

# VALOX<sup>TM</sup> RESIN 312

REGION AMERICAS

## DESCRIPTION

Unreinforced, For compounding only (not for injection molding), Medium viscosity.

## TYPICAL PROPERTY VALUES

Revision 20181012

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	51	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	300	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	82	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2340	MPa	ASTM D 790
Hardness, Rockwell R	117	-	ASTM D 785
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	1602	J/m	ASTM D 4812
Izod Impact, notched, 23°C	53	J/m	ASTM D 256
Modified Gardner, 23°C	40	J	ASTM D 3029
<b>THERMAL</b>			
HDT, 0.45 MPa, 6.4 mm, unannealed	154	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	54	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.1E-05	1/°C	ASTM E 831
CTE, 60°C to 138°C, flow	1.39E-04	1/°C	ASTM E 831
<b>PHYSICAL</b>			
Specific Gravity	1.31	-	ASTM D 792
Specific Volume	0.76	cm <sup>3</sup> /g	ASTM D 792
Water Absorption, 24 hours	0.08	%	ASTM D 570
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
<b>ELECTRICAL</b>			
Volume Resistivity	>4.E+16	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	15.7	kV/mm	ASTM D 149
Dielectric Strength, in oil, 1.6 mm	23.2	kV/mm	ASTM D 149
Relative Permittivity, 100 Hz	3.3	-	ASTM D 150
Relative Permittivity, 1 MHz	3.1	-	ASTM D 150
Dissipation Factor, 100 Hz	0.002	-	ASTM D 150
Dissipation Factor, 1 kHz	0.4193	-	ASTM D 150
Dissipation Factor, 1 MHz	0.02	-	ASTM D 150
<b>COMPOUNDING EXTRUSION</b>			
Drying Temperature	110 – 120	°C	
Drying Time	4 – 6	hrs	

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Drying Time (Cumulative)	8	hrs	
Maximum Moisture Content	0	%	
Melt Temperature	245 – 260	°C	
Barrel - Zone 1 Temperature	200 – 230	°C	
Barrel - Zone 2 Temperature	240 – 255	°C	
Barrel - Zone 3 Temperature	240 – 275	°C	
Barrel - Zone 4 Temperature	240 – 275	°C	
Adapter Temperature	240 – 275	°C	
Die Temperature	240 – 275	°C	
Waterbath Temperature	25 – 35	°C	

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