

XENYO* 6380U Resin

Polybutylene Terephthalate + PET

SABIC Innovative Plastics



Prospector

Product Description

XENYO 6380U is a 30% glass reinforced, UV stabilized grade, that combines high stiffness with improved ductility. The combination of mechanical properties at high and low temperatures and chemical resistance makes XENYO 6380U a suitable material for a wide range of demanding applications where safety is a primary consideration. The material's gloss characteristics are an added advantage for appearance parts in the appliance industry.

General

Material Status	• Commercial: Active
Availability	• North America
Filler / Reinforcement	• Glass Fiber Reinforcement, 30% Filler by Weight
Additive	• UV Stabilizer
Features	• Ductile • High Stiffness • Good Chemical Resistance • Pleasing Surface Appearance
Uses	• Appliances
Forms	• Pellets
Processing Method	• Injection Molding

Physical

	Nominal Value	Unit	Test Method
Specific Gravity	1.51	g/cm ³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (266°C/1.2 kg)	13	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (265°C/1.2 kg)	9.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow			ASTM D955
--	0.30 to 0.70	%	
3.20 mm	0.30 to 0.70	%	
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.15	%	

Mechanical

	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	8200	MPa	ASTM D638
--	8400	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	100	MPa	ASTM D638
Yield	105	MPa	ISO 527-2/5
Break ³	100	MPa	ASTM D638
Break	105	MPa	ISO 527-2/5
Tensile Elongation			
Yield ³	2.0	%	ASTM D638
Yield	2.0	%	ISO 527-2/5
Break ³	2.0	%	ASTM D638
Break	2.0	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁴	7000	MPa	ASTM D790
-- ⁵	7200	MPa	ISO 178
Flexural Strength			
-- ^{5, 6}	145	MPa	ISO 178
Yield, 50.0 mm Span ⁴	140	MPa	ASTM D790



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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	7.0	kJ/m ²	
23°C	10	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	35	kJ/m ²	
23°C	40	kJ/m ²	
Notched Izod Impact			
-30°C	60.0	J/m	ASTM D256
23°C	80.0	J/m	ASTM D256
-30°C	6.00	kJ/m ²	ISO 180/1A
23°C	10.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
-30°C	600	J/m	ASTM D4812
23°C	650	J/m	ASTM D4812
-30°C	40.0	kJ/m ²	ISO 180/1U
23°C	40.0	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			ASTM D3763
23°C, Total Energy	7.00	J	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	110		ISO 2039-2
Ball Indentation Hardness (H 358/30)	115	MPa	ISO 2039-1
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed, 64.0 mm Span ⁷	215	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	165	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ⁷	180	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	180	°C	ASTM D1525 ⁸
--	215	°C	ISO 306/A50
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
Flow: -40 to 40°C	0.000025	cm/cm/°C	ASTM E831
Flow: 23 to 80°C	0.000023	cm/cm/°C	ISO 11359-2
Transverse: -40 to 40°C	0.00010	cm/cm/°C	ASTM E831
Transverse: 23 to 80°C	0.00013	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.19	W/m/K	ISO 8302



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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+14	ohm·cm	IEC 60093
Relative Permittivity			IEC 60250
50 Hz	4.20		
60 Hz	4.20		
1 MHz	4.00		
Dissipation Factor			IEC 60250
50 Hz	0.0020		
60 Hz	0.0020		
1 MHz	0.020		
Comparative Tracking Index	300	V	IEC 60112
Electric Strength			IEC 60243-1
1.60 mm, in Oil	20	kV/mm	
3.20 mm, in Oil	17	kV/mm	

Flammability	Nominal Value	Unit	Test Method
Flame Rating - UL			UL 94
1.50 mm	HB		
3.00 mm	HB		
Glow Wire Flammability Index (3.20 mm)	750	°C	IEC 60695-2-12

Injection	Nominal Value	Unit
Drying Temperature	110 to 120	°C
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	60.0 to 80.0	°C
Rear Temperature	240 to 270	°C
Middle Temperature	250 to 275	°C
Front Temperature	260 to 280	°C
Nozzle Temperature	260 to 275	°C
Processing (Melt) Temp	265 to 285	°C
Mold Temperature	60.0 to 110	°C

Notes

¹ Typical properties: these are not to be construed as specifications.

² 5.0 mm/min

³ Type I, 5.0 mm/min

⁴ 1.3 mm/min

⁵ 2.0 mm/min

⁶ Break

⁷ 80*10*4 mm

⁸ Rate B (120°C/h), Loading 2 (50 N)

