

VALOX™ V4760 resin

Polybutylene Terephthalate
SABIC Innovative Plastics Asia Pacific

Message:
30% glass fiber reinforced, thin wall brominated FR, high flow, high CTI

General Information			
Filler / Reinforcement	Glass Fiber,30% Filler by Weight		
Additive	Flame Retardant		
Features	Brominated		
	Flame Retardant		
	High Flow		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.67	g/cm ³	ASTM D792
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	28.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow	0.30	%	
Across Flow	0.70	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	10500	MPa	ASTM D638
--	10700	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	125	MPa	ASTM D638
Yield	126	MPa	ISO 527-2/5
Break ³	125	MPa	ASTM D638
Break	126	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	2.2	%	ASTM D638
Yield	2.2	%	ISO 527-2/5
Break ⁵	2.2	%	ASTM D638
Break	2.2	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	9500	MPa	ASTM D790
-- ⁷	9500	MPa	ISO 178
Flexural Stress			
--	190	MPa	ISO 178

Break, 50.0 mm Span ⁸	188	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/2C
-30°C	8.0	kJ/m ²	
23°C	8.0	kJ/m ²	
Charpy Unnotched Impact Strength (23°C)	45	kJ/m ²	ISO 179/2U
Notched Izod Impact			
-30°C	77	J/m	ASTM D256
23°C	76	J/m	ASTM D256
-30°C ⁹	8.0	kJ/m ²	ISO 180/1A
23°C ¹⁰	7.5	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	740	J/m	ASTM D4812
23°C ¹¹	38	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	209	°C	ASTM D648
1.8 MPa, Unannealed, 6.40 mm	211	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹²	207	°C	ISO 75-2/Af
Vicat Softening Temperature	202	°C	ISO 306/B50, ASTM D1525 ¹³
CLTE			
Flow : -40 to 40°C	2.1E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Flow : 23 to 80°C	1.9E-5	cm/cm/°C	ASTM E831
Flow : 23 to 80°C	1.5E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	7.1E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Transverse : 23 to 80°C	1.1E-4	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	1.2E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.6E+15	ohms · cm	ASTM D257
Comparative Tracking Index (CTI)	PLC 2		UL 746
Comparative Tracking Index	250	V	IEC 60112
High Amp Arc Ignition (HAI)	PLC 0		UL 746
Hot-wire Ignition (HWI)	PLC 3		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.280 mm	V-0		
1.50 mm	5VA		
Glow Wire Flammability Index (0.800 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
0.800 mm	725	°C	
1.00 mm	700	°C	

2.00 mm	725	°C
3.00 mm	775	°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	243 to 266	°C
Middle Temperature	249 to 271	°C
Front Temperature	254 to 277	°C
Nozzle Temperature	249 to 271	°C
Processing (Melt) Temp	254 to 277	°C
Mold Temperature	65.6 to 87.8	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	50 to 80	rpm
Vent Depth	0.025 to 0.038	mm

NOTE

1.	5.0 mm/min
2.	Type I, 5.0 mm/min
3.	Type I, 5.0 mm/min
4.	Type I, 5.0 mm/min
5.	Type I, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4
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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