



VALOX™ Resin 357U

Asia Pacific: COMMERCIAL

PBT+PC, UL94V-0/5VA Rated, Impact Modified, Opaque, Unreinforced, UV Stabilized. Applications like bobbins, switches and enclosures

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	490	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	490	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	110	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	840	kgf/cm ²	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	840	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	21000	kgf/cm ²	ASTM D 790
Hardness, Rockwell R	117	-	ASTM D 785
IMPACT			
Izod Impact, unnotched, 23°C	326	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	54	cm-kgf/cm	ASTM D 256
Gardner, 23°C	442	cm-kgf	ASTM D 3029
Modified Gardner, 23°C	442	cm-kgf	ASTM D 3029
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	137	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	98	°C	ASTM D 648
CTE, -40°C to 40°C, flow	9.18E-05	1/°C	ASTM E 831
CTE, 60°C to 138°C, flow	1.24E-04	1/°C	ASTM E 831
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	1.34	-	ASTM D 792
Specific Volume	0.75	cm ³ /g	ASTM D 792
Water Absorption, 24 hours	0.08	%	ASTM D 570



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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
PHYSICAL			
Mold Shrinkage, flow, 0.75-2.3 mm (5)	0.8 - 1.1	%	SABIC Method
Mold Shrinkage, flow, 2.3-4.6 mm (5)	1 - 1.4	%	SABIC Method
Mold Shrinkage, xflow, 0.75-2.3 mm (5)	0.9 - 1.3	%	SABIC Method
Mold Shrinkage, xflow, 2.3-4.6 mm (5)	1.2 - 1.6	%	SABIC Method
ELECTRICAL			
Volume Resistivity	>1.2E+16	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	18.5	kV/mm	ASTM D 149
Dielectric Strength, in oil, 1.6 mm	25.2	kV/mm	ASTM D 149
Dielectric Strength, in oil, 3.2 mm	18.5	kV/mm	ASTM D 149
Relative Permittivity, 100 Hz	3.2	-	ASTM D 150
Relative Permittivity, 1 MHz	3.2	-	ASTM D 150
Dissipation Factor, 100 Hz	0.003	-	ASTM D 150
Dissipation Factor, 1 MHz	0.03	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	3	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	3	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	0.46	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	0.64	mm	UL 94
UL Recognized, 94-5VA Rating (3)	3	mm	UL 94
Oxygen Index (LOI)	30	%	ASTM D 2863
UV-light, water exposure/immersion	F1	-	UL 746C



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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
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	50 - 75	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	50 - 100	rpm
Shot to Cylinder Size	40 - 80	%
Vent Depth	0.025 - 0.038	mm