

XENOY[™] RESIN 6620

REGION AMERICAS

DESCRIPTION

PBT+PC, Unreinforced, impact modified thermoplastic alloy. Outstanding impact at low temperature

TYPICAL PROPERTY VALUES

Revision 20170706

MECHANICALTensile Stress, yid, Type I, 50 mm/min43MPaASTM D 638Tensile Strain, brk, Type I, 50 mm/min175%ASTM D 638Flexural Stress, yid, 1.3 mm/min, 50 mm span64MPaASTM D 790Hardness, Rockwell R108-ASTM D 785IMPACMPaASTM D 785Ecol Impact, unotched, 23°C602J/mASTM D 4812Ecol Impact, notched, 23°C697J/mASTM D 256Ide adment, notched, 23°C667J/mASTM D 256Gardner, 23°C54JASTM D 2029Modified Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C54JASTM D 648HDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed98°CASTM D 648CTE, 40°C to 40°C, flow9.8E-051/°CASTM D 648CTE, 40°C to 40°C, flow9.8E-051/°CASTM E 831CTE, 40°C to 40°C, flow9.8E-051/°CASTM E 831Relative Temp Index, Kech w/impact75°CUL 7468Relative Temp Index, Kech w/impact75°CUL 7468PHSICL-ASTM D 792Specific Gravity1.2-ASTM D 792Specific Volume0.83cm''yaASTM D 792Modi Shrinkage, flow, 3.2 mn (5)1.6 – 1.8%SABIC method	PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Tensile Strain, brk, Type I, 50 mm/min175%ASTM D 638Flexural Stress, yld, 1.3 mm/min, 50 mm span64MPaASTM D 790Hardness, Rockwell R108-ASTM D 790Hardness, Rockwell R108-ASTM D 785IMPACTImpact, unnotched, 23°C1602J/mASTM D 4812Izod Impact, notched, 23°C897J/mASTM D 256Idodlingat, notched, -30°C667J/mASTM D 256Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C54JASTM D 3029THERMAL'CASTM D 648HDT, 0.45 MPA, 3.2 mm, unannealed93°CASTM D 648HDT, 0.45 MPA, 6.4 mm, unannealed98°CASTM D 648HDT, 1.82 MPA, 6.4 mm, unannealed98°CASTM D 648CTE, 40°C to 40°C, flow9.4E-051/°CASTM D 648CTE, 40°C to 138°C, flow1.03E-041/°CASTM D 648Relative Temp Index, Mech w/impact75°CU 1746BRelative Temp Index, Mech w/impact75°CU 1746BPHYSICAL-°CASTM D 792Specific Gravity1.2-ASTM D 792Specific Volume0.08%ASTM D 792	MECHANICAL			
Flexural Stress, yid, 1.3 mm/min, 50 mm span64MPaASTM D 790Flexural Modulus, 1.3 mm/min, 50 mm span1720MPaASTM D 790Hardness, Rockwell R108-ASTM D 785IMPACTImpact, unnotched, 23°C6002J/mASTM D 4812Izod Impact, notched, 23°C607J/mASTM D 256Izod Impact, notched, -30°C667J/mASTM D 256Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C54JASTM D 3029THERMALImpactJASTM D 484HDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 0.45 MPa, 6.4 mm, unannealed93°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed98°CASTM D 648CTE, 40°C to 40°C, flow9.4E-051/°CASTM E 831CTE, 40°C to 40°C, flow9.8E-051/°CASTM E 831Relative Temp Index, Mech w/impact75°CUI 746BRelative Temp Index, Mech w/impact75°CUI 746BPHYSICALImpact°CASTM D 792Specific Gravity1.2-ASTM D 792Specific Volume0.08%ASTM D 792Out0.08%ASTM D 792	Tensile Stress, yld, Type I, 50 mm/min	43	MPa	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span1720MPaASTM D 790Hardness, Rockwell R108-ASTM D 785IMPACTImpact, unnotched, 23°C1602J/mASTM D 4812Izod Impact, notched, 23°C607J/mASTM D 256Izod Impact, notched, 23°C667J/mASTM D 256Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C64JASTM D 3029Modified Gardner, 23°C64JASTM D 3029Modified Gardner, 23°C64JASTM D 3029Modified Gardner, 23°C93°CASTM D 643HDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 643HDT, 0.45 MPa, 6.4 mm, unannealed98°CASTM D 643HDT, 1.82 MPa, 6.4 mm, unannealed98E-051/°CASTM D 643CTE, 40°C to 40°C, flow98E-051/°CASTM E 831GTE, 60°C to 138°C, flow103E-041/°CASTM E 831Relative Temp Index, Mech w/impact75°CUL 746BRelative Temp Index, Mech w/impact75°CUL 746BPHYSICALImage Same Same Same Same Same Same Same Sam	Tensile Strain, brk, Type I, 50 mm/min	175	%	ASTM D 638
Hardness, Rockwell R108-ASTM D 785IMPACTISTM D 785Izod Impact, unotched, 23°C1602J/mASTM D 4812Izod Impact, notched, 23°C897J/mASTM D 256Izod Impact, notched, 23°C667J/mASTM D 3029Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C54JASTM D 648HDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 0.45 MPa, 6.4 mm, unannealed93°CASTM D 648HDT, 0.45 MPa, 6.4 mm, unannealed98°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed98°CASTM D 648GTE, 40°C to 40°C, flow9.4E-051/°CASTM D 648ICTE, 40°C to 40°C, flow9.8E-051/°CASTM E 831GTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Elec75°CUU.7468Relative Temp Index, Mech w/impact75°CUU.7468PHYSICALIIIIIISpecific Gravity1.2-ASTM D 792IMater Absorption, 24 hours0.08%0%ITM D 792	Flexural Stress, yld, 1.3 mm/min, 50 mm span	64	MPa	ASTM D 790
