



XENYO™ Resin 1731

Americas: COMMERCIAL

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

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	620	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	570	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D 638
Tensile Modulus, 5 mm/min	24100	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	940	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	23900	kgf/cm ²	ASTM D 790
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	68	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	10	cm-kgf/cm	ASTM D 256
Izod Impact, notched, 23°C, 6.4mm	16	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	623	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -30°C	626	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	59	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	16	kJ/m ²	ISO 180/1A



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IMPACT			
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	65	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	125	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	93	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	115	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	107	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.75E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.57E-05	1/°C	ASTM E 831
CTE, -40°C to 95°C, flow	8.28E-05	1/°C	ASTM E 831
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
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 D 792
Specific Volume	0.82	cm ³ /g	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.6 - 0.8	%	SABIC Method
Melt Flow Rate, 250°C/5.0 kgf	9.6	g/10 min	ASTM D 1238
Density	1.22	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.28	%	ISO 62



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PHYSICAL			
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 D 495
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 Recognized, 94HB Flame Class Rating (3)	1.49	mm	UL 94



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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