

XENOY™ RESIN X4820

REGION AMERICAS

DESCRIPTION

XENOY X4820 is a 7.5% mineral filled PC/PBT blend with low CTE, high modulus, high ductile PC/PBT blend. XENOY X4820 provides high chemical resistance, excellent impact, very low creep, excellent fatigue and dimensional stability. XENOY X4820 could be positioned for body panels, window rails, door panels, power tool housings, door handles, medical device enclosures, EV electric vehicle components.

TYPICAL PROPERTY VALUES

Revision 20200806

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	57	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	58	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	4.2	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	140	%	ASTM D638
Tensile Modulus, 50 mm/min	3200	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	91	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2900	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	58	MPa	ISO 527
Tensile Stress, break, 50 mm/min	52	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.2	%	ISO 527
Tensile Strain, break, 50 mm/min	100	%	ISO 527
Tensile Modulus, 1 mm/min	3000	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	87	MPa	ISO 178
Flexural Modulus, 2 mm/min	2850	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	700	J/m	ASTM D256
Izod Impact, notched, -30°C	150	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	60	J	ASTM D3763
Izod Impact, notched 80°10°4 +23°C	55	kJ/m²	ISO 180/1A
Izod Impact, notched 80°10°4 -30°C	15	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm	60	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	130	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	98	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.1E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.1E-04	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	132	°C	ISO 306
Vicat Softening Temp, Rate B/120	134	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80°10°4 sp=64mm	94	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.25	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.95 – 1.1	%	SABIC method

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CHEMISTRY THAT MATTERS™



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Flow Rate, 250°C/5.0 kgf	10	g/10 min	ASTM D1238
Density	1.26	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.42	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.14	%	ISO 62
Melt Volume Rate, MVR at 265°C/5.0 kg	12	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-100130014	-	-
UL Yellow Card Link 2	E121562-624505	-	-
INJECTION MOLDING			
Drying Temperature	110	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	255 – 275	°C	
Nozzle Temperature	250 – 265	°C	
Front - Zone 3 Temperature	250 – 270	°C	
Middle - Zone 2 Temperature	245 – 265	°C	
Rear - Zone 1 Temperature	240 – 260	°C	
Mold Temperature	40 – 90	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 80	rpm	
Shot to Cylinder Size	50 – 80	%	
Vent Depth	0.013 – 0.02	mm	

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