

XENOY™ X4820 resin

Polycarbonate + PBT

SABIC Innovative Plastics

Message:

XENOY X4820 is a high modulus PC/PBT Blend. This resin provides high chemical resistance, excellent impact, very low creep, low CTE, excellent fatigue and dimensional stability.

General Information			
UL YellowCard	E121562-100130014	E121562-624505	
Features	Fatigue Resistant		
	Good Chemical Resistance		
	Good Creep Resistance		
	Good Dimensional Stability		
	High Impact Resistance		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.25	g/cm ³	ASTM D792
--	1.26	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/5.0 kg)	10	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (265°C/5.0 kg)	12.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.95 to 1.1	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.42	%	
Equilibrium, 23°C, 50% RH	0.14	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	3200	MPa	ASTM D638
--	3000	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	57.0	MPa	ASTM D638
Yield	58.0	MPa	ISO 527-2/50
Break ³	58.0	MPa	ASTM D638
Break	52.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	4.2	%	ASTM D638
Yield	4.2	%	ISO 527-2/50
Break ⁵	140	%	ASTM D638
Break	100	%	ISO 527-2/50

Flexural Modulus			
50.0 mm Span ⁶	2900	MPa	ASTM D790
-- ⁷	2850	MPa	ISO 178
Flexural Stress			
--	87.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	91.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	60	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	150	J/m	ASTM D256
23°C	700	J/m	ASTM D256
-30°C ¹⁰	15	kJ/m ²	ISO 180/1A
23°C ¹¹	55	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	60.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	98.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹²	94.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	130	°C	ASTM D1525 ¹³
--	132	°C	ISO 306/B50
--	134	°C	ISO 306/B120
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	7.5E-5	cm/cm/°C	
Transverse : -40 to 40°C	1.1E-4	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	110	°C	
Drying Time	4.0 to 6.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	50 to 80	%	
Rear Temperature	238 to 260	°C	
Middle Temperature	243 to 266	°C	
Front Temperature	249 to 271	°C	
Nozzle Temperature	249 to 266	°C	
Processing (Melt) Temp	254 to 277	°C	
Mold Temperature	37.8 to 87.8	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	40 to 80	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 mm
13.	Rate B (120°C/h), Loading 2 (50 N)

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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