IMPACTIzod Impact, unnotched, 23°C1602J/mASTM D 4812Izod Impact, notched, 23°C897J/mASTM D 256Izod Impact, notched, 30°C667J/mASTM D 256Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C54JASTM D 3029THERMALUUHDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 1.82 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 0.45 MPa, 6.4 mm, unannealed98°CASTM D 648CTE, 40°C to 40°C, flow9.4E-051/°CASTM D 648CTE, 40°C to 40°C, flow9.8E-051/°CASTM E 831CTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Elec75°CU 1746BRelative Temp Index, Mech w/impact75°CU 1746BPHYSICALUYAGESTM D 792PhysicAl1.2-ASTM D 792Water Absorption, 24 hours0.08%ASTM D 570	Flexural Modulus, 1.3 mm/min, 50 mm span	1720	MPa	ASTM D 790
ized largect, unnotched, 23°C1602J/mASTM D 4812ized largect, notched, 23°C897J/mASTM D 256ized largect, notched, -30°C667J/mASTM D 256Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C54JASTM D 3029THERMALIIIHDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 0.45 MPa, 6.4 mm, unannealed93°CASTM D 648HDT, 0.45 MPa, 6.4 mm, unannealed98°CASTM D 648HDT, 0.45 MPa, 6.4 mm, unannealed98°CASTM D 648CTE, -40°C to 40°C, flow9.4E-05°CASTM D 648CTE, 40°C to 40°C, flow9.8E-051°CASTM E 831CTE, 60°C to 138°C, flow9.8E-05°CUI 746BRelative Temp Index, Klech w/impact75°CUI 746BFelditve Temp Index, Mech w/impact75°CUI 746BPhySICALIS°CASTM D 792Fysichfic Gravity1.20.08°m*/gaASTM D 792Met Absorption, 24 hours0.08%SS	Hardness, Rockwell R	108	-	ASTM D 785
Izod Impact, notched, 23°C897J/mASTM D 256Izod Impact, notched, -30°C667J/mASTM D 256Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C54JASTM D 3029THERMALUUHDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed98°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed90°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed90°CASTM D 648CTE, 40°C to 40°C, flow9.4E-051/°CASTM D 648CTE, 40°C to 40°C, flow9.8E-051/°CASTM E 831CTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Elec75°CU 1/46BRelative Temp Index, Mech w/impact75°CU 1/46BPHYSCALUUStrin D 792Physical0.83cm²/gASTM D 792Water Absorption, 24 hours0.08%Strin D 792	IMPACT			
Izod Impact, notched, 30°C667J/mASTM D 256Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C54JASTM D 3029THERMALTTTHDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed63°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed98°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed90°CASTM D 648CTE, 40°C to 40°C, flow9.4E-051/°CASTM D 648CTE, 40°C to 40°C, xflow9.8E-051/°CASTM E 831CTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Mech w/impact75°CU 1/46BPHYSICALTS°CSTM D 502Physical1.2°CASTM D 792Specific Volume0.88cm ³ gASTM D 792Water Absorption, 24 hours0.08%ASTM D 792	Izod Impact, unnotched, 23°C	1602	J/m	ASTM D 4812
Gardner, 23°C54JASTM D 3029Modified Gardner, 23°C54JASTM D 3029THERMALJASTM D 648HDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 1.82 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed98°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed98°CASTM D 648CTE, 40°C to 40°C, flow9.4E-05°CASTM D 648CTE, 40°C to 40°C, flow9.8E-051/°CASTM E 831CTE, 60°C to 138°C, flow1.03E-04°CU. 746BRelative Temp Index, Elec75°CU. 746BRelative Temp Index, Mech w/impact75°CU. 746BPHYSICAL''CASTM D 792Specific Gravity1.2-''ASTM D 792Water Absorption, 24 hours0.08%ASTM D 570	Izod Impact, notched, 23°C	897	J/m	ASTM D 256
Modified Gardner, 23°C54JASTM D 3029THERMALHDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 1.82 MPa, 3.2mm, unannealed53°CASTM D 648HDT, 0.45 MPa, 6.4 mm, unannealed98°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed60°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed98.E°CASTM D 648CTE, 40°C to 40°C, flow9.4E-051/°CASTM E 831CTE, 40°C to 40°C, flow9.8E-051/°CASTM E 831CTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Elec75°CUL 746BRelative Temp Index, Mech w/impact75°CUL 746BPHYSICAL1.2°CASTM D 792Specific Gravity1.2-ASTM D 792Specific Volume0.08%ASTM D 570	Izod Impact, notched, -30°C	667	J/m	ASTM D 256
THERMALHDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 1.82 MPa, 3.2mm, unannealed53°CASTM D 648HDT, 0.45 MPa, 6.4 mm, unannealed98°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed60°CASTM D 648CTE, 40°C to 40°C, flow94E-051/°CASTM E 831CTE, 40°C to 40°C, xflow98E-051/°CASTM E 831CTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Elec75°CU. 746BRelative Temp Index, Mech w/impact75°CU. 746BPHYSICALVVStart E 83Specific Gravity1.2-ASTM D 792Water Absorption, 24 hours0.08%ASTM D 792	Gardner, 23°C	54	J	ASTM D 3029
