

Arnitel® EM400

Thermoplastic Copolyester Elastomer
DSM Engineering Plastics

Message:

Arnitel®EM400 is a thermoplastic polyester elastomer (TPC-ET) material. This product is available in North America, Europe or Asia Pacific. The processing method is extrusion or injection molding. Arnitel®The main characteristics of EM400 are: flame retardant/rated flame.

General Information			
UL YellowCard	E47960-524614		
Processing Method	Extrusion		
	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	1.11	g/cm ³	ISO 1183
Apparent Density	0.69	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	33.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Vertical flow direction	1.5	%	ISO 294-4
Flow direction	1.5	%	ISO 294-4
Water Absorption			ISO 62
Saturated, 23°C	0.75	%	ISO 62
Equilibrium, 23°C, 50% RH	0.30	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 3 sec)	33		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	40.0	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Fracture	21.0	MPa	ISO 527-2
5.0% strain	2.10	MPa	ISO 527-2
10% strain	3.50	MPa	ISO 527-2
50% strain	6.50	MPa	ISO 527-2
100% strain	7.30	MPa	ISO 527-2
Nominal Tensile Strain at Break	830	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	No Break		ISO 179/1eA

23°C	No Break		ISO 179/1eA
Notched Izod Impact			ISO 180/1A
-20°C	No Break		ISO 180/1A
23°C	No Break		ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Melting Temperature ¹	195	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.2E-4	cm/cm/°C	ISO 11359-2
Lateral	2.2E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Dielectric Strength	20	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.10		IEC 60250
1 MHz	4.00		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	1.0E-3		IEC 60250
1 MHz	0.017		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 - 6.0	hr	
Rear Temperature	190 - 210	°C	
Middle Temperature	200 - 220	°C	
Front Temperature	210 - 230	°C	
Nozzle Temperature	220 - 240	°C	
Processing (Melt) Temp	220 - 240	°C	
Mold Temperature	20.0 - 50.0	°C	
Injection Rate	Moderate-Fast		
Back Pressure	3.00 - 10.0	MPa	
Screw Compression Ratio	2.5:1.0		
Extrusion	Nominal Value	Unit	
Melt Temperature	205 - 240	°C	
NOTE			
1.	10°C/min		

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