

VALOX™ HX312C resin

Polybutylene Terephthalate

SABIC Innovative Plastics Europe

Message:

Unreinforced PBT with release. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI), food contact compliant. EtO and steam sterilizable.

General Information			
Additive	Mold Release		
Features	Biocompatible		
	Ethylene Oxide Sterilizable		
	Food Contact Acceptable		
	Steam Sterilizable		
Uses	Medical/Healthcare Applications		
	Pharmaceuticals		
Agency Ratings	ISO 10993		
	USP Class VI		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/1.2 kg)	35	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (250°C/1.2 kg)	31.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.90 to 1.6	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.35	%	
Equilibrium, 23°C, 50% RH	0.080	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2500	MPa	ASTM D638
--	2500	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	51.0	MPa	ASTM D638
Yield	58.0	MPa	ISO 527-2/50
Break ³	30.0	MPa	ASTM D638
Break	30.0	MPa	ISO 527-2/50
Tensile Elongation			

Yield ⁴	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁵	25	%	ASTM D638
Break	25	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2340	MPa	ASTM D790
-- ⁷	2400	MPa	ISO 178
Flexural Stress			
--	85.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	82.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	2.0	kJ/m ²	
23°C	3.0	kJ/m ²	
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	53	J/m	ASTM D256
23°C	53	J/m	ASTM D256
-30°C ¹¹	3.0	kJ/m ²	ISO 180/1A
23°C ¹²	3.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹³			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact (23°C, Total Energy)	40.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	54.0	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹⁴	58.0	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	175	°C	ASTM D1525, ISO 306/B50 10 ¹⁵
--	165	°C	ISO 306/B120
CLTE			
Flow : -40 to 40°C	1.0E-4	cm/cm/°C	ASTM E831
Flow : 23 to 80°C	1.0E-4	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	1.0E-4	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	1.0E-4	cm/cm/°C	ISO 11359-2
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.	50 mm/min
2.	Type I, 50 mm/min
3.	Type I, 50 mm/min
4.	Type I, 50 mm/min
5.	Type I, 50 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4 sp=62mm
10.	80*10*4 sp=62mm
11.	80*10*4
12.	80*10*4
13.	80*10*4
14.	120*10*4 mm
15.	Rate B (120°C/h), Loading 2 (50 N)

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