Vandar® 4602Z

Celanese Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

General Information

Product Description

4602Z is an unfilled thermoplastic alloy with good weatherability and chemical resistance.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Chemical Resistant	• Good Weather Resistance	
RoHS Compliance	• Contact Manufacturer		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.25	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	9.00	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.7 to 2.2	%	
Flow	1.7 to 2.2	%	
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	203000	psi	ISO 527-2/1A
Tensile Stress (Yield)	4500	psi	ISO 527-2/1A/50
Tensile Stress (50% Strain)	3770	psi	ISO 527-2/1A/50
Tensile Strain (Yield)	5.5	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	> 50	%	ISO 527-2/1A/50
Flexural Modulus (73°F)	203000	psi	ISO 178
Flexural Stress (73°F)	5950	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	4.8	ft·lb/in²	
73°F	33	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	No Break		
73°F	No Break		
Notched Izod Impact Strength			ISO 180/1A
-22°F	4.8	ft·lb/in²	
73°F	38	ft·lb/in²	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	101		ISO 2039-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	230	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	118	°F	ISO 75-2/A
Glass Transition Temperature [2]	140	°F	ISO 11357-2
Vicat Softening Temperature	266	°F	ISO 306/B50

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Thermal	Nominal Value	Unit	Test Method
Melting Temperature [2]	437	°F	ISO 11357-3
CLTE - Flow	6.7E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	6.3E-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	610	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.40		
1 MHz	3.90		
Dissipation Factor			IEC 60250
100 Hz	7.5E-3		
1 MHz	0.031		
Comparative Tracking Index	600	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.03 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