VALOX™ RESIN 508

REGION ASIA

DESCRIPTION

30% GR PBT+PC. Excellent mechanical and thermal performance. Non-flame retardant. Reduced warpage characteristics. Applications same as VALOX 420.

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	110	MPa	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	189	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	6890	MPa	ASTM D 790
Hardness, Rockwell R	119	-	ASTM D 785
IMPACT			
Izod Impact, unnotched, 23°C	640	J/m	ASTM D 4812
Izod Impact, notched, 23°C	90	J/m	ASTM D 256
Izod Impact, notched, -30°C	80	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	6	J	ASTM D 3763
Instrumented Impact Total Energy, 23°C	8	J	ASTM D 3763
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	215	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	176	°C	ASTM D 648
CTE, -40°C to 40°C, flow	2.34E-05	1/°C	ASTM E 831
CTE, 60°C to 138°C, flow	1.62E-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	1.5	-	ASTM D 792
Specific Volume	0.66	cm³/g	ASTM D 792
Water Absorption, 24 hours	0.06	%	ASTM D 570
Mold Shrinkage, flow, 1.5-3.2 mm	0.3 – 0.5	%	SABIC method
Mold Shrinkage, flow, 3.2-4.6 mm	0.5 – 0.8	%	SABIC method
Mold Shrinkage, xflow, 1.5-3.2 mm	0.4 – 0.6	%	SABIC method
Mold Shrinkage, xflow, 3.2-4.6 mm	0.6 – 0.9	%	SABIC method
ELECTRICAL			
Volume Resistivity	5.9E+16	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	23.6	kV/mm	ASTM D 149
Dielectric Strength, in oil, 1.6 mm	29.1	kV/mm	ASTM D 149
Relative Permittivity, 100 Hz	3.6	-	ASTM D 150
Relative Permittivity, 1 MHz	3.6	-	ASTM D 150
Dissipation Factor, 100 Hz	0.0014	-	ASTM D 150
Dissipation Factor, 1 MHz	0.02	-	ASTM D 150

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	1	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	3	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	4	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E207780-643579	-	-
UL Yellow Card Link 2	E45587-236817	-	-
UL Recognized, 94HB Flame Class Rating	1.47	mm	UL 94
UV-light, water exposure/immersion	F2	-	UL 746C
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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