

VALOX™ 325FC resin

Polybutylene Terephthalate
SABIC Innovative Plastics Europe

Message:

Commercial, VALOX 325FC is compliant with food contact regulations. VALOX 325FC is a general purpose, unreinforced PBT injection moulding resin which contains internal mold release. This new 325FC grade is a good processable resin that exhibits faster and more economical cycle times.

General Information			
Additive	Mold Release		
Features	Fast Molding Cycle		
	Food Contact Acceptable		
	General Purpose		
	Good Mold Release		
	Good Processability		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR)			ISO 1133
250°C/2.16 kg	20.0	cm³/10min	
250°C/5.0 kg	50.0	cm³/10min	
Molding Shrinkage ¹			Internal Method
Flow	2.0 to 2.6	%	
Across Flow	0.90 to 1.8	%	
Water Absorption			ISO 62
Saturation, 23°C	0.34	%	
Equilibrium, 23°C, 50% RH	0.080	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	117		ISO 2039-2
Ball Indentation Hardness (H 358/30)	145	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	2500	MPa	ASTM D638
--	2550	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	60.0	MPa	ASTM D638
Yield	60.0	MPa	ISO 527-2/50
Break ⁴	60.0	MPa	ASTM D638
Break	60.0	MPa	ISO 527-2/50

Tensile Elongation			
Yield ⁵	7.0	%	ASTM D638
Yield	10	%	ISO 527-2/50
Break ⁶	15	%	ASTM D638
Break	15	%	ISO 527-2/50
Flexural Modulus ⁷	2400	MPa	ISO 178
Flexural Stress	85.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/2C
-30°C	4.0	kJ/m ²	
23°C	4.0	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/2U
-30°C	80	kJ/m ²	
23°C	No Break		
Notched Izod Impact			
-30°C	36	J/m	ASTM D256
0°C	36	J/m	ASTM D256
23°C	38	J/m	ASTM D256
-30°C ⁸	4.0	kJ/m ²	ISO 180/1A
0°C ⁹	4.0	kJ/m ²	ISO 180/1A
23°C ¹⁰	4.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
-30°C	No Break		ASTM D4812
23°C	No Break		ASTM D4812, ISO 180/1U
-30°C ¹¹	100	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ¹²			
0.45 MPa, Unannealed, 64.0 mm Span	150	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 64.0 mm Span	50.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	220	°C	ASTM D1525, ISO 306/A50 ¹³
--	185	°C	ASTM D1525, ISO 306/B50, ISO 306/B120 ¹⁴
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (260°C, 1500 sec ⁻¹)	165	Pa · s	ISO 11443
Injection	Nominal Value	Unit	
Drying Temperature	110 to 120	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	40.0 to 60.0	°C	
Rear Temperature	230 to 245	°C	

Middle Temperature	240 to 255	°C
Front Temperature	245 to 265	°C
Nozzle Temperature	240 to 260	°C
Processing (Melt) Temp	250 to 270	°C
Mold Temperature	40.0 to 100	°C

NOTE

1.	Tensile Bar
2.	50 mm/min
3.	Type I, 50 mm/min
4.	Type I, 50 mm/min
5.	Type I, 50 mm/min
6.	Type I, 50 mm/min
7.	2.0 mm/min
8.	80*10*4
9.	80*10*4
10.	80*10*4
11.	80*10*4
12.	80*10*4 mm
13.	Rate A (50°C/h), Loading 2 (50 N)
14.	Rate B (120°C/h), Loading 2 (50 N)

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