



VALOX™ 310 resin

General Information			
Product Description			
Unreinforced, general purpose. Typical viscosity 5000-7000.			
General			
Features	• General Purpose		
Uses	• General Purpose		
Processing Method	• Injection Molding		
ASTM and ISO Properties ¹			
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31		ASTM D792
Specific Volume	21.3	in³/lb	ASTM D792
Molding Shrinkage - Flow			Internal Method
-- ²	0.0090 to 0.016	in/in	
-- ³	0.015 to 0.023	in/in	
Molding Shrinkage - Across Flow			Internal Method
-- ²	0.010 to 0.017	in/in	
-- ³	0.016 to 0.024	in/in	
Water Absorption (24 hr)	0.080	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ⁴ (Yield)	7500	psi	ASTM D638
Tensile Strength ⁴ (Break)	7500	psi	ASTM D638
Tensile Elongation ⁴ (Break)	300	%	ASTM D638
Flexural Modulus ⁵ (1.97 in Span)	340000	psi	ASTM D790
Flexural Strength ⁵ (Yield, 1.97 in Span)	12000	psi	ASTM D790

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Mechanical	Nominal Value	Unit	Test Method
Flexural Strength ⁵ (Break, 1.97 in Span)	12000	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F)	1.0	ft-lb/in	ASTM D256
Unnotched Izod Impact (73°F)	30	ft-lb/in	ASTM D4812
Gardner Impact			ASTM D3029
73°F	360	in-lb	
73°F ⁶	360	in-lb	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	117		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi, Unannealed, 0.252 in	310	°F	
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.252 in	130	°F	
CLTE - Flow			ASTM E831
-40 to 104°F	0.000045	in/in/°F	
140 to 280°F	0.000077	in/in/°F	
RTI Elec	248	°F	UL 746
RTI Imp	248	°F	UL 746
RTI Str	284	°F	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 4.0E+16	ohm·cm	ASTM D257
Dielectric Strength			ASTM D149
0.0630 in, in Air	590	V/mil	
0.0630 in, in Oil	590	V/mil	
0.126 in, in Air	400	V/mil	
0.126 in, in Oil	400	V/mil	
Dielectric Constant			ASTM D150
100 Hz	3.30		
1 MHz	3.10		
Dissipation Factor			ASTM D150
100 Hz	0.0020		
1 MHz	0.020		
Arc Resistance ⁷	PLC 5		ASTM D495
Comparative Tracking Index (CTI)	PLC 0		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 1		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.0580 in)	HB		UL 94
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity	600	Pa·s	Internal Method

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Processing Information		
Injection	Nominal Value	Unit
Drying Temperature	250	°F
Drying Time	3.0 to 4.0	hr
Drying Time, Maximum	12	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 to 80	%
Rear Temperature	450 to 480	°F
Middle Temperature	460 to 490	°F
Front Temperature	470 to 500	°F
Nozzle Temperature	460 to 490	°F
Processing (Melt) Temp	470 to 500	°F
Mold Temperature	120 to 170	°F
Back Pressure	50.0 to 100	psi
Screw Speed	50 to 100	rpm
Vent Depth	0.00050 to 0.0010	in