

LEXAN™ HP2EU resin

Polycarbonate
SABIC Innovative Plastics Europe

Message:
Med/high flow polycarbonate. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO10993 or USP Class VI). EtO and steam sterilizable. Contains mold release.

General Information			
UL YellowCard	E45329-100106608		
Additive	Mold Release		
Features	Biocompatible		
	Ethylene Oxide Sterilizable		
	Good Mold Release		
	High Flow		
	Steam Sterilizable		
Uses	Medical/Healthcare Applications		
	Pharmaceuticals		
Agency Ratings	ISO 10993		
	USP Class VI		
RoHS Compliance	RoHS Compliant		
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)	22	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	21.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow			Internal Method
-- ¹	0.50 to 0.70	%	
3.20 mm	0.50 to 0.70	%	
Water Absorption			ISO 62
Saturation, 23°C	0.35	%	
Equilibrium, 23°C, 50% RH	0.15	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	630	MPa	ASTM D638
--	2350	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	630	MPa	ASTM D638

Yield	63.0	MPa	ISO 527-2/50
Break ⁴	700	MPa	ASTM D638
Break	65.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁵	7.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁶	130	%	ASTM D638
Break	100	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁷	2350	MPa	ASTM D790
-- ⁸	2300	MPa	ISO 178
Flexural Stress			
--	90.0	MPa	ISO 178
Yield, 50.0 mm Span ⁹	980	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
-30°C ¹⁰	10	kJ/m ²	ISO 179/1eA
23°C ¹¹	65	kJ/m ²	ISO 179/1eA
23°C	35	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength ¹²			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	30	J/m	ASTM D256
23°C	70	J/m	ASTM D256
-30°C ¹³	10	kJ/m ²	ISO 180/1A
23°C ¹⁴	60	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹⁵			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact (23°C, Total Energy)	633	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed, 100 mm Span ¹⁶	133	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 3.20 mm	129	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹⁷	122	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	139	°C	ASTM D1525 ¹⁸
--	140	°C	ISO 306/B50
--	141	°C	ISO 306/B120
CLTE			

Flow : -40 to 40°C	6.8E-5	cm/cm/°C	ASTM E831
Flow : 23 to 80°C	7.0E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	6.8E-5	cm/cm/°C	ASTM E831
Transverse : -40 to 40°C	7.0E-5	cm/cm/°C	ISO 11359-2
Optical	Nominal Value	Unit	Test Method
Transmittance (2540 μm)	88.0	%	ASTM D1003
Haze (2540 μm)	< 0.80	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 to 80.0	°C	
Rear Temperature	260 to 280	°C	
Middle Temperature	270 to 290	°C	
Front Temperature	280 to 300	°C	
Nozzle Temperature	270 to 290	°C	
Processing (Melt) Temp	280 to 300	°C	
Mold Temperature	80.0 to 100	°C	
NOTE			
1.	Tensile Bar		
2.	5.0 mm/min		
3.	Type I, 50 mm/min		
4.	Type I, 50 mm/min		
5.	Type I, 50 mm/min		
6.	Type I, 50 mm/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 sp=62mm		
13.	80*10*3		
14.	80*10*3		
15.	80*10*3		
16.	120*10*4 mm		
17.	120*10*4 mm		
18.	Rate B (120°C/h), Loading 2 (50 N)		

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