

VALOX™ 735 resin

Polybutylene Terephthalate

SABIC Innovative Plastics

Message:

40% glass/mineral, excellent thermal performance/low shrink. Motorized heating appliances, adaptor rings, oven grills, etc. Black/natural only.

General Information	
UL YellowCard	E121562-220805
Filler / Reinforcement	Glass\Mineral,40% Filler by Weight
Features	Low Shrinkage
Uses	Appliance Components
Appearance	Black
	Natural Color
Processing Method	Injection Molding
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)
	Elastic Modulus vs Temperature (ASTM D4065)
	Flexural DMA (ASTM D4065)
	Instrumented Impact (Energy) (ASTM D3763)
	Instrumented Impact (Load) (ASTM D3763)
	Pressure-Volume-Temperature (PVT - Zoller Method)
	Shear DMA (ASTM D4065)
	Specific Heat vs. Temperature (ASTM D3417)
	Tensile Creep (ASTM D2990)
	Tensile Fatigue
	Tensile Stress vs. Strain (ASTM D638)
	Thermal Conductivity vs. Temperature (ASTM E1530)
	Viscosity vs. Shear Rate (ASTM D3835)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.62	g/cm ³	ASTM D792
Specific Volume	0.621	cm ³ /g	ASTM D792
Molding Shrinkage			Internal Method
Flow ¹	0.30 to 0.40	%	
Flow ²	0.40 to 0.60	%	
Across Flow ³	0.40 to 0.60	%	
Across Flow ⁴	0.60 to 0.80	%	
Water Absorption (24 hr)	0.070	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	109		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ⁵ (Break)	75.8	MPa	ASTM D638
Flexural Modulus ⁶ (50.0 mm Span)	8270	MPa	ASTM D790
Flexural Strength ⁷ (Break, 50.0 mm Span)	124	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	75	J/m	ASTM D256
Unnotched Izod Impact (23°C)	430	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	216	°C	
1.8 MPa, Unannealed, 6.40 mm	199	°C	
CLTE - Flow			ASTM E831
-40 to 40°C	2.5E-5	cm/cm/°C	
60 to 138°C	2.5E-5	cm/cm/°C	
RTI Elec	140	°C	UL 746
RTI Imp	140	°C	UL 746
RTI Str	140	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.3E+15	ohms · cm	ASTM D257
Dielectric Strength			ASTM D149
1.60 mm, in Oil	30	kV/mm	
3.20 mm, in Air	24	kV/mm	
Dielectric Constant			ASTM D150
100 Hz	4.30		
1 MHz	4.00		
Dissipation Factor			ASTM D150
100 Hz	1.0E-3		
1 MHz	0.020		
Arc Resistance ⁸	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 3		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 1		UL 746
Hot-wire Ignition (HWI)	PLC 0		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.813 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. | 3.2 to 4.6 mm |
| 3. | 1.5 to 3.2 mm |
| 4. | 3.2-4.6 mm |
| 5. | Type I, 5.0 mm/min |
| 6. | 1.3 mm/min |
| 7. | 1.3 mm/min |
| 8. | Tungsten Electrode |

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