

VALOX™ 745 resin

Polybutylene Terephthalate

SABIC Innovative Plastics

Message:

30% mineral reinforced polyester improved toughness and low warpage. Typical applications are telephone ringer frames and card racks.

General Information			
UL YellowCard	E45587-236820		
Filler / Reinforcement	Mineral filler, 30% filler by weight		
Features	Low warpage		
	Good toughness		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.46	g/cm ³	ASTM D792
Specific Volume	0.690	cm ³ /g	ASTM D792
Molding Shrinkage			Internal method
Flow ¹	0.60 - 0.80	%	Internal method
Flow: 3.20mm	0.80 - 1.0	%	Internal method
Transverse flow ²	0.60 - 0.80	%	Internal method
Transverse flow: 3.20mm	0.80 - 1.0	%	Internal method
Water Absorption (24 hr)	0.090	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	112		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ³			ASTM D638
Yield	49.0	MPa	ASTM D638
Fracture	46.9	MPa	ASTM D638
Flexural Modulus ⁴ (50.0 mm Span)	3450	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 50.0 mm Span)	89.6	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	80	J/m	ASTM D256
Unnotched Izod Impact (23°C)	1600	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 6.40mm	160	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	87.8	°C	ASTM D648
CLTE - Flow			ASTM E831
-40 to 40°C	7.6E-5	cm/cm/°C	ASTM E831
60 to 138°C	1.4E-4	cm/cm/°C	ASTM E831

RTI Elec	105	°C	UL 746
RTI Imp	105	°C	UL 746
RTI	105	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	6.9E+16	ohms·cm	ASTM D257
Dielectric Strength			ASTM D149
1.60 mm, in Oil	25	kV/mm	ASTM D149
3.20 mm, in Air	23	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
100 Hz	3.30		ASTM D150
1 MHz	3.20		ASTM D150
Dissipation Factor			ASTM D150
100 Hz	2.0E-3		ASTM D150
1 MHz	0.014		ASTM D150
Arc Resistance ⁶	PLC 5		ASTM D495
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 0		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 3		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.47 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	12	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 80	%	
Rear Temperature	243 - 254	°C	
Middle Temperature	249 - 260	°C	
Front Temperature	254 - 266	°C	
Nozzle Temperature	254 - 271	°C	
Processing (Melt) Temp	254 - 277	°C	
Mold Temperature	65.6 - 93.3	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	50 - 80	rpm	
Vent Depth	0.025 - 0.038	mm	
NOTE			
1.	1.5 to 3.2 mm		
2.	1.5 to 3.2 mm		
3.	Type 1, 50mm/min		
4.	1.3 mm/min		
5.	1.3 mm/min		

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