

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			
UL YellowCard	E207780-101188061		
Filler / Reinforcement	Glass Fiber,33% Filler by Weight		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	Good Thermal Shock Resistance		
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	
265°C/5.0 kg	20.0	cm ³ /10min	
Molding Shrinkage			Internal Method
Flow ¹	0.10 to 0.40	%	
Flow : 3.20 mm	0.10 to 0.40	%	
Across Flow ²	0.40 to 0.80	%	
Across Flow : 3.20 mm	0.40 to 0.80	%	
Water Absorption			ISO 62
Saturation, 23°C	0.23	%	
Equilibrium, 23°C, 50% RH	0.060	%	
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
Break ⁵	137	MPa	ASTM D638
Break	140	MPa	ISO 527-2/5

Tensile Elongation			
Yield ⁶	2.4	%	ASTM D638
Yield	2.4	%	ISO 527-2/5
Break ⁷	2.4	%	ASTM D638
Break	2.4	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁸	9400	MPa	ASTM D790
-- ⁹	9400	MPa	ISO 178
Flexural Stress			
--	185	MPa	ISO 178
Yield, 50.0 mm 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	
23°C	12	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/2U
-30°C	60	kJ/m ²	
23°C	60	kJ/m ²	
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	
23°C	800	J/m	
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, 3.20 mm	218	°C	
1.8 MPa, Unannealed, 3.20 mm	206	°C	
Vicat Softening Temperature	205	°C	ASTM D1525 ¹³
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
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
Transverse : -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Transverse : -40 to 150°C	9.8E-5	cm/cm/°C	ASTM E831
Transverse : 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 Str	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 to 120	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	40.0 to 60.0	°C	
Rear Temperature	230 to 240	°C	
Middle Temperature	235 to 250	°C	
Front Temperature	240 to 260	°C	
Nozzle Temperature	230 to 255	°C	
Processing (Melt) Temp	245 to 260	°C	
Mold Temperature	40.0 to 100	°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		
12.	80*10*4		
13.	Rate B (120°C/h), Loading 2 (50 N)		

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



WECHAT