

VALOX™ VIC4311 resin

Polybutylene Terephthalate

SABIC Innovative Plastics

Message:

VALOX VIC4311 is a 30% glass filled, impact modified PBT with excellent epoxy adhesion. Automotive underhood applications such as ignition coil housings.

General Information			
Filler / Reinforcement	Glass Fiber,30% Filler by Weight		
Additive	Impact Modifier		
Features	Impact Modified		
Uses	Automotive Under the Hood		
	Housings		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.42	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/5.0 kg)	19	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	15.6	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.20 to 0.40	%	
Flow : 6.40 mm	0.60 to 0.80	%	
Across Flow : 3.20 mm	0.60 to 0.80	%	
Water Absorption			ISO 62
Saturation, 23°C	0.090	%	
Equilibrium, 23°C, 50% RH	0.070	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	8370	MPa	ASTM D638
--	7380	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	83.0	MPa	ASTM D638
Yield	86.5	MPa	ISO 527-2/5
Break ³	84.0	MPa	ASTM D638
Break	84.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	3.0	%	ASTM D638
Yield	3.0	%	ISO 527-2/5
Break ⁵	4.0	%	ASTM D638
Break	4.0	%	ISO 527-2/5

Flexural Modulus			
50.0 mm Span ⁶	6080	MPa	ASTM D790
-- ⁷	6190	MPa	ISO 178
Flexural Stress			
--	139	MPa	ISO 178
Yield, 50.0 mm Span ⁸	129	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	16	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	97	J/m	ASTM D256
23°C	140	J/m	ASTM D256
-30°C ¹⁰	9.9	kJ/m ²	ISO 180/1A
23°C ¹¹	13	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	13.9	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	220	°C	ASTM D648
1.8 MPa, Unannealed, 3.20 mm	205	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹²	175	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	180	°C	ASTM D1525 ¹³
--	175	°C	ISO 306/B50
--	170	°C	ISO 306/B120
Ball Pressure Test (75°C)	Pass		IEC 60695-10-2
CLTE			
Flow : -40 to 40°C	2.3E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Flow : -30 to 30°C	3.0E-5	cm/cm/°C	ASTM E831
Transverse : -40 to 40°C	1.1E-4	cm/cm/°C	ASTM E831, ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	ASTM D257
Dielectric Constant			ASTM D150
50 Hz	3.00		
60 Hz	3.00		
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	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 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)

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