

Arnitel® EM460

Thermoplastic Copolyester Elastomer
DSM Engineering Plastics

Message:

Arnitel® EM460 is a Thermoplastic Copolyester Elastomer (TPC-ET) material. It is available in Asia Pacific, Europe, or North America for extrusion or injection molding.

Important attributes of Arnitel® EM460 are:

Flame Rated
Impact Resistant
Mold Release Agent

General Information	
UL YellowCard	E47960-240195
Additive	Mold Release
Features	Good Impact Resistance
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	1.15	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	46.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.5	%	
Flow	1.3	%	
Water Absorption			ISO 62
Saturation, 23°C	0.70	%	
Equilibrium, 23°C, 50% RH	0.30	%	

Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, 3 sec)	40		ISO 868

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	85.0	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Break	23.0	MPa	
5.0% Strain	3.90	MPa	
10% Strain	6.60	MPa	
50% Strain	9.20	MPa	
100% Strain	9.30	MPa	

Nominal Tensile Strain at Break	800	%	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
-20°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	50.0	°C	ISO 306/B50
Melting Temperature ¹	189	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	1.6E-4	cm/cm/°C	
Transverse	1.6E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+13	ohms·cm	IEC 60093
Electric Strength	20	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	4.40		IEC 60250
Dissipation Factor (1 MHz)	0.035		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	190 to 210	°C	
Middle Temperature	200 to 220	°C	
Front Temperature	210 to 230	°C	
Nozzle Temperature	220 to 240	°C	
Processing (Melt) Temp	220 to 240	°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		
Extrusion	Nominal Value	Unit	
Melt Temperature	195 to 240	°C	
NOTE			
1.	10°C/min		

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