VALOX™ RESIN 310

REGION ASIA

DESCRIPTION

Unreinforced, general purpose. Typical viscosity 5000-7000.

TYPICAL PROPERTY VALUES

Revision 20190628

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	51	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	51	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	300	%	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	82	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	82	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2340	MPa	ASTM D790
Hardness, Rockwell R	117	-	ASTM D785
IMPACT			
Izod Impact, unnotched, 23°C	1602	J/m	ASTM D4812
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Gardner, 23°C	40	J	ASTM D3029
Modified Gardner, 23°C	40	J	ASTM D3029
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	154	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	54	°C	ASTM D648
CTE, -40°C to 40°C, flow	8.1E-05	1/°C	ASTM E831
CTE, 60°C to 138°C, flow	1.39E-04	1/°C	ASTM E831
Relative Temp Index, Elec	120	°C	UL 746B
Relative Temp Index, Mech w/impact	120	°C	UL 746B
Relative Temp Index, Mech w/o impact	140	°C	UL 746B
PHYSICAL			
Specific Gravity	1.31	-	ASTM D792
Specific Volume	0.76	cm^3/g	ASTM D792
Water Absorption, (23°C/24hrs)	0.08	%	ASTM D570
Mold Shrinkage, flow, 0.75-2.3 mm	0.9 – 1.6	%	SABIC method
Mold Shrinkage, flow, 2.3-4.6 mm	1.5 – 2.3	%	SABIC method
Mold Shrinkage, xflow, 0.75-2.3 mm	1 – 1.7	%	SABIC method
Mold Shrinkage, xflow, 2.3-4.6 mm	1.6 – 2.4	%	SABIC method
Melt Viscosity	600	Pa-s	SABIC method
ELECTRICAL			
Volume Resistivity	>4.E+16	Ω.cm	ASTM D257
Dielectric Strength, in air, 1.6 mm	23.2	kV/mm	ASTM D149
Dielectric Strength, in air, 3.2 mm	15.7	kV/mm	ASTM D149
Dielectric Strength, in oil, 1.6 mm	23.2	kV/mm	ASTM D149
Dielectric Strength, in oil, 3.2 mm	15.7	kV/mm	ASTM D149

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Permittivity, 100 Hz	3.3	-	ASTM D150
Relative Permittivity, 1 MHz	3.1	-	ASTM D150
Dissipation Factor, 100 Hz	0.002	-	ASTM D150
Dissipation Factor, 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
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E45587-236807	-	-
UL Recognized, 94HB Flame Class Rating	1.47	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	245 – 260	°C	
Nozzle Temperature	240 – 255	°C	
Front - Zone 3 Temperature	245 – 260	°C	
Middle - Zone 2 Temperature	240 – 255	°C	
Rear - Zone 1 Temperature	230 – 250	°C	
Mold Temperature	50 – 75	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	50 – 100	rpm	
Shot to Cylinder Size	40 – 80	%	
Vent Depth	0.013 – 0.025	mm	

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