

VALOX™ 8032UX resin

Polybutylene Terephthalate + PET
SABIC Innovative Plastics Asia Pacific

Message:

VALOX 8032UX is a 30% glass fibre reinforced, UV stabilized PBT+PET blend with excellent surface finish. This grade is VALOX 8032U with improved weathering resistance. Applications: appliance housings, door handles, mirror brackets.

General Information			
Filler / Reinforcement	Glass Fiber,30% Filler by Weight		
Additive	UV Stabilizer		
Features	Good Surface Finish		
	Good Weather Resistance		
Uses	Appliances		
	Handles		
	Housings		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.60	g/cm ³	ASTM D792
--	1.54	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (265°C/2.16 kg)	21	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (265°C/2.16 kg)	15.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow ¹	0.40 to 0.80	%	ISO 62
Flow : 3.20 mm	0.40 to 0.80	%	
Across Flow ²	0.60 to 1.0	%	
Across Flow : 3.20 mm	0.60 to 1.0	%	
Water Absorption			ISO 62
Saturation, 23°C	0.16	%	
Equilibrium, 23°C, 50% RH	0.070	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	119		ISO 2039-2
Ball Indentation Hardness (H 358/30)	110	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ³	9950	MPa	ASTM D638
--	9500	MPa	ISO 527-2/1

Tensile Strength			
Yield ⁴	115	MPa	ASTM D638
Yield	145	MPa	ISO 527-2/5
Break ⁵	115	MPa	ASTM D638
Break	145	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁶	2.0	%	ASTM D638
Yield	2.4	%	ISO 527-2/5
Break ⁷	2.0	%	ASTM D638
Break	2.4	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁸	8450	MPa	ASTM D790
-- ⁹	8500	MPa	ISO 178
Flexural Stress			
--	210	MPa	ISO 178
Yield, 50.0 mm Span ¹⁰	165	MPa	ASTM D790
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	30.0	mg	Internal Method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹¹			ISO 179/1eA
-30°C	9.0	kJ/m ²	
23°C	9.0	kJ/m ²	
Charpy Unnotched Impact Strength ¹²			ISO 179/1eU
-30°C	40	kJ/m ²	
23°C	45	kJ/m ²	
Notched Izod Impact			
-30°C	48	J/m	ASTM D256
23°C	57	J/m	ASTM D256
-30°C ¹³	8.0	kJ/m ²	ISO 180/1A
0°C ¹⁴	8.0	kJ/m ²	ISO 180/1A
23°C ¹⁵	9.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
-30°C	470	J/m	ASTM D4812
23°C	480	J/m	ASTM D4812
-30°C ¹⁶	40	kJ/m ²	ISO 180/1U
23°C ¹⁷	45	kJ/m ²	ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	8.00	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	208	°C	ASTM D648
0.45 MPa, Unannealed, 100 mm Span ¹⁸	217	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 3.20 mm	190	°C	ASTM D648

1.8 MPa, Unannealed, 100 mm Span ¹⁹	195	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	221	°C	ASTM D1525 ²⁰
--	203	°C	ASTM D1525 ²¹
--	220	°C	ISO 306/A50
--	202	°C	ISO 306/B50
--	204	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
Flow : -40 to 40°C	2.5E-5	cm/cm/°C	ASTM E831
Flow : 23 to 60°C	2.2E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	7.5E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 60°C	8.1E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
0.800 mm, in Oil	27	kV/mm	
1.60 mm, in Oil	23	kV/mm	
3.20 mm, in Oil	15	kV/mm	
Relative Permittivity			IEC 60250
50 Hz	3.30		
60 Hz	3.30		
100 Hz	3.60		
1 MHz	3.20		
Dissipation Factor			IEC 60250
50 Hz	8.0E-4		
60 Hz	8.0E-4		
1 MHz	0.013		
Comparative Tracking Index (CTI)	PLC 2		UL 746
Comparative Tracking Index	300	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.60 mm, Testing by SABIC)	HB		UL 94
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	40.0 to 60.0	°C	
Rear Temperature	240 to 260	°C	
Middle Temperature	255 to 280	°C	
Front Temperature	260 to 280	°C	
Nozzle Temperature	265 to 275	°C	

Processing (Melt) Temp	260 to 285	°C
Mold Temperature	60.0 to 110	°C
NOTE		
1.	Tensile Bar	
2.	Tensile Bar	
3.	5.0 mm/min	
4.	Type I, 5.0 mm/min	
5.	Type I, 5.0 mm/min	
6.	Type I, 5.0 mm/min	
7.	Type I, 5.0 mm/min	
8.	1.3 mm/min	
9.	2.0 mm/min	
10.	1.3 mm/min	
11.	80*10*4 sp=62mm	
12.	80*10*4 sp=62mm	
13.	80*10*4	
14.	80*10*4	
15.	80*10*4	
16.	80*10*4	
17.	80*10*4	
18.	120*10*4 mm	
19.	120*10*4 mm	
20.	Rate A (50°C/h), Loading 2 (50 N)	
21.	Rate B (120°C/h), Loading 2 (50 N)	

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