

VALOX™ 295 resin

Polybutylene Terephthalate

SABIC Innovative Plastics

Message:

Unreinforced PBT

General Information			
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm ³	ASTM D792
Specific Volume	0.770	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR) (250°C/2.16 kg)	70	g/10 min	ASTM D1238
Molding Shrinkage			Internal Method
Flow ¹	0.90 to 1.6	%	
Flow ²	1.5 to 2.3	%	
Across Flow ³	1.0 to 1.7	%	
Across Flow ⁴	1.6 to 2.4	%	
Water Absorption (24 hr)	0.080	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ⁵	2670	MPa	ASTM D638
Tensile Strength ⁶			ASTM D638
Yield	51.7	MPa	
Break	50.7	MPa	
Tensile Elongation ⁷			ASTM D638
Yield	3.7	%	
Break	14	%	
Flexural Modulus ⁸ (50.0 mm Span)	2340	MPa	ASTM D790
Flexural Strength ⁹ (Yield, 50.0 mm Span)	82.7	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	53	J/m	ASTM D256
Unnotched Izod Impact (23°C)	1600	J/m	ASTM D4812
Gardner Impact ¹⁰ (23°C)	40.7	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	154	°C	
1.8 MPa, Unannealed, 3.20 mm	50.0	°C	
1.8 MPa, Unannealed, 6.40 mm	54.4	°C	
Vicat Softening Temperature	170	°C	ASTM D1525 ¹¹
CLTE - Flow			ASTM E831

-40 to 40°C	8.1E-5	cm/cm/°C
60 to 138°C	1.4E-4	cm/cm/°C
Injection	Nominal Value	Unit
Drying Temperature	121	°C
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	232 to 249	°C
Middle Temperature	238 to 254	°C
Front Temperature	243 to 260	°C
Nozzle Temperature	238 to 254	°C
Processing (Melt) Temp	243 to 260	°C
Mold Temperature	48.9 to 76.7	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	50 to 100	rpm
Vent Depth	0.013 to 0.025	mm
NOTE		
1.	0.75 to 2.3 mm	
2.	2.3 to 4.6 mm	
3.	0.75 to 2.3 mm	
4.	2.3 to 4.6 mm	
5.	5.0 mm/min	
6.	Type I, 50 mm/min	
7.	Type I, 50 mm/min	
8.	1.3 mm/min	
9.	1.3 mm/min	
10.	Modified	
11.	Rate B (120°C/h), Loading 2 (50 N)	

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