VALOX™ FR RESINS 855

REGION ASIA

DESCRIPTION

VALOX 855 is a 15% glass filled, flame retardant Polybutylene Terephthalate/Polyethylene Terephthalate (PBT/PET) injection moldable grade. It has excellent chemical resistance and a UL94V0@1.5mm flame rating. With its improved aesthetics compared to standard PBT, it is an excellent candidate for a wide variety of applications including steam irons, appliance components, and lighting parts.

TYPICAL PROPERTY VALUES

Revision 20260522

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	95	MPa	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	143	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	5000	MPa	ASTM D790
Hardness, Rockwell R	119	-	ASTM D785
IMPACT			
Izod Impact, Unnotched			
23°C	345	J/m	ASTM D4812
Izod impact, notched			
23°C	55	J/m	ASTM D256
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	204	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	187	°C	ASTM D648
CTE, -40°C to 40°C, flow	4.0E-05	1/°C	ASTM E831
CTE, 60°C to 138°C, flow	6.12E-05	1/°C	ASTM E831
Relative Temp Index, Elec	125	°C	UL 746B
Relative Temp Index, Mech w/impact	110	°C	UL 746B
Relative Temp Index, Mech w/o impact	125	°C	UL 746B
PHYSICAL			
Specific Gravity	1.5	-	ASTM D792
Specific Volume	0.65	cm³/g	ASTM D792
Water Absorption, (23°C/24hrs)	0.06	%	ASTM D570
Mold Shrinkage, flow, 1.5-3.2 mm	0.4 – 0.6	%	SABIC method
Mold Shrinkage, flow, 3.2-4.6 mm	0.6 – 0.9	%	SABIC method
Mold Shrinkage, xflow, 1.5-3.2 mm	0.5 – 0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2-4.6 mm	0.8 – 1.1	%	SABIC method
Melt Flow Rate			
266°C/5.0 kgf	79	g/10 min	ASTM D1238
ELECTRICAL			
Volume Resistivity	1.0E+13	Ω.cm	ASTM D257
Dielectric Strength, in air, 3.2 mm	20	kV/mm	ASTM D149
Dielectric Strength, in oil, 1.6 mm	24	kV/mm	ASTM D149
Relative Permittivity, 100 Hz	3.5	-	ASTM D150
Relative Permittivity, 1 MHz	3.3	-	ASTM D150

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Dissipation Factor			
100 Hz	0.001	-	ASTM D150
1 MHz	0.0125	-	ASTM D150
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	0	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E207780-643580	-	-
UL Yellow Card Link 2	E45587-236859	-	-
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 265	°C	
Nozzle Temperature	245 – 260	°C	
Front - Zone 3 Temperature	250 – 265	°C	
Middle - Zone 2 Temperature	245 – 260	°C	
Rear - Zone 1 Temperature	240 – 255	°C	
Mold Temperature	65 – 90	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	50 – 80	rpm	
Shot to Cylinder Size	40 – 80	%	
Vent Depth	0.025 – 0.038	mm	

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