

VALOX™ VX4930 resin

Polybutylene Terephthalate
SABIC Innovative Plastics Europe

Message:

VALOX VX4930 is a 30% glass reinforced nucleated PBT/ASA blend with excellent mechanical properties, high dimensional stability and low density. Applications: connectors and automotive industry.

General Information			
UL YellowCard	E45329-236573		
Filler / Reinforcement	Glass Fiber,30% Filler by Weight		
Additive	Nucleating Agent		
Features	Good Dimensional Stability		
	Low Density		
	Nucleated		
Uses	Automotive Applications		
	Connectors		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.46	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
200°C/3.8 kg	13	g/10 min	
265°C/5.0 kg	35	g/10 min	
266°C/5.0 kg	35	g/10 min	
Melt Volume-Flow Rate (MVR)			ISO 1133
250°C/5.0 kg	13.0	cm³/10min	
265°C/5.0 kg	25.0	cm³/10min	
Molding Shrinkage			Internal Method
Flow ¹	0.10 to 0.30	%	
Flow : 3.20 mm	0.30 to 0.70	%	
Across Flow ²	0.30 to 0.70	%	
Water Absorption			ISO 62
Saturation, 23°C	0.71	%	
Equilibrium, 23°C, 50% RH	0.23	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	116		ISO 2039-2
Ball Indentation Hardness (H 358/30)	210	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus			
-- ³	9500	MPa	ASTM D638
--	9600	MPa	ISO 527-2/1
Tensile Strength			
Yield ⁴	125	MPa	ASTM D638
Yield	130	MPa	ISO 527-2/5
Break ⁵	125	MPa	ASTM D638
Break	130	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁶	2.8	%	ASTM D638
Yield	2.8	%	ISO 527-2/5
Break ⁷	2.8	%	ASTM D638
Break	2.8	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁸	7700	MPa	ASTM D790
-- ⁹	8200	MPa	ISO 178
Flexural Stress			
--	185	MPa	ISO 178
--	180	MPa	ISO 178
Yield, 50.0 mm Span ¹⁰	175	MPa	ASTM D790
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	65.0	mg	Internal Method
Flexural Strain at Break ¹¹	2.9	%	ISO 178
Filler Content	30	%	ASTM D229
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
-30°C ¹²	6.0	kJ/m ²	ISO 179/1eA
-30°C	9.0	kJ/m ²	ISO 179/2C
23°C ¹³	7.0	kJ/m ²	ISO 179/1eA
23°C	9.0	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength			
-30°C ¹⁴	25	kJ/m ²	ISO 179/1eU
-30°C	45	kJ/m ²	ISO 179/2U
23°C ¹⁵	30	kJ/m ²	ISO 179/1eU
23°C	55	kJ/m ²	ISO 179/2U
Notched Izod Impact			
-30°C	80	J/m	ASTM D256
0°C	80	J/m	ASTM D256
23°C	80	J/m	ASTM D256
-30°C ¹⁶	8.0	kJ/m ²	ISO 180/1A
0°C ¹⁷	8.0	kJ/m ²	ISO 180/1A
23°C ¹⁸	9.0	kJ/m ²	ISO 180/1A

Unnotched Izod Impact			
-30°C	800	J/m	ASTM D4812
23°C	800	J/m	ASTM D4812
-30°C ¹⁹	45	kJ/m ²	ISO 180/1U
23°C ²⁰	50	kJ/m ²	ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	78.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed, 100 mm Span ²¹	215	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 3.20 mm	190	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ²²	190	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	218	°C	ASTM D1525, ISO 306/A50 14 ²³
--	182	°C	ASTM D1525, ISO 306/B50, ISO 306/B120 ²⁴
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
Flow : -40 to 40°C	2.2E-5	cm/cm/°C	ASTM E831
Flow : 23 to 60°C	2.2E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	1.2E-4	cm/cm/°C	ASTM E831
Transverse : 23 to 60°C	1.2E-4	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.26	W/m/K	ISO 8302
RTI Elec	50.0	°C	UL 746
RTI Imp	50.0	°C	UL 746
RTI Str	50.0	°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
Electric Strength (3.20 mm, in Oil)	21	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	3.60		
60 Hz	3.60		
1 MHz	3.20		
Dissipation Factor			IEC 60250
50 Hz	2.4E-3		
60 Hz	2.4E-3		
1 MHz	0.018		
Comparative Tracking Index (CTI)	PLC 1		UL 746
Comparative Tracking Index	500	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94

0.750 mm	HB		
3.00 mm	HB		
Glow Wire Flammability Index (1.00 mm)	750	°C	IEC 60695-2-12
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (260°C, 1500 sec ⁻¹)	130	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.	Tensile Bar		
3.	5.0 mm/min		
4.	Type I, 5.0 mm/min		
5.	Type I, 5.0 mm/min		
6.	Type I, 5.0 mm/min		
7.	Type I, 5.0 mm/min		
8.	1.3 mm/min		
9.	2.0 mm/min		
10.	1.3 mm/min		
11.	2 mm/min		
12.	80*10*4 sp=62mm		
13.	80*10*4 sp=62mm		
14.	80*10*4 sp=62mm		
15.	80*10*4 sp=62mm		
16.	80*10*4		
17.	80*10*4		
18.	80*10*4		
19.	80*10*4		
20.	80*10*4		
21.	120*10*4 mm		
22.	120*10*4 mm		
23.	Rate A (50°C/h), Loading 2 (50 N)		
24.	Rate B (120°C/h), Loading 2 (50 N)		

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