SABIC Innovative Plastics™

Xenoy* Resin 5720U

Americas: COMMERCIAL

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

Property

TYPICAL PROPERTIES (1)			
MECHANICAL	Value	Unit	Standard
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	Value	Unit	Standard
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
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 3673
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	Value	Unit	Standard
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	Value	Unit	Standard
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	0.6 - 0.9	%	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/2.16kg	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/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
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

Source GMD, last updated:07/31/2007

Processing

Parameter Injection Molding	Value	Unit
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

Source GMD, last updated:07/31/2007

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR (LOCAL SALES OFFICE) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.
(2) Only typical data for selection purposes. 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) Internal measurements according to UL standards.