VALOX™ RESIN 420

REGION ASIA

DESCRIPTION

30% GR, excellent strength, stiffness and dimensional stability. High heat resistance. Appliance handles, spotlights, electric motors, connectors.

TYPICAL PROPERTY VALUES

Revision 20260509

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	119	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	190	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	7580	MPa	ASTM D790
Hardness, Rockwell R	118	-	ASTM D785
IMPACT			
Izod Impact, unnotched, 23°C	801	J/m	ASTM D4812
Izod Impact, notched, 23°C	85	J/m	ASTM D256
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	215	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	207	°C	ASTM D648
CTE, -40°C to 40°C, flow	2.52E-05	1/°C	ASTM E831
CTE, 60°C to 138°C, flow	2.52E-05	1/°C	ASTM E831
Relative Temp Index, Elec	140	°C	UL 746B
Relative Temp Index, Mech w/impact	140	°C	UL 746B
Relative Temp Index, Mech w/o impact	140	°C	UL 746B
PHYSICAL			
Specific Gravity	1.53	-	ASTM D792
Specific Volume	0.66	cm^3/g	ASTM D792
Water Absorption, (23°C/24hrs)	0.06	%	ASTM D570
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	>3.2E+16	Ω.cm	ASTM D257
Dielectric Strength, in air, 3.2 mm	18.7	kV/mm	ASTM D149
Dielectric Strength, in oil, 1.6 mm	24	kV/mm	ASTM D149
Relative Permittivity, 100 Hz	3.8	-	ASTM D150
Relative Permittivity, 1 MHz	3.7	-	ASTM D150
Dissipation Factor			
100 Hz	0.002	-	ASTM D150
1 MHz	0.02	-	ASTM D150
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D495
High Voltage Arc Track Rate {PLC}	1	PLC Code	UL 746A

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index	400	V	IEC 60112
FLAME CHARACTERISTICS			
UL Yellow Card Link	E207780-100173314	-	-
UL Yellow Card Link 2	E45587-236813	-	-
UL Recognized, 94HB Flame Class Rating	0.83	mm	UL 94
Oxygen Index (LOI)	19	%	ASTM D2863
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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