

VALOX™ 815 resin

Polybutylene Terephthalate + PET

SABIC Innovative Plastics

Message:

15% GR PBT+ PET, excellent surface finish. Typical applications are hot air gun housing assemblies, industrial glue guns, appliance housings and handles.

General Information			
UL YellowCard	E121562-220850		
Filler / Reinforcement	Glass Fiber, 15% Filler by Weight		
Features	Good Surface Finish		
Uses	Appliances		
	Handles		
	Housings		
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)		
	Specific Heat vs. Temperature (ASTM D3417)		
	Tensile Fatigue		
	Tensile Stress vs. Strain (ASTM D638)		
	Thermal Conductivity vs. Temperature (ASTM E1530)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.43	g/cm ³	ASTM D792
Specific Volume	0.704	cm ³ /g	ASTM D792
Molding Shrinkage			Internal Method
Flow ¹	0.60 to 0.90	%	
Flow ²	0.40 to 0.60	%	
Across Flow ³	0.50 to 0.80	%	
Across Flow ⁴	0.80 to 1.1	%	
Water Absorption (24 hr)	0.060	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	119		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ⁵ (Break)	89.6	MPa	ASTM D638
Flexural Modulus ⁶ (50.0 mm Span)	4480	MPa	ASTM D790

Flexural Strength ⁷ (Break, 50.0 mm Span)	138	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	37	J/m	ASTM D256
Unnotched Izod Impact (23°C)	270	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	210	°C	
1.8 MPa, Unannealed, 6.40 mm	160	°C	
CLTE - Flow			ASTM E831
-40 to 40°C	4.5E-5	cm/cm/°C	
60 to 138°C	5.4E-5	cm/cm/°C	
RTI Elec	125	°C	UL 746
RTI Imp	110	°C	UL 746
RTI Str	125	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	5.6E+16	ohms · cm	ASTM D257
Dielectric Strength			ASTM D149
1.60 mm, in Oil	24	kV/mm	
3.20 mm, in Air	22	kV/mm	
Dielectric Constant			ASTM D150
100 Hz	3.60		
1 MHz	3.50		
Dissipation Factor (100 Hz)	2.0E-3		ASTM D150
Arc Resistance ⁸	PLC 5		ASTM D495
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 2		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 1		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	238 to 254	°C	
Middle Temperature	243 to 260	°C	
Front Temperature	249 to 266	°C	
Nozzle Temperature	243 to 260	°C	
Processing (Melt) Temp	249 to 266	°C	
Mold Temperature	65.6 to 87.8	°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.	3.2 to 4.6 mm
2.	1.5 to 3.2 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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