

VALOX™ 815F resin

Polybutylene Terephthalate + PET

SABIC Innovative Plastics Europe

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		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.42	g/cm³	ASTM D792
--	1.43	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
265°C/5.0 kg	70	g/10 min	
266°C/1.2 kg	16	g/10 min	
266°C/5.0 kg	70	g/10 min	
Melt Volume-Flow Rate (MVR)			ISO 1133
250°C/5.0 kg	22.0	cm³/10min	
265°C/1.2 kg	12.0	cm³/10min	
265°C/5.0 kg	50.0	cm³/10min	
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	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	121		ISO 2039-2
Ball Indentation Hardness (H 358/30)	195	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	5500	MPa	ASTM D638
--	5500	MPa	ISO 527-2/1
Tensile Strength			

Yield ²	90.0	MPa	ASTM D638
Yield	90.0	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	5100	MPa	ISO 178
Flexural Stress ⁸			ISO 178
-- ⁹	130	MPa	
-- ¹⁰	145	MPa	
Flexural Strain at Break ¹¹	5.0	%	ISO 178
Filler Content	15	%	ASTM D229
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
-30°C	4.0	kJ/m ²	ISO 179/2C
23°C ¹²	5.0	kJ/m ²	ISO 179/1eA
23°C	4.0	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength			ISO 179/2U
-30°C	25	kJ/m ²	
23°C	25	kJ/m ²	
Notched Izod Impact			
-30°C	39	J/m	ASTM D256
0°C	39	J/m	ASTM D256
23°C	39	J/m	ASTM D256
-30°C ¹³	4.0	kJ/m ²	ISO 180/1A
0°C ¹⁴	4.0	kJ/m ²	ISO 180/1A
23°C ¹⁵	4.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
-30°C	300	J/m	ASTM D4812
23°C	300	J/m	ASTM D4812
-30°C ¹⁶	25	kJ/m ²	ISO 180/1U
23°C ¹⁷	25	kJ/m ²	ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	6.00	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	205	°C	ASTM D648

0.45 MPa, Unannealed, 64.0 mm Span ¹⁸	205	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	150	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹⁹	175	°C	ISO 75-2/Ae
1.8 MPa, Unannealed, 64.0 mm Span ²⁰	150	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	220	°C	ASTM D1525, ISO 306/A50 13 ²¹
--	197	°C	ASTM D1525, ISO 306/B50 14 ²²
--	195	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
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
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (260°C, 1500 sec ⁻¹)	160	Pa · s	ISO 11443
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.	2.0 mm/min		
9.	Break		
10.	Yield		
11.	2 mm/min		
12.	80*10*4 sp=62mm		
13.	80*10*4		

14.	80*10*4
15.	80*10*4
16.	80*10*4
17.	80*10*4
18.	80*10*4 mm
19.	120*10*4 mm
20.	80*10*4 mm
21.	Rate A (50°C/h), Loading 2 (50 N)
22.	Rate B (120°C/h), Loading 2 (50 N)

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