



VALOX™ Resin 855
Americas: COMMERCIAL

15% GR PBTP, UL94 V-0 rated. Improved surface appearance. For external housings: steam irons, appliance housings and lighting parts.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	910	kgf/cm ²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	1400	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	49200	kgf/cm ²	ASTM D 790
Hardness, Rockwell R	119	-	ASTM D 785
IMPACT			
Izod Impact, unnotched, 23°C	32	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	5	cm-kgf/cm	ASTM D 256
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	204	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	187	°C	ASTM D 648
CTE, -40°C to 40°C, flow	4.5E-05	1/°C	ASTM E 831
CTE, 60°C to 138°C, flow	6.12E-05	1/°C	ASTM E 831
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	1.54	-	ASTM D 792
Specific Volume	0.65	cm ³ /g	ASTM D 792
Water Absorption, 24 hours	0.06	%	ASTM D 570
Mold Shrinkage, flow, 1.5-3.2 mm (5)	0.4 - 0.6	%	SABIC Method
Mold Shrinkage, flow, 3.2-4.6 mm (5)	0.6 - 0.9	%	SABIC Method
Mold Shrinkage, xflow, 1.5-3.2 mm (5)	0.5 - 0.8	%	SABIC Method
Mold Shrinkage, xflow, 3.2-4.6 mm (5)	0.8 - 1.1	%	SABIC Method
Melt Flow Rate, 266°C/5.0 kgf	81	g/10 min	ASTM D 1238



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ELECTRICAL			
Volume Resistivity	4.5E+16	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	20	kV/mm	ASTM D 149
Dielectric Strength, in oil, 1.6 mm	22.4	kV/mm	ASTM D 149
Relative Permittivity, 100 Hz	3.5	-	ASTM D 150
Relative Permittivity, 1 MHz	3.4	-	ASTM D 150
Dissipation Factor, 100 Hz	0.001	-	ASTM D 150
Dissipation Factor, 1 MHz	0.01	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
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 Recognized, 94V-0 Flame Class Rating (3)	1.47	mm	UL 94



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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
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