

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			
Features	Good dimensional stability		
	Impact resistance, high		
	Good creep resistance		
	Good chemical resistance		
	Fatigue resistance		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.25	g/cm³	ASTM D792
--	1.26	g/cm³	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	cm³/10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.95 - 1.1	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.42	%	ISO 62
Equilibrium, 23°C, 50% RH	0.14	%	ISO 62
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
Fracture ³	58.0	MPa	ASTM D638
Fracture	52.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	4.2	%	ASTM D638
Yield	4.2	%	ISO 527-2/50
Fracture ⁵	140	%	ASTM D638
Fracture	100	%	ISO 527-2/50

Flexural Modulus			
50.0mm span ⁶	2900	MPa	ASTM D790
-- ⁷	2850	MPa	ISO 178
Flexural Stress			
--	87.0	MPa	ISO 178
Yield, 50.0mm 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, 3.20mm	98.0	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm 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
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	7.5E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	1.1E-4	cm/cm/°C	ASTM E831, ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	110	°C	
Drying Time	4.0 - 6.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	50 - 80	%	
Rear Temperature	238 - 260	°C	
Middle Temperature	243 - 266	°C	
Front Temperature	249 - 271	°C	
Nozzle Temperature	249 - 266	°C	
Processing (Melt) Temp	254 - 277	°C	
Mold Temperature	37.8 - 87.8	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	40 - 80	rpm	
Vent Depth	0.013 - 0.020	mm	
NOTE			

1.	50 mm/min
2.	Type 1, 50mm/min
3.	Type 1, 50mm/min
4.	Type 1, 50mm/min
5.	Type 1, 50mm/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.	标准 B (120°C/h), 载荷2 (50N)

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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

