XENOY™ RESIN 1731

REGION AMERICAS

DESCRIPTION

Impact/chemical resistant. UV-Stabilized. Excellent physical property retention in automotive exteriors and OVAD.

TYPICAL PROPERTY VALUES

Revision 20190702

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	61	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	56	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D638
Tensile Modulus, 5 mm/min	2370	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	93	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2340	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	60	MPa	ISO 527
Tensile Stress, break, 50 mm/min	58	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	90	%	ISO 527
Tensile Modulus, 1 mm/min	2330	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	93	MPa	ISO 178
Flexural Modulus, 2 mm/min	2210	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	667	J/m	ASTM D256
Izod Impact, notched, -30°C	106	J/m	ASTM D256
Izod Impact, notched, 23°C, 6.4mm	160	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	61	J	ASTM D3763
Instrumented Dart Impact Total Energy, -30°C	61	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	59	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	16	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	65	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	125	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	93	°C	ASTM D648
HDT, 0.45 MPa, 6.4 mm, unannealed	115	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	107	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.75E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.57E-05	1/°C	ASTM E831
CTE, -40°C to 95°C, flow	8.28E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	7.75E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.57E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	127	°C	ISO 306
Vicat Softening Temp, Rate B/120	130	°C	ISO 306

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	99	°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	1.22	-	ASTM D792
Specific Volume	0.82	cm³/g	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.6 – 0.8	%	SABIC method
Melt Flow Rate, 250°C/5.0 kgf	9.6	g/10 min	ASTM D1238
Density	1.22	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.28	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Melt Flow Rate, 250°C/5.0 kg	8	g/10 min	ISO 1133
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-220835	-	-
UL Recognized, 94HB Flame Class Rating	1.49	mm	UL 94
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	