

VALOX™ ENH3500 resin

Polybutylene Terephthalate
SABIC Innovative Plastics Europe

Message:
Unfilled PBT, Non-Brominated & Non-Chlorinated Flame Retardant

General Information			
UL YellowCard	E207780-100208979		
Features	Chlorine Free		
	Bromine-free		
	Flame retardancy		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm ³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	20.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ¹	1.8 - 2.8	%	Internal method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	3150	MPa	ASTM D638
--	3200	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	44.0	MPa	ASTM D638
Yield	39.0	MPa	ISO 527-2/50
Fracture ⁴	42.0	MPa	ASTM D638
Fracture	38.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁵	3.0	%	ASTM D638
Yield	3.0	%	ISO 527-2/50
Fracture ⁶	10	%	ASTM D638
Fracture	8.0	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁷	2750	MPa	ASTM D790
-- ⁸	2700	MPa	ISO 178
Flexural Stress			
--	70.0	MPa	ISO 178
Yield, 50.0mm span ⁹	77.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			

23°C	40	J/m	ASTM D256
-30°C ¹⁰	50	kJ/m ²	ISO 180/1A
23°C ¹¹	5.0	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, unannealed, 3.20mm	60.0	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹²	60.0	°C	ISO 75-2/Af
Vicat Softening Temperature	170	°C	ISO 306/B120
Electrical	Nominal Value	Unit	Test Method
Comparative Tracking Index (CTI)	PLC 0		UL 746
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.800 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	110 - 120	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	40.0 - 60.0	°C	
Rear Temperature	230 - 240	°C	
Middle Temperature	235 - 250	°C	
Front Temperature	240 - 260	°C	
Nozzle Temperature	230 - 255	°C	
Processing (Melt) Temp	245 - 260	°C	
Mold Temperature	40.0 - 100	°C	
NOTE			
1.	Tensile Bar		
2.	5.0 mm/min		
3.	Type 1, 50mm/min		
4.	Type 1, 50mm/min		
5.	Type 1, 50mm/min		
6.	Type 1, 50mm/min		
7.	1.3 mm/min		
8.	2.0 mm/min		
9.	1.3 mm/min		
10.	80*10*4		
11.	80*10*4		
12.	80*10*4 mm		

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