XENOY™ RESIN 5220U

REGION ASIA

DESCRIPTION

Unreinforced PBT+PC Alloy. Impact Modified. Improved retention of mechanical properties under UV exposure. Excellent low temperature impact and chemical resistance.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	53	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	51	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	120	%	ASTM D 638
Tensile Modulus, 50 mm/min	2250	MPa	ASTM D 638
Tensile Modulus, 5 mm/min	2250	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	84	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2030	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	50	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	120	%	ISO 527
Tensile Modulus, 1 mm/min	2050	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	80	MPa	ISO 178
Flexural Modulus, 2 mm/min	2000	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	710	J/m	ASTM D 256
Izod Impact, notched, -30°C	530	J/m	ASTM D 256
Izod Impact, notched, -40°C	299	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	60	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	50	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	30	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	55	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	122	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	84	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	107	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	99	°C	ASTM D 648
CTE, -40°C to 40°C, flow	9.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	9.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	9.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	9.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	120	°C	ISO 306
Vicat Softening Temp, Rate B/120	125	°C	ISO 306

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	75	°C	ISO 75/Af
Relative Temp Index, Elec	75	°C	UL 746B
Relative Temp Index, Mech w/impact	75	°C	UL 746B
Relative Temp Index, Mech w/o impact	75	°C	UL 746B
PHYSICAL			
Specific Gravity	1.21	-	ASTM D 792
Specific Volume	0.83	cm³/g	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.8 – 1	%	SABIC method
Mold Shrinkage on Tensile Bar, xflow	0.8 – 1.1	%	SABIC method
Melt Volume Rate, MVR at 250°C/5 kg	15	cm³/10 min	ASTM D 1238
Density	1.22	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.5	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Flow Rate, 250°C/5.0 kg	16	g/10 min	ISO 1133
Melt Volume Rate, MVR at 250°C/5.0 kg	15	cm³/10 min	ISO 1133
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	3	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	0	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	1	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E207780-103219926	-	-
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
UV-light, water exposure/immersion	F2	-	UL 746C
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	
SHEET EXTRUSION			
Drying Temperature	110 – 115	°C	
Drying Time	4 – 6	hrs	
Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0 – 0.02	%	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Temperature	245 – 275	°C	
Barrel - Zone 1 Temperature	170 – 205	°C	
Barrel - Zone 2 Temperature	195 – 255	°C	
Barrel - Zone 3 Temperature	205 – 280	°C	
Barrel - Zone 4 Temperature	205 – 280	°C	
Adapter Temperature	225 – 280	°C	
Die Temperature	230 – 280	°C	
Roll Stack Temp - Top	70 – 80	°C	
Roll Stack Temp - Middle	75 – 80	°C	
Roll Stack Temp - Bottom	80 – 95	°C	

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