

Arnitel® PL581

Thermoplastic Copolyester Elastomer
DSM Engineering Plastics

Message:

Arnitel® PL581 is a Thermoplastic Copolyester Elastomer (TPC-ET) material. It is available in Asia Pacific, Europe, or North America for injection molding.
Primary attribute of Arnitel® PL581: Flame Rated.

General Information			
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.24	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	15.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.8	%	
Flow	1.7	%	
Water Absorption			ISO 62
Saturation, 23°C	2.5	%	
Equilibrium, 23°C, 50% RH	0.40	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, 3 sec)	53		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	210	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Break	31.0	MPa	
5.0% Strain	9.20	MPa	
10% Strain	13.2	MPa	
50% Strain	16.5	MPa	
100% Strain	17.0	MPa	
Nominal Tensile Strain at Break	400	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	16	kJ/m ²	
23°C	No Break		
Notched Izod Impact Strength			ISO 180/1A
-30°C	15	kJ/m ²	
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	100	°C	ISO 75-2/B
Vicat Softening Temperature	105	°C	ISO 306/B50

Melting Temperature ¹	218	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	1.1E-4	cm/cm/°C	
Transverse	1.1E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	21	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	4.00		IEC 60250
Dissipation Factor (1 MHz)	0.040		IEC 60250
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flammability Classification (1.60 mm)	HB		IEC 60695-11-10, -20
Injection	Nominal Value	Unit	
Drying Temperature	110	°C	
Drying Time	4.0 to 6.0	hr	
Rear Temperature	200 to 220	°C	
Middle Temperature	210 to 230	°C	
Front Temperature	220 to 240	°C	
Nozzle Temperature	230 to 250	°C	
Processing (Melt) Temp	230 to 250	°C	
Mold Temperature	20.0 to 50.0	°C	
Injection Rate	Moderate-Fast		
Back Pressure	3.00 to 10.0	MPa	
Screw Compression Ratio	2.5:1.0		
NOTE			

1. 10°C/min

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