

VALOX™ K4530 resin

Polybutylene Terephthalate

SABIC Innovative Plastics

Message:

15% glass reinforced PBT, Hydrolytically stable, High flow, Automotive connectors.

General Information			
UL YellowCard	E45329-101938098		
Filler / Reinforcement	Glass fiber reinforced material, 15% filler by weight		
Features	Hydrolysis stability		
Uses	Connector		
	Application in Automobile Field		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.41	g/cm³	ASTM D792
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	17.0	cm³/10min	ISO 1133
Molding Shrinkage			Internal method
Flow: 3.20mm	0.70 - 0.90	%	Internal method
Transverse flow: 3.20mm	1.0 - 1.2	%	Internal method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	3560	MPa	ASTM D638
--	5250	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	103	MPa	ASTM D638
Yield	98.0	MPa	ISO 527-2/5
Fracture	97.2	MPa	ASTM D638
Fracture ³	103	MPa	ASTM D638
Fracture	89.6	MPa	ASTM D638
Fracture	82.0	MPa	ASTM D638
Fracture	98.0	MPa	ASTM D638
Fracture	98.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	4.0	%	ASTM D638
Yield	7.0	%	ASTM D638
Yield	3.1	%	ISO 527-2/5
Fracture	2.3	%	ASTM D638

Fracture	4.0	%	ASTM D638
Fracture	2.5	%	ASTM D638
Fracture	3.1	%	ISO 527-2/5
Flexural Modulus			
50.0mm span	4820	MPa	ASTM D790
50.0mm span	5100	MPa	ASTM D790
50.0mm span	4530	MPa	ASTM D790
50.0mm span	4810	MPa	ASTM D790
50.0mm span ⁵	4640	MPa	ASTM D790
-- ⁶	4750	MPa	ISO 178
Flexural Stress			
--	150	MPa	ISO 178
Fracture, 50.0mm span ⁷	150	MPa	ASTM D790
Bending strain-1.3 mm/min, 50 mm span			ASTM D790
-- ⁸	7.0	%	ASTM D790
-- ⁹	6.0	%	ASTM D790
-- ¹⁰	3.8	%	ASTM D790
-- ¹¹	9.7	%	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	58	J/m	ASTM D256
23°C ¹²	7.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	400	J/m	ASTM D4812
23°C ¹³	30	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			ASTM D3763
23°C, Total Energy ¹⁴	4.97	J	ASTM D3763
23°C, Total Energy ¹⁵	5.30	J	ASTM D3763
23°C, Total Energy ¹⁶	6.10	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	193	°C	ASTM D648
Vicat Softening Temperature	205	°C	ISO 306/B120
Injection	Nominal Value	Unit	
Drying Temperature	60.0 - 76.7	°C	
Drying Time	4.0 - 6.0	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.	5.0 mm/min
2.	Type 1, 5.0 mm/min
3.	Type 1, 5.0 mm/min
4.	Type 1, 5.0 mm/min
5.	1.3 mm/min
6.	2.0 mm/min
7.	1.3 mm/min
8.	AFTER 1008 HOURS AT 125°C
9.	AFTER 40 CYCLES, SIMILAR TO USCAR-2, CLASS IV
10.	AFTER 1008 HOURS AT 155°C
11.	AFTER 40 CYCLES, SIMILAR TO USCAR-2, CLASS III
12.	80*10*4
13.	80*10*4
14.	AFTER 40 CYCLES, SIMILAR TO USCAR-2, CLASS IV
15.	AFTER 1008 HOURS AT 125°C
16.	AFTER 40 CYCLES, SIMILAR TO USCAR-2, CLASS III

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