

LEXAN™ HPS6 resin

Polycarbonate

SABIC Innovative Plastics

Message:

Med/low flow polycarbonate. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO10993 or USP Class VI). EtO, steam e-beam and gamma sterilizable. Contains mold release.

General Information			
Additive	demoulding		
Features	Electron beam disinfection		
	Radiation disinfection		
	Ethylene oxide disinfection		
	Medium liquidity		
	Biocompatibility		
	Disinfect with steam		
Uses	Drug		
	Medical/nursing supplies		
Agency Ratings	ISO 10993		
	USP Class VI		
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)			ASTM D1238
300°C/1.2 kg	7.0	g/10 min	ASTM D1238
300°C/5.0 kg	110	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	6.50	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal method
Flow ¹	0.50 - 0.70	%	Internal method
Flow: 3.20mm	0.50 - 0.70	%	Internal method
Transverse flow: 3.20mm	0.50 - 0.70	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.35	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	2310	MPa	ASTM D638
--	2300	MPa	ISO 527-2/1

Tensile Strength			
Yield ³	62.1	MPa	ASTM D638
Yield	60.0	MPa	ISO 527-2/50
Fracture ⁴	68.9	MPa	ASTM D638
Fracture	75.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁵	6.5	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Fracture ⁶	140	%	ASTM D638
Fracture	140	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁷	2340	MPa	ASTM D790
-- ⁸	2250	MPa	ISO 178
Flexural Stress			
--	95.0	MPa	ISO 178
Yield, 50.0mm span ⁹	97.9	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹⁰			ISO 179/1eA
-30°C	15	kJ/m ²	ISO 179/1eA
23°C	75	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ¹¹			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact			
-30°C	140	J/m	ASTM D256
23°C	910	J/m	ASTM D256
-30°C ¹²	10	kJ/m ²	ISO 180/1A
23°C ¹³	70	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	3200	J/m	ASTM D4812
-30°C ¹⁴	No Break		ISO 180/1U
23°C ¹⁵	No Break		ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	65.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	135	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	124	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁶	124	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	154	°C	ASTM D1525 ¹⁷
--	143	°C	ISO 306/B50

--	140	°C	ISO 306/B120
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			
Flow: -40 to 40°C	6.2E-5	cm/cm/°C	ASTM E831
Flow: -40 to 40°C	6.0E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	5.7E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	6.0E-5	cm/cm/°C	ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 60	%	
Rear Temperature	288 - 310	°C	
Middle Temperature	299 - 321	°C	
Front Temperature	310 - 332	°C	
Nozzle Temperature	304 - 327	°C	
Processing (Melt) Temp	310 - 332	°C	
Mold Temperature	82.2 - 116	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	40 - 70	rpm	
Vent Depth	0.025 - 0.076	mm	
NOTE			
1.	Tensile Bar		
2.	5.0 mm/min		
3.	Type 1, 50mm/min		
4.	Type 1, 50mm/min		
5.	Type 1, 50mm/min		
6.	Type 1, 50mm/min		
7.	1.3 mm/min		
8.	2.0 mm/min		
9.	1.3 mm/min		
10.	80*10*3 sp=62mm		
11.	80*10*3 sp=62mm		
12.	80*10*3		
13.	80*10*3		
14.	80*10*3		
15.	80*10*3		
16.	80*10*4 mm		
17.	标准 B (120°C/h), 载荷2 (50N)		

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any

infringement occurs, please contact us immediately.

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

