

VALOX™ 815F resin

Polybutylene Terephthalate + PET
SABIC Innovative Plastics Asia Pacific

Message:
PBT+PET, 15% Glass, Mold Release, Heat Stabilized, For foodcontact applications

General Information			
Filler / Reinforcement	Glass Fiber,15% Filler by Weight		
Additive	Heat Stabilizer		
	Mold Release		
Features	Food Contact Acceptable		
	Heat Stabilized		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.43	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (266°C/1.2 kg)	16	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (265°C/1.2 kg)	12.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 to 1.0	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.26	%	
Equilibrium, 23°C, 50% RH	0.060	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	5000	MPa	ASTM D638
--	5400	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	90.0	MPa	ASTM D638
Yield	95.0	MPa	ISO 527-2/5
Break ³	90.0	MPa	ASTM D638
Break	95.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	3.0	%	ASTM D638
Yield	3.0	%	ISO 527-2/5
Break ⁵	3.0	%	ASTM D638
Break	3.0	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	4500	MPa	ASTM D790

-- ⁷	4700	MPa	ISO 178
Flexural Stress	145	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁸ (23°C)	5.0	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	30	J/m	ASTM D256
23°C	35	J/m	ASTM D256
-30°C ⁹	5.0	kJ/m ²	ISO 180/1A
23°C ¹⁰	6.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹¹			ISO 180/1U
-30°C	25	kJ/m ²	
23°C	30	kJ/m ²	
Instrumented Dart Impact (23°C, Total Energy)	6.00	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	160	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹²	175	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	185	°C	ASTM D1525, ISO 306/B50 10 ¹³
--	190	°C	ISO 306/B120
CLTE			
Flow : -40 to 40°C	4.5E-5	cm/cm/°C	ASTM E831
Flow : 23 to 80°C	5.5E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	5.4E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	8.5E-5	cm/cm/°C	ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	2.0 to 6.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	40.0 to 60.0	°C	
Rear Temperature	240 to 260	°C	
Middle Temperature	250 to 270	°C	
Front Temperature	260 to 280	°C	
Nozzle Temperature	265 to 275	°C	
Processing (Melt) Temp	260 to 285	°C	
Mold Temperature	60.0 to 110	°C	
NOTE			
1.	5.0 mm/min		
2.	Type I, 5.0 mm/min		
3.	Type I, 5.0 mm/min		
4.	Type I, 5.0 mm/min		

5.	Type I, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	80*10*4 sp=62mm
9.	80*10*4
10.	80*10*4
11.	80*10*4
12.	120*10*4 mm
13.	Rate B (120°C/h), Loading 2 (50 N)

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