



VALOX™ FR RESINS 771

REGION AMERICAS

DESCRIPTION

VALOX 771 is a 35% mineral/glass filled, flame retardant Polybutylene Terephthalate (PBT) injection moldable grade. It has excellent chemical resistance and a UL94V0@0.75 flame rating and 5VA@2.0mm. This grade also has a CTI of 0 and is a good candidate for applications that may see electrical arcing.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	72	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.3	%	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	110	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	5860	MPa	ASTM D790
IMPACT			
Izod Impact, unnotched, 23°C	390	J/m	ASTM D4812
Izod Impact, notched, 23°C	42	J/m	ASTM D256
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	217	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	196	°C	ASTM D648
Ball Pressure Test			
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Ball Pressure Test, 175°C +/- 2°C	PASSES	-	IEC 60695-10-2
Relative Temp Index, Elec	140	°C	UL 746B
Relative Temp Index, Mech w/impact	125	°C	UL 746B
Relative Temp Index, Mech w/o impact	140	°C	UL 746B
PHYSICAL			
Specific Gravity	1.7	-	ASTM D792
Mold Shrinkage on Tensile Bar, flow	0.65 – 0.85	%	SABIC method
Mold Shrinkage on Tensile Bar, xflow	1 – 1.2	%	SABIC method
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	4	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	0	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	0	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index	600	V	IEC 60112
Volume Resistivity	>1.E+15	Ω.cm	ASTM D257
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-220821	-	-
UL Recognized, 94V-2 Flame Class Rating	0.62	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	0.75	mm	UL 94

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Recognized, 94-5VA Flame Class Rating	2.0	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	1	mm	IEC 60695-2-12
Glow Wire Flammability Index 960°C, passes at, by VDE	3	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	750	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	800	°C	IEC 60695-2-13
INJECTION MOLDING			
Drying Temperature	110 – 120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	255 – 275	°C	
Nozzle Temperature	255 – 270	°C	
Front - Zone 3 Temperature	255 – 265	°C	
Middle - Zone 2 Temperature	250 – 260	°C	
Rear - Zone 1 Temperature	245 – 255	°C	
Hopper Temperature	40 – 60	°C	
Mold Temperature	40 – 100	°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	