HDT, 0.45 MPa, 3.2 mm, unannealed93°CASTM D 648HDT, 1.82 MPa, 3.2mm, unannealed53°CASTM D 648HDT, 0.45 MPa, 6.4 mm, unannealed98°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed60°CASTM D 648CTE, 40°C to 40°C, flow9.4E-051/°CASTM E 831CTE, 40°C to 40°C, xflow9.8E-051/°CASTM E 831CTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Elec75°CUL 746BRelative Temp Index, Mech w/impact75°CUL 746BPHYSICAL1.2-ASTM D 792Specific Gravity1.2-ASTM D 792Mater Absorption, 24 hours0.08%ASTM D 792	Modified Gardner, 23°C	54	J	ASTM D 3029
HDT, 1.82 MPa, 3.2mm, unannealed53°CASTM D 648HDT, 0.45 MPa, 6.4 mm, unannealed98°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed60°CASTM D 648CTE, 40°C to 40°C, flow9.4E-051/°CASTM E 831CTE, 40°C to 40°C, xflow9.8E-051/°CASTM E 831CTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Elec75°CUL 746BRelative Temp Index, Mech w/impact75°CUL 746BPHYSICALYYYSpecific Gravity1.2-ASTM D 792Mater Absorption, 24 hours0.08%ASTM D 792	THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed98°CASTM D 648HDT, 1.82 MPa, 6.4 mm, unannealed60°CASTM D 648CTE, -40°C to 40°C, flow9.4E-051/°CASTM E 831CTE, -40°C to 40°C, xflow9.8E-051/°CASTM E 831CTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Elec75°CUL 746BRelative Temp Index, Mech w/impact75°CUL 746BPHYSICAL-Specific Gravity1.2-Specific Volume0.83cm³/gASTM D 792Water Absorption, 24 hours0.08%ASTM D 570	HDT, 0.45 MPa, 3.2 mm, unannealed	93	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed60°CASTM D 648CTE, -40°C to 40°C, flow9.4E-051/°CASTM E 831CTE, -40°C to 40°C, xflow9.8E-051/°CASTM E 831CTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Elec75°CUL 746BRelative Temp Index, Mech w/impact75°CUL 746BPHYSICAL75°CUL 746BPHYSICAL1.2-ASTM D 792Specific Gravity1.2-ASTM D 792Specific Volume0.08%ASTM D 570	HDT, 1.82 MPa, 3.2mm, unannealed	53	°C	ASTM D 648
CTE, 40°C to 40°C, flow9.4E-051/°CASTM E 831CTE, 40°C to 40°C, xflow9.8E-051/°CASTM E 831CTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Elec75°CUL 746BRelative Temp Index, Mech w/impact75°CUL 746BPHYSICALYYYYSpecific Gravity1.2-ASTM D 792Specific Volume0.83cm³/gASTM D 792Water Absorption, 24 hours0.08%ASTM D 570	HDT, 0.45 MPa, 6.4 mm, unannealed	98	°C	ASTM D 648
CTE, -40°C to 40°C, xflow9.8E-051/°CASTM E 831CTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Elec75°CUL 746BRelative Temp Index, Mech w/impact75°CUL 746BPHYSICAL*********************************	HDT, 1.82 MPa, 6.4 mm, unannealed	60	°C	ASTM D 648
CTE, 60°C to 138°C, flow1.03E-041/°CASTM E 831Relative Temp Index, Elec75°CUL 746BRelative Temp Index, Mech w/impact75°CUL 746BPHYSICAL°CUL 746BSpecific Gravity1.2-ASTM D 792Specific Volume0.08cm³/gASTM D 792Water Absorption, 24 hours0.08%ASTM D 570	CTE, -40°C to 40°C, flow	9.4E-05	1/°C	ASTM E 831
Relative Temp Index, Elec75°CUL 746BRelative Temp Index, Mech w/impact75°CUL 746BRelative Temp Index, Mech w/o impact75°CUL 746BPHYSICAL </td <td>CTE, -40°C to 40°C, xflow</td> <td>9.8E-05</td> <td>1/°C</td> <td>ASTM E 831</td>	CTE, -40°C to 40°C, xflow	9.8E-05	1/°C	ASTM E 831
Relative Temp Index, Mech w/impact75°CUL 746BRelative Temp Index, Mech w/o impact75°CUL 746BPHYSICAL*********************************	CTE, 60°C to 138°C, flow	1.03E-04	1/°C	ASTM E 831
Relative Temp Index, Mech w/o impact75°CUL 746BPHYSICAL57°CASTM D792Specific Gravity1.2-ASTM D792Specific Volume0.83cm³/gASTM D792Water Absorption, 24 hours0.08%ASTM D570	Relative Temp Index, Elec	75	°C	UL 746B
PHYSICALI.2ASTM D 792Specific Gravity0.83cm³/gASTM D 792Water Absorption, 24 hours0.08%ASTM D 570	Relative Temp Index, Mech w/impact	75	°C	UL 746B
Specific Gravity 1.2 - ASTM D 792 Specific Volume 0.83 cm³/g ASTM D 792 Water Absorption, 24 hours 0.08 % ASTM D 570	Relative Temp Index, Mech w/o impact	75	°C	UL 746B
Specific Volume 0.83 cm³/g ASTM D 792 Water Absorption, 24 hours 0.08 % ASTM D 570	PHYSICAL			
Water Absorption, 24 hours 0.08 % ASTM D 570	Specific Gravity	1.2	-	ASTM D 792
	Specific Volume	0.83	cm³/g	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5) 1.6 – 1.8 % SABIC method	Water Absorption, 24 hours	0.08	%	ASTM D 570
	Mold Shrinkage, flow, 3.2 mm (5)	1.6 – 1.8	%	SABIC method

