

VALOX™ K3501 resin

Polybutylene Terephthalate

SABIC Innovative Plastics

Message:

Unfilled PBT, Hydrollytically Stable, Heat Stabilized, Impact Modified. A hydrollytically stable grade designed for improved performance under heat/humidity environments. Targeted at automotive underhood applications requiring USCAR-2 Class III humidity/heat performance.

General Information			
UL YellowCard	E45329-101938116		
Additive	Impact modifier		
	heat stabilizer		
Features	Impact modification		
	Moisture proof		
	Heat resistance, high		
	Thermal Stability		
	Hydrolysis stability		
Uses	Parts under the hood of a car		
Agency Ratings	USCAR III		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.29	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	26.0	cm ³ /10min	ISO 1133
Water Absorption			ISO 62
Saturated, 23°C	0.34	%	ISO 62
Equilibrium, 23°C, 50% RH	0.080	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2400	MPa	ASTM D638
--	2100	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	50.0	MPa	ASTM D638
Yield	50.0	MPa	ISO 527-2/50
Fracture ³	25.0	MPa	ASTM D638
Tensile Elongation			
Yield ⁴	3.5	%	ASTM D638
Yield	3.5	%	ISO 527-2/50
Fracture ⁵	50	%	ASTM D638

Fracture	40	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2100	MPa	ASTM D790
-- ⁷	2000	MPa	ISO 178
Flexural Stress			
--	70.0	MPa	ISO 178
Yield, 50.0mm span ⁸	70.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
-20°C	75	J/m	ASTM D256
0°C	80	J/m	ASTM D256
23°C	90	J/m	ASTM D256
23°C ⁹	8.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact (-30°C)	No Break		ASTM D4812, ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, unannealed, 3.20mm	45.0	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁰	45.0	°C	ISO 75-2/Af
Vicat Softening Temperature	165	°C	ISO 306/B120
Linear thermal expansion coefficient			ISO 11359-2
Flow: -40 to 40°C	9.1E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	9.7E-5	cm/cm/°C	ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	60.0 - 76.7	°C	
Drying Time	4.0 - 5.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.050	%	
Suggested Shot Size	40 - 80	%	
Rear Temperature	238 - 254	°C	
Middle Temperature	243 - 260	°C	
Front Temperature	249 - 266	°C	
Nozzle Temperature	243 - 260	°C	
Processing (Melt) Temp	249 - 266	°C	
Mold Temperature	65.6 - 87.8	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	50 - 80	rpm	
Vent Depth	0.025 - 0.038	mm	
NOTE			
1.	50 mm/min		
2.	Type 1, 50mm/min		
3.	Type 1, 50mm/min		
4.	Type 1, 50mm/min		

5.	Type 1, 50mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4
10.	80*10*4 mm

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