ISO 527-2/1

Tensile Strength			
Yield ²	47.0	MPa	ASTM D638
Yield	55.0	MPa	ISO 527-2/50
Break ³	46.0	MPa	ASTM D638
Break	54.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.0	%	ASTM D638
Yield	5.0	%	ISO 527-2/50
Break ⁵	150	%	ASTM D638
Break	> 200	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	1680	MPa	ASTM D790
-- ⁷	1700	MPa	ISO 178
Flexural Stress			
--	78.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	71.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	70	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
23°C	1100	J/m	ASTM D256
-30°C ¹⁰	< 1.0	kJ/m ²	ISO 180/1A
-10°C ¹¹	5.0	kJ/m ²	ISO 180/1A
23°C ¹²	8.0	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	95.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	79.0	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	75.0	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹³	80.0	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	96.0	°C	ASTM D1525, ISO 306/B120 ¹⁴
--	92.0	°C	ISO 306/B50
Ball Pressure Test ¹⁵ (85°C)	Pass		IEC 60695-10-2
CLTE			
Flow : -40 to 40°C	1.1E-4	cm/cm/°C	ASTM E831, ISO 11359-2
Flow : 23 to 60°C	9.0E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	1.1E-4	cm/cm/°C	ASTM E831, ISO 11359-2
Transverse : 23 to 60°C	9.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.23	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	ASTM D257

Volume Resistivity	> 1.0E+15	ohms·cm	ASTM D257
Comparative Tracking Index (CTI)	PLC 0		UL 746
Flammability	Nominal Value	Unit	Test Method
Glow Wire Flammability Index (1.00 mm)	750	°C	IEC 60695-2-12
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.539		ISO 489
Transmittance (2540 μm)	88.0	%	ASTM D1003
Haze (2540 μm)	< 2.0	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	65.6 to 76.7	°C	
Drying Time	3.0 to 5.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 80	%	
Rear Temperature	238 to 249	°C	
Middle Temperature	238 to 260	°C	
Front Temperature	243 to 266	°C	
Nozzle Temperature	243 to 266	°C	
Processing (Melt) Temp	243 to 266	°C	
Mold Temperature	43.3 to 60.0	°C	
Back Pressure	0.172 to 0.517	MPa	
Screw Speed	20 to 100	rpm	
Vent Depth	0.013 to 0.020	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*4 sp=62mm		
10.	80*10*4		
11.	80*10*4		
12.	80*10*4		
13.	120*10*4 mm		
14.	Rate B (120°C/h), Loading 2 (50 N)		
15.	Approximate maximum		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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