Vandar® 4632Z

Celanese Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

General Information

Product Description

Vandar 4632Z is a high impact, 15% glass reinforced polyester alloy. It combines high strength and toughness with a moderate degree of rigidity. It is characterized by excellent solvent resistance, dimensional stability, and moldability.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight		
Features	• Good Dimensional Stability • Good Moldability • High Impact Resistance	• High Strength • High Toughness • Medium Stiffness	• Solvent Resistant
RoHS Compliance	• Contact Manufacturer		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.34	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	7.00	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.2 to 1.4	%	
Flow	0.40 to 0.60	%	
Water Absorption (Saturation, 73°F)	0.45	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	580000	psi	ISO 527-2/1A
Tensile Stress (Break)	8700	psi	ISO 527-2/1A/5
Tensile Strain (Break)	4.0	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	551000	psi	ISO 178
Flexural Stress (73°F)	14500	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	3.8	ft·lb/in²	
73°F	8.6	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	30	ft·lb/in²	
73°F	31	ft·lb/in²	
Notched Izod Impact Strength			ISO 180/1A
-22°F	3.3	ft·lb/in²	
73°F	8.1	ft·lb/in²	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	109		ISO 2039-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	410	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	309	°F	ISO 75-2/A
Glass Transition Temperature [2]	140	°F	ISO 11357-2

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Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	356	°F	ISO 306/B50
Melting Temperature [2]	437	°F	ISO 11357-3
CLTE - Flow	1.4E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	7.8E-5	in/in/°F	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+14	ohms	IEC 60093
Volume Resistivity	> 1.0E+14	ohms·cm	IEC 60093
Electric Strength	760	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.60		
1 MHz	4.10		
Dissipation Factor			IEC 60250
100 Hz	7.0E-3		
1 MHz	0.029		
Comparative Tracking Index	425	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.06 in)	HB		UL 94

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248 to 266	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	68 to 122	°F
Rear Temperature	446 to 464	°F
Middle Temperature	455 to 482	°F
Front Temperature	455 to 482	°F
Nozzle Temperature	464 to 500	°F
Processing (Melt) Temp	455 to 500	°F
Mold Temperature	149 to 205	°F
Injection Rate	Moderate-Fast	

Injection Notes

Feeding zone temperature: 230 to 240°C
Zone4 temperature: 240 to 260°C
Hot runner temperature: 250 to 260°C

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 10°C/min