VALOX™ PDR4922 resin

Polybutylene Terephthalate

SABIC Innovative Plastics Asia Pacific

Message:

GF filled PBT grade

General Information			
Filler / Reinforcement	Glass Fiber		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.40	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/2.16 kg)	13	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	12.0	cm³/10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.16	%	
Across Flow : 3.20 mm	0.94	%	
Water Absorption			ISO 62
Saturation, 23°C	0.030	%	
Equilibrium, 23°C, 50% RH	0.030	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
-- [1]	5410	MPa	ASTM D638
--	5230	MPa	ISO 527-2/1
Tensile Strength			
Yield [2]	85.0	MPa	ASTM D638
Yield	85.0	MPa	ISO 527-2/50
Break [3]	81.0	MPa	ASTM D638
Break	81.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield [4]	2.4	%	ASTM D638
Yield	3.0	%	ISO 527-2/50
Break [5]	3.3	%	ASTM D638
Break	3.6	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span [6]	4580	MPa	ASTM D790
-- [7]	4870	MPa	ISO 178
Flexural Stress			
--	130	MPa	ISO 178
Yield, 50.0 mm Span [8]	133	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength [9] (23°C)	8.0	kJ/m²	ISO 179/1eA
Notched Izod Impact			
-30°C	58	J/m	ASTM D256
23°C	100	J/m	ASTM D256
-30°C [10]	6.0	kJ/m²	ISO 180/1A
23°C [11]	11	kJ/m²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	8.80	J	ASTM D3763
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	216	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	184	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span [12]	170	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	200	°C	ASTM D1525 [13]
--	195	°C	ISO 306/B50
--	196	°C	ISO 306/B120
CLTE			
Flow : -40 to 40°C	4.2E-5	cm/cm/°C	ASTM E831
Flow : -40 to 40°C	4.4E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	1.1E-4	cm/cm/°C	ASTM E831
Transverse : -40 to 40°C	1.2E-4	cm/cm/°C	ISO 11359-2
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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