

VALOX™ V3004 resin

Polybutylene Terephthalate
SABIC Innovative Plastics Asia Pacific

Message:
Unfilled PBT modified with elastomer. Targeted for flexible hinge, automotive connectors, film applications.

General Information			
Additive	Impact Modifier		
Features	Impact Modified		
Uses	Automotive Applications		
	Connectors		
	Film		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.29	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/2.16 kg)	23	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	21.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	2.1 to 2.7	%	
Across Flow : 3.20 mm	2.1 to 2.7	%	
Water Absorption			ISO 62
Saturation, 23°C	0.20	%	
Equilibrium, 23°C, 50% RH	0.080	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2400	MPa	ASTM D638
--	2350	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	51.0	MPa	ASTM D638
Yield	50.0	MPa	ISO 527-2/50
Break ³	22.0	MPa	ASTM D638
Break	30.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	4.0	%	ASTM D638
Yield	3.7	%	ISO 527-2/50
Break ⁵	300	%	ASTM D638
Break	200	%	ISO 527-2/50
Flexural Modulus			

50.0 mm Span ⁶	2300	MPa	ASTM D790
-- ⁷	2100	MPa	ISO 178
Flexural Stress			
--	74.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	82.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	7.0	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	45	J/m	ASTM D256
23°C	51	J/m	ASTM D256
-30°C ¹⁰	4.0	kJ/m ²	ISO 180/1A
23°C ¹¹	6.0	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	60.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	120	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	52.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹²	48.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	167	°C	ASTM D1525 ¹³
--	110	°C	ISO 306/B50
--	170	°C	ISO 306/B120
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	9.2E-5	cm/cm/°C	
Transverse : -40 to 40°C	7.5E-5	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	12	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 80	%	
Rear Temperature	238 to 254	°C	
Middle Temperature	243 to 260	°C	
Front Temperature	249 to 266	°C	
Nozzle Temperature	243 to 260	°C	
Processing (Melt) Temp	249 to 266	°C	
Mold Temperature	48.9 to 76.7	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	50 to 100	rpm	
Vent Depth	0.025 to 0.038	mm	
NOTE			

1.	50 mm/min
2.	Type I, 50 mm/min
3.	Type I, 50 mm/min
4.	Type I, 50 mm/min
5.	Type I, 50 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4 sp=62mm
10.	80*10*4
11.	80*10*4
12.	80*10*4 mm
13.	Rate B (120°C/h), Loading 2 (50 N)

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