

Arnitel® PL381

Thermoplastic Copolyester Elastomer
DSM Engineering Plastics

Message:

Arnitel® PL381 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® PL381: Flame Rated.

General Information			
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.16	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	32.0	cm ³ /10min	ISO 1133
Water Absorption			ISO 62
Saturation, 23°C	7.0	%	
Equilibrium, 23°C, 50% RH	0.40	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, 3 sec)	33		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	45.0	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Break	14.0	MPa	
5.0% Strain	2.50	MPa	
10% Strain	4.00	MPa	
50% Strain	7.00	MPa	
100% Strain	8.50	MPa	
Nominal Tensile Strain at Break	450	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength			ISO 180/1A
-30°C	No Break		
-20°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Melting Temperature ¹	212	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	1.5E-4	cm/cm/°C	
Transverse	1.5E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method

Volume Resistivity	1.0E+14	ohms·cm	IEC 60093
Electric Strength	20	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.70		
1 MHz	4.40		
Dissipation Factor			IEC 60250
100 Hz	0.031		
1 MHz	0.081		
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flammability Classification			IEC 60695-11-10, -20
1.50 mm	HB		
3.00 mm	HB		
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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