

VALOX™ 3007 resin

Polybutylene Terephthalate
SABIC Innovative Plastics Europe

Message:

VALOX 3007 is an unreinforced, impact modified, non flame retardant PBT injection moulding resin. Applications: flexible hinge connectors.

General Information			
UL YellowCard	E45329-236585		
Additive	Impact modifier		
Features	Impact modification		
Uses	Connector		
RoHS Compliance	RoHS compliance		
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/1.2 kg)	8.00	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
Ball Indentation Hardness (H 358/30)	105	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2300	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	50.0	MPa	ISO 527-2/50
Fracture	25.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	3.0	%	ISO 527-2/50
Fracture	50	%	ISO 527-2/50
Flexural Modulus ²	2200	MPa	ISO 178
Flexural Stress	80.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ³			ISO 179/1eA
-30°C	6.0	kJ/m ²	ISO 179/1eA
23°C	7.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ⁴			ISO 179/1eU

-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact ⁵			ISO 180/1A
-30°C	5.0	kJ/m ²	ISO 180/1A
23°C	6.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ⁶			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 ⁷			
0.45 MPa, unannealed, 100 mm span	120	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	50.0	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	173	°C	ISO 306/B50
--	170	°C	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
RTI Elec	75.0	°C	UL 746
RTI Imp	75.0	°C	UL 746
RTI	75.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength			IEC 60243-1
0.800mm, in oil	29	kV/mm	IEC 60243-1
1.60mm, in oil	23	kV/mm	IEC 60243-1
3.20mm, in oil	16	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	3.00		IEC 60250
60 Hz	3.00		IEC 60250
1 MHz	3.00		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			IEC 60112
--	600	V	IEC 60112
Solution B	350	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
3.2 mm	750	°C

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
6.	80*10*4
7.	120*10*4 mm

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