

Xenoy* Resin 5720U

Americas: COMMERCIAL

Unfilled PBT+PC alloy. Outstanding low temperature impact/chemical resistance. UV stabilized version of XENYOY

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	470	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	480	kgf/cm ²	ASTM D 638
Tensile Stress, yld, Type I, 5 mm/min	440	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	500	kgf/cm ²	ASTM D 638
Tensile Stress, yld, Type I, 10 mm/min	450	kgf/cm ²	GEPJ Method
Tensile Stress, brk, Type I, 10 mm/min	470	kgf/cm ²	GEPJ Method
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	116.6	%	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	4.6	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	122.4	%	ASTM D 638
Tensile Strain, yld, Type I, 10 mm/min	4.6	%	GEPJ Method
Tensile Strain, brk, Type I, 10 mm/min	109.5	%	GEPJ Method
Tensile Modulus, 50 mm/min	18500	kgf/cm ²	ASTM D 638
Tensile Modulus, 5 mm/min	18600	kgf/cm ²	ASTM D 638
Tensile Modulus, 10 mm/min	18700	kgf/cm ²	GEPJ Method
Flexural Stress, yld, 1.3 mm/min, 50 mm span	710	kgf/cm ²	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	700	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	16900	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 5 mm/min	44	MPa	ISO 527
Tensile Stress, break, 5 mm/min	43	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	47	MPa	ISO 527

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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 by this or any other material under actual fire conditions.
4) Own measurement according to UL.

Source, GMD, Last Update: 07/31/2007

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, break, 50 mm/min	43	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4.1	%	ISO 527
Tensile Strain, break, 5 mm/min	106.8	%	ISO 527
Tensile Strain, yield, 50 mm/min	4.6	%	ISO 527
Tensile Strain, break, 50 mm/min	115.3	%	ISO 527
Tensile Modulus, 1 mm/min	1790	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	71	MPa	ISO 178
Flexural Modulus, 2 mm/min	1860	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	73	cm-kgf/cm	ASTM D 256
Izod Impact, notched, 0°C	70	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -10°C	67	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -20°C	70	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	65	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -40°C	60	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	456	cm-kgf	ASTM D 3763
Instrumented Impact, Energy @ peak, -20°C	420	cm-kgf	ASTM D 3763
Instrumented Impact Energy @ peak, -30	504	cm-kgf	ASTM D 3763
Instrumented Impact Energy @ peak, -40°C	504	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, 23°C	550	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -20°C	542	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -30°C	631	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -40°C	603	cm-kgf	ASTM D 3673
Izod Impact, notched 80*10*4 +23°C	55	kJ/m ²	ISO 180/1A

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
IMPACT			
Izod Impact, notched 80*10*4 0°C	55	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -10°C	52	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -20°C	50	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	48	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -40°C	46	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	55	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	47	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	119	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	108	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	83	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	117	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	95	°C	ASTM D 648
CTE, -40°C to 95°C, flow	9.75E-05	1/°C	ASTM E 831
CTE, -40°C to 95°C, xflow	1.E-04	1/°C	ASTM E 831
CTE, -30°C to 80°C, flow	9.75E-05	1/°C	ISO 11359-2
CTE, -30°C to 80°C, xflow	1.E-04	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	119	°C	ISO 306
Vicat Softening Temp, Rate B/120	122	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	109	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	87	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.17	-	ASTM D 792
Specific Volume	0.85	cm ³ /g	ASTM D 792
Density	1.17	g/cm ³	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.6 - 0.9	%	GE Method
Melt Flow Rate, 250°C/2.16 kgf	3.8	g/10 min	ASTM D 1238
Melt Flow Rate, 250°C/5.0 kgf	11.4	g/10 min	ASTM D 1238

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
PHYSICAL			
Melt Flow Rate, 265°C/2.16kg	6	g/10 min	ASTM D 1238
Melt Flow Rate, 266°C/5.0 kgf	19.7	g/10 min	ASTM D 1238
Density	1.17	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.28	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Melt Flow Rate, 250°C/2.16 kg	3	g/10 min	ISO 1133
Melt Flow Rate, 250°C/5.0 kg	11	g/10 min	ISO 1133
Melt Volume Rate, MVR at 250°C/2.16 kg	3	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 250°C/5.0 kg	10	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 265°C/2.16 kg	6	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 265°C/5.0 kg	18	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	260 - 275	°C
Nozzle Temperature	255 - 270	°C
Front - Zone 3 Temperature	255 - 275	°C
Middle - Zone 2 Temperature	250 - 270	°C
Rear - Zone 1 Temperature	245 - 265	°C
Mold Temperature	65 - 90	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	50 - 80	rpm
Shot to Cylinder Size	50 - 80	%
Vent Depth	0.013 - 0.02	mm

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