

VALOX™ 325F resin

Polybutylene Terephthalate
SABIC Innovative Plastics Europe

Message:

LIMITED USE, PM Approval required. VALOX 325F is compliant with food contact regulations. VALOX 325F is a general purpose, unreinforced PBT injection moulding resin which contains internal mold release. Available in natural colour only (1001). This grade is similar to 325.

General Information			
UL YellowCard	E45329-236588		
Additive	demoulding		
Features	Compliance of Food Exposure		
	General		
Uses	General		
RoHS Compliance	RoHS compliance		
Appearance	Natural color		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.31	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	18.0	cm ³ /10min	ISO 1133
Molding Shrinkage ¹			Internal method
Flow	1.1 - 1.8	%	Internal method
Transverse flow	0.90 - 1.8	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.34	%	ISO 62
Equilibrium, 23°C, 50% RH	0.080	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	117		ISO 2039-2
Ball Indentation Hardness (H 358/30)	85.0	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2400	MPa	ISO 527-2/1
Tensile Stress (Yield)	55.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	3.0	%	ISO 527-2/50
Fracture	60	%	ISO 527-2/50
Flexural Modulus ²	2300	MPa	ISO 178
Flexural Stress	80.0	MPa	ISO 178
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	9.00	mg	Internal method
Impact	Nominal Value	Unit	Test Method

Charpy Notched Impact Strength			
-30°C ³	4.0	kJ/m ²	ISO 179/1eA
23°C ⁴	4.0	kJ/m ²	ISO 179/1eA
23°C	7.0	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength ⁵			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact ⁶			ISO 180/1A
-30°C	5.0	kJ/m ²	ISO 180/1A
23°C	5.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ⁷			ISO 180/1U
-30°C	No Break		ISO 180/1U
23°C	No Break		ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁸			
0.45 MPa, unannealed, 100 mm span	110	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	50.0	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	220	°C	ISO 306/A50
--	175	°C	ISO 306/B50, ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 80°C	1.3E-4	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	1.3E-4	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.16	W/m/K	ISO 8302
RTI Elec	120	°C	UL 746
RTI Imp	120	°C	UL 746
RTI	140	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Strength			IEC 60243-1
1.00 mm ⁹	16	kV/mm	IEC 60243-1
3.20mm, in oil	18	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	3.30		IEC 60250
60 Hz	3.30		IEC 60250
1 MHz	3.10		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	2.0E-3		IEC 60250
60 Hz	2.0E-3		IEC 60250
1 MHz	0.020		IEC 60250

Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.5 mm	HB		UL 94
3.0 mm	HB		UL 94
Glow Wire Flammability Index			IEC 60695-2-12
1.0 mm	850	°C	IEC 60695-2-12
3.0 mm	960	°C	IEC 60695-2-12
Injection	Nominal Value	Unit	
Drying Temperature	110 - 120	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	40 - 60	°C	
Rear Temperature	230 - 245	°C	
Middle Temperature	240 - 255	°C	
Front Temperature	245 - 265	°C	
Nozzle Temperature	240 - 260	°C	
Processing (Melt) Temp	250 - 270	°C	
Mold Temperature	40 - 100	°C	
NOTE			
1.	Tensile Bar		
2.	2.0 mm/min		
3.	80*10*4 sp=62mm		
4.	80*10*4 sp=62mm		
5.	80*10*4 sp=62mm		
6.	80*10*4		
7.	80*10*4		
8.	120*10*4 mm		
9.	Short-Time		

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