VALOX™ FR RESINS 3706

REGION AMERICAS

DESCRIPTION

VALOX 3706 is an unreinforced impact modified flame retardant Polybutylene Terephthalate/Polycarbonate (PBT/PC) injection moldable grade. It has excellent chemical resistance and a UL94V0@1.5mm and 5VA@2.49mm flame rating. This is a good candidate for outdoor enclosures.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	48	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	39	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	50	%	ASTM D638
Tensile Modulus, 50 mm/min	1960	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	78	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	1990	MPa	ASTM D790
IMPACT			
Izod Impact, notched, 23°C	667	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	49	J	ASTM D3763
THERMAL			
Vicat Softening Temp, Rate B/50	135	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	126	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	85	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.92E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	8.64E-05	1/°C	ASTM E831
Relative Temp Index, Elec	100	°C	UL 746B
Relative Temp Index, Mech w/impact	85	°C	UL 746B
Relative Temp Index, Mech w/o impact	100	°C	UL 746B
PHYSICAL			
Specific Gravity	1.3	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	1.2 – 1.4	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	1.2 – 1.4	%	SABIC method
Melt Flow Rate, 266°C/5.0 kgf	19	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 265°C/5.0 kg	17	cm³/10 min	ISO 1133
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-100626858	-	-
UL Yellow Card Link 2	E121562-220842	-	-

+135-3858-6433 (GuangDong)
+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Yellow Card Link 3	E121562-220843	-	-
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	2.49	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	