CHEMISTRY THAT MATTERS



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, xflow, 3.2 mm (5)	1.6 – 1.8	%	SABIC method
ELECTRICAL			
Volume Resistivity	5.5E+16	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	19	kV/mm	ASTM D 149
Dielectric Strength, in oil, 1.6 mm	27.9	kV/mm	ASTM D 149
Dielectric Strength, in oil, 3.2 mm	19	kV/mm	ASTM D 149
Relative Permittivity, 100 Hz	3.1	-	ASTM D 150
Relative Permittivity, 100 kHz	3	-	ASTM D 150
Relative Permittivity, 1 MHz	3	-	ASTM D 150
Dissipation Factor, 100 Hz	0.002	-	ASTM D 150
Dissipation Factor, 100 kHz	0.02	-	ASTM D 150
Dissipation Factor, 1 MHz	0.02	-	ASTM D 150
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}	1	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.47	mm	UL 94
INJECTION MOLDING			
Drying Temperature	105 – 115	°C	
Drying Time	2-4	hrs	
Drying Time (Cumulative)	6	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	240 - 260	°C	
Nozzle Temperature	240 - 260	°C	
Front - Zone 3 Temperature	240 - 260	°C	
Middle - Zone 2 Temperature	230 – 250	°C	
Rear - Zone 1 Temperature	225 – 245	°C	
Mold Temperature	50 - 80	°C	
Back Pressure	0.2 - 0.3	MPa	
Shot to Cylinder Size	50 - 80	%	
Vent Depth	0.013 - 0.02	mm	

DISCLAIMER

The information contained herein may include typical properties of our products or their typical performances when used in certain typical applications. Actual properties of our products, in particular when used in conjunction with any third party material(s) or for any non-typical applications, may differ from typical properties.

It is the customer's responsibility to inspect and test our product(s) in order to satisfy itself as to the suitability of the product(s) for its



and its customers particular purposes. The customer is responsible for the appropriate, safe and legal use, processing and handling of all product(s) purchased from us.

Nothing herein is intended to be nor shall it constitute a warranty whatsoever, in particular, warranty of merchantability or fitness for a particular purpose.

SABIC as referred to herein means any legal entity belonging to the group of companies headed by Saudi Arabia Basic Industries Corporation.