XENOY™ RESIN 5720U

REGION ASIA

DESCRIPTION

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

TYPICAL PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	47	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	48	MPa	ASTM D 638
Tensile Stress, yld, Type I, 5 mm/min	44	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	50	MPa	ASTM D 638
Tensile Stress, yld, Type I, 10 mm/min	45	MPa	SABIC - Japan Method
Tensile Stress, brk, Type I, 10 mm/min	47	MPa	SABIC - Japan 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	%	SABIC - Japan Method
Tensile Strain, brk, Type I, 10 mm/min	109.5	%	SABIC - Japan Method
Tensile Modulus, 50 mm/min	1810	MPa	ASTM D 638
Tensile Modulus, 5 mm/min	1830	MPa	ASTM D 638
Tensile Modulus, 10 mm/min	1830	MPa	SABIC - Japan Method
Flexural Stress, yld, 1.3 mm/min, 50 mm span	70	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	69	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	1660	MPa	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
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	722	J/m	ASTM D 256
Izod Impact, notched, 0°C	691	J/m	ASTM D 256
Izod Impact, notched, -10°C	663	J/m	ASTM D 256
Izod Impact, notched, -20°C	695	J/m	ASTM D 256
Izod Impact, notched, -30°C	647	J/m	ASTM D 256

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Izod Impact, notched, -40°C	598	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	44	J	ASTM D 3763
Instrumented Impact, Energy @ peak, -20°C	41	J	ASTM D 3763
Instrumented Impact Energy @ peak, -30	49	J	ASTM D 3763
Instrumented Impact Energy @ peak, -40°C	49	J	ASTM D 3763
Instrumented Impact Total Energy, 23°C	54	J	ASTM D 3763
Instrumented Impact Total Energy, -20°C	53	J	ASTM D 3763
Instrumented Impact Total Energy, -30°C	61	J	ASTM D 3763
Instrumented Impact Total Energy, -40°C	59	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	55	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 0°C	55	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -10°C	52	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -20°C	50	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	48	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -40°C	46	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	55	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	47	kJ/m²	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	cm³/g	ASTM D 792
Density	1.17	g/cm³	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	1 – 1.2	%	SABIC 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
Melt Flow Rate, 265°C/2.16kgf	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/cm³	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	cm³/10 min	ISO 1133

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Volume Rate, MVR at 250°C/5.0 kg	10	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 265°C/2.16 kg	6	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 265°C/5.0 kg	18	cm³/10 min	ISO 1133
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	

DISCLAIMER