

VALOX™ RESIN 312

REGION AMERICAS

DESCRIPTION

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

TYPICAL PROPERTY VALUES

Revision 20180807

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, 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 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
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
PHYSICAL			
Specific Gravity	1.31	-	ASTM D792
Specific Volume	0.76	cm³/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
ELECTRICAL			
Volume Resistivity	>4.E+16	Ω.cm	ASTM D257
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
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 kHz	0.4193	-	ASTM D150
Dissipation Factor, 1 MHz	0.02	-	ASTM D150
COMPOUNDING EXTRUSION			
Drying Temperature	110 – 120	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	8	Hrs	

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CHEMISTRY THAT MATTERS™



PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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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