

VALOX™ ENH4565 resin

Polybutylene Terephthalate

SABIC Innovative Plastics Asia Pacific

Message:

33% GF reinforced, Non-Brominated & Non-Chlorinated Flame Retardant, PBT resin, Good thermal shock resistance and low CTE.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 33% filler by weight		
Features	Chlorine Free		
	Earthquake resistance		
	Bromine-free		
	Flame retardancy		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.60	g/cm ³	ASTM D792
--	1.61	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/5.0 kg)	24	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR)			ISO 1133
250°C/5.0 kg	18.0	cm ³ /10min	ISO 1133
265°C/5.0 kg	20.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal method
Flow ¹	0.10 - 0.40	%	Internal method
Flow: 3.20mm	0.10 - 0.40	%	Internal method
Transverse flow ²	0.40 - 0.80	%	Internal method
Transverse flow: 3.20mm	0.40 - 0.80	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.23	%	ISO 62
Equilibrium, 23°C, 50% RH	0.060	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ³	11600	MPa	ASTM D638
--	11500	MPa	ISO 527-2/1
Tensile Strength			
Yield ⁴	137	MPa	ASTM D638
Yield	140	MPa	ISO 527-2/5
Fracture ⁵	137	MPa	ASTM D638
Fracture	140	MPa	ISO 527-2/5

Tensile Elongation			
Yield ⁶	2.4	%	ASTM D638
Yield	2.4	%	ISO 527-2/5
Fracture ⁷	2.4	%	ASTM D638
Fracture	2.4	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁸	9400	MPa	ASTM D790
-- ⁹	9400	MPa	ISO 178
Flexural Stress			
--	185	MPa	ISO 178
Yield, 50.0mm span ¹⁰	180	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/2C
-30°C	12	kJ/m ²	ISO 179/2C
23°C	12	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength			ISO 179/2U
-30°C	60	kJ/m ²	ISO 179/2U
23°C	60	kJ/m ²	ISO 179/2U
Notched Izod Impact			
-30°C	60	J/m	ASTM D256
23°C	80	J/m	ASTM D256
-30°C ¹¹	14	kJ/m ²	ISO 180/1A
23°C ¹²	14	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			ASTM D4812
-30°C	600	J/m	ASTM D4812
23°C	800	J/m	ASTM D4812
Instrumented Dart Impact (23°C, Total Energy)	9.40	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 3.20mm	218	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	206	°C	ASTM D648
Vicat Softening Temperature	205	°C	ASTM D1525 ¹³
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			
Flow: -40 to 40°C	1.9E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Flow: -40 to 150°C	2.0E-5	cm/cm/°C	ASTM E831
Flow: 23 to 80°C	1.9E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 150°C	9.8E-5	cm/cm/°C	ASTM E831
Lateral: 23 to 80°C	8.0E-5	cm/cm/°C	ISO 11359-2
RTI Elec	130	°C	UL 746

RTI Imp	140	°C	UL 746
RTI	140	°C	UL 746
Flammability	Nominal Value		Test Method
Flame Rating (0.750 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	110 - 120	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	40.0 - 60.0	°C	
Rear Temperature	230 - 240	°C	
Middle Temperature	235 - 250	°C	
Front Temperature	240 - 260	°C	
Nozzle Temperature	230 - 255	°C	
Processing (Melt) Temp	245 - 260	°C	
Mold Temperature	40.0 - 100	°C	
NOTE			
1.	Tensile Bar		
2.	Tensile Bar		
3.	5.0 mm/min		
4.	Type 1, 5.0 mm/min		
5.	Type 1, 5.0 mm/min		
6.	Type 1, 5.0 mm/min		
7.	Type 1, 5.0 mm/min		
8.	1.3 mm/min		
9.	2.0 mm/min		
10.	1.3 mm/min		
11.	80*10*4		
12.	80*10*4		
13.	标准 B (120°C/h), 载荷2 (50N)		

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