

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	E121562-220807		
Filler / Reinforcement	Mineral,30% Filler by Weight		
Features	Good Toughness		
	Low Warpage		
Processing Method	Injection Molding		
Multi-Point Data	Elastic Modulus vs Temperature (ASTM D4065)		
	Flexural DMA (ASTM D4065)		
	Tensile Stress vs. Strain (ASTM D638)		
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 to 0.80	%	
Flow : 3.20 mm	0.80 to 1.0	%	
Across Flow ²	0.60 to 0.80	%	
Across Flow : 3.20 mm	0.80 to 1.0	%	
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	
Break	46.9	MPa	
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, 6.40 mm	160	°C	

1.8 MPa, Unannealed, 6.40 mm	87.8	°C	
CLTE - Flow			ASTM E831
-40 to 40°C	7.6E-5	cm/cm/°C	
60 to 138°C	1.4E-4	cm/cm/°C	
RTI Elec	105	°C	UL 746
RTI Imp	105	°C	UL 746
RTI Str	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	
3.20 mm, in Air	23	kV/mm	
Dielectric Constant			ASTM D150
100 Hz	3.30		
1 MHz	3.20		
Dissipation Factor			ASTM D150
100 Hz	2.0E-3		
1 MHz	0.014		
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 to 4.0	hr	
Drying Time, Maximum	12	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 80	%	
Rear Temperature	243 to 254	°C	
Middle Temperature	249 to 260	°C	
Front Temperature	254 to 266	°C	
Nozzle Temperature	254 to 271	°C	
Processing (Melt) Temp	254 to 277	°C	
Mold Temperature	65.6 to 93.3	°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.	1.5 to 3.2 mm		

2.	1.5 to 3.2 mm
3.	Type I, 50 mm/min
4.	1.3 mm/min
5.	1.3 mm/min
6.	Tungsten Electrode

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