



Xenoy* Resin X4820

Americas: COMMERCIAL

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.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	57	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	58	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4.2	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	140	%	ASTM D 638
Tensile Modulus, 50 mm/min	3200	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	91	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2900	MPa	ASTM D 790
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 D 256
Izod Impact, notched, -30°C	150	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	60	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	55	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	15	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	60	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	130	°C	ASTM D 1525

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity.
All properties, except the melt volume rate are measured on injection moulded samples.
All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.
3) This rating is not intended to reflect hazards presented this or any other material under actual fire conditions.
4) Own measurement according to UL.





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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	98	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.1E-04	1/°C	ASTM E 831
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 D 792
Mold Shrinkage, flow, 3.2 mm	0.95 - 1.1	%	SABIC Method
Melt Flow Rate, 250°C/5.0 kgf	10	g/10 min	ASTM D 1238
Density	1.26	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.42	%	ISO 62
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

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
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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Source, GMD, Last Update:07/09/2007

