

Vandar® 2100

Polybutylene Terephthalate

Celanese Corporation

Message:

Vandar 2100 is a polyester alloy designed to offer maximum impact strength at room and low temperatures. This unfilled compound is characterized by outstanding chemical resistance, dimensional stability, paintability, and toughness.

General Information	
UL YellowCard	E45575-239369
Features	Good dimensional stability
	Impact resistance, high
	Sprayable
	Low temperature impact resistance
	Good chemical resistance
	Good toughness
RoHS Compliance	Contact manufacturer
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)
	Shear Modulus vs. Temperature (ISO 11403-1)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.23	g/cm ³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	5.50	cm ³ /10min	ISO 1133
Molding Shrinkage			
Flow	1.8	%	ASTM D955
Vertical flow direction	1.7 - 2.2	%	ISO 294-4
Flow direction	1.7 - 2.2	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.20	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	109		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1700	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield, 23°C	43.4	MPa	ASTM D638
Yield	40.0	MPa	ISO 527-2/1A/50
Fracture	28.0	MPa	ISO 527-2/1A/50
50% strain	26.0	MPa	ISO 527-2/1A/50
Tensile Strain			
Yield	4.0	%	ISO 527-2/1A/50

Fracture, 23°C	150	%	ASTM D638
Nominal Tensile Strain at Break	> 50	%	ISO 527-2/1A/50
Flexural Modulus (23°C)	1650	MPa	ISO 178
Flexural Stress (23°C)	53.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	16	kJ/m ²	ISO 179/1eA
23°C	80	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact (23°C)	70	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	110	°C	ISO 75-2/B
0.45 MPa, annealed	104	°C	ASTM D648
1.8 MPa, not annealed	48.9	°C	ASTM D648
1.8 MPa, not annealed	50.0	°C	ISO 75-2/A
Glass Transition Temperature ¹	60.0	°C	ISO 11357-2
Vicat Softening Temperature	137	°C	ISO 306/B50
Melting Temperature ²	225	°C	ISO 11357-3, ASTM D3418
CLTE - Flow	1.3E-4	cm/cm/°C	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
Dielectric Strength	24	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.00		IEC 60250
1 MHz	3.60		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	7.0E-3		IEC 60250
1 MHz	0.020		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.60 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	120 - 130	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Max Regrind	25	%	
Hopper Temperature	20.0 - 50.0	°C	
Rear Temperature	230 - 240	°C	
Middle Temperature	235 - 250	°C	

Front Temperature	235 - 250	°C
Nozzle Temperature	240 - 260	°C
Processing (Melt) Temp	235 - 260	°C
Mold Temperature	65.0 - 96.0	°C
Injection Rate	Moderate-Fast	
Back Pressure	0.00 - 0.345	MPa

Injection instructions

Manifold Temperature: 250 to 260°C Zone 4 Temperature: 240 to 260°C Feed Temperature: 230 to 240°C

NOTE

1. 10°C/min
2. 10°C/min

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

