Arnitel® EM460-08

Envalior - *Thermoplastic Copolyester Elastomer*

General Information

Product Description			
Food Contact Quality, Injection Molding or Extrusion Grade			
General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Food Contact Acceptable		
Processing Method	• Extrusion	• Injection Molding	
Resin ID	• TPC-ET		

Properties [1]

Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.15	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	46	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.5	%	
Flow	1.3	%	
Water Absorption (Saturation, 73°F)	0.70	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.30	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	12300	psi	ISO 527-1
Tensile Stress			ISO 527-2
Break	3340	psi	
Across Flow : Break	2900	psi	
Tensile Stress			ISO 527-2
5.0% Strain	566	psi	
10% Strain	957	psi	
50% Strain	1330	psi	
100% Strain	1350	psi	
300% Strain	1710	psi	
Tensile Strain			ISO 527-2
Break	> 300	%	
Across Flow : Break	850	%	
Nominal Tensile Strain at Break	700	%	ISO 527-2
Flexural Modulus	13800	psi	ISO 178
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tear Strength [2]			ISO 34-1
Across Flow	680	lbf/in	
Flow	685	lbf/in	
Compression Set (158°F)	50	%	ISO 815
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	No Break		
73°F	No Break		
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	No Break		
73°F	No Break		

Notched Izod Impact Strength			ISO 180/1A
-4°F	No Break		
73°F	No Break		
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D, 3 sec)	43		ISO 868
Thermal	**Nominal Value**	**Unit**	**Test Method**
Melting Temperature [3]	372	°F	ISO 11357-3
CLTE - Flow	8.9E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	8.9E-5	in/in/°F	ISO 11359-2
RTI Elec (0.06 in)	122	°F	UL 746B
RTI Imp (0.06 in)	122	°F	UL 746B
RTI Str (0.06 in)	122	°F	UL 746B
Effective Thermal Diffusivity	9.28E-5	in²/s	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+11	ohms·m	IEC 62631-3-1
Relative Permittivity (1 MHz)	4.40		IEC 62631-2-1
Dissipation Factor (1 MHz)	0.035		IEC 62631-2-1
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Melt Density	0.928	g/cm³	
Melt Specific Heat	0.430	Btu/lb/°F	
Melt Thermal Conductivity	0.69	Btu·in/hr/ft²/°F	ASTM E1461

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Method B, Angle

[3] 10°C/min