

Arnitel® UM551

Thermoplastic Copolyester Elastomer

DSM Engineering Plastics

Message:

Arnitel® UM551 is a Thermoplastic Copolyester Elastomer (TPC-ES) material. It is available in Europe or North America for film extrusion or injection molding.

Important attributes of Arnitel® UM551 are:

Flame Rated

Impact Resistant

General Information			
UL YellowCard	E47960-240184		
Features	Good Impact Resistance		
Processing Method	Film Extrusion		
	Injection Molding		

Physical	Nominal Value	Unit	Test Method
Density	1.26	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	14	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	13.8	cm ³ /10min	ISO 1133
Water Absorption			ISO 62
Saturation, 23°C	0.60	%	
Equilibrium, 23°C, 50% RH	0.25	%	

Hardness	Nominal Value	Unit	Test Method
Shore Hardness			ISO 868
Shore D, 3 sec	55		
Shore D, 15 sec	55		

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	200	MPa	ISO 527-2
Tensile Stress			ISO 527-2
10% Strain	13.4	MPa	
100% Strain	24.0	MPa	

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	6.0	kJ/m ²	
23°C	No Break		

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	80.0	°C	ISO 75-2/B
Vicat Softening Temperature	85.0	°C	ISO 306/B50

Melting Temperature	200	°C	ISO 11357-3
CLTE - Flow	1.6E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flammability Classification			IEC 60695-11-10, -20
0.750 mm	HB		
1.50 mm	HB		
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		

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