

Arnitel® EL550

Thermoplastic Copolyester Elastomer
DSM Engineering Plastics

Message:

Arnitel® EL550 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® EL550: Flame Rated.

General Information			
UL YellowCard	E47960-240192		
Processing Method	Injection Molding		
Multi-Point Data	Isochronous Stress vs. Strain (ISO 11403-1)		
	Shear Modulus vs. Temperature (ISO 11403-1)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	36.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.6	%	
Flow	1.6	%	
Water Absorption			ISO 62
Saturation, 23°C	0.65	%	
Equilibrium, 23°C, 50% RH	0.20	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, 3 sec)	51		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	170	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Break	32.0	MPa	
5.0% Strain	7.40	MPa	
10% Strain	11.1	MPa	
50% Strain	13.8	MPa	
100% Strain	13.7	MPa	
Nominal Tensile Strain at Break	640	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	25	kJ/m ²	
23°C	No Break		
Notched Izod Impact Strength			ISO 180/1A
-20°C	No Break		

23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	110	°C	ISO 75-2/B
Vicat Softening Temperature	90.0	°C	ISO 306/B50
Melting Temperature ¹	207	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	2.0E-4	cm/cm/°C	
Transverse	2.0E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+13	ohms·cm	IEC 60093
Electric Strength	21	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.40		
1 MHz	4.00		
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	100	°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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