

**Arnitel® CM551**
*Envalior - Thermoplastic Copolyester Elastomer*
**General Information**
**Product Description**

Heat Resistant Copolyester

Design Challenge

Degradation &amp; Stability | Thermo-oxidative stability

**General**

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Features	• Good Heat Resistance		
Processing Method	• Extrusion	• Injection Molding	
Resin ID	• TPC-ES		

**Properties <sup>1</sup>**

Physical	Nominal Value	Unit	Test Method
Density	1.24	g/cm <sup>3</sup>	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	8.0	cm <sup>3</sup> /10min	ISO 1133
Water Absorption (24 hr, 73°F)	0.27	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.11	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	23200	psi	ISO 527-1
Tensile Stress			ISO 527-2
Break	4930	psi	
Across Flow : Break	4930	psi	
Tensile Stress			ISO 527-2
5.0% Strain	1220	psi	
Across Flow : 5.0% Strain	1230	psi	
10% Strain	1740	psi	
Across Flow : 10% Strain	1740	psi	
50% Strain	2320	psi	
Across Flow : 50% Strain	2320	psi	
100% Strain	2320	psi	
Across Flow : 100% Strain	2180	psi	
Tensile Strain			ISO 527-2
Break	> 300	%	
Across Flow : Break	660	%	
Nominal Tensile Strain at Break	450	%	ISO 527-2
Elastomers	Nominal Value	Unit	Test Method
Tear Strength <sup>2</sup>			ISO 34-1
Across Flow	828	lbf/in	
Flow	914	lbf/in	
Compression Set			ISO 815
73°F	18	%	
158°F	42	%	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	2.9	ft·lb/in <sup>2</sup>	
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
-22°F	3.0 ft·lb/in <sup>2</sup>	
-4°F	No Break	
73°F	No Break	
<b>Hardness</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Shore Hardness		ISO 868
Shore D, 3 sec	51	
Shore D, 15 sec	51	
<b>Thermal</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Glass Transition Temperature <sup>3</sup>	14.0 °F	ISO 11357-2
Vicat Softening Temperature	142 °F	ISO 306/B50
Melting Temperature <sup>3</sup>	401 °F	ISO 11357-3
CLTE - Transverse	1.1E-4 in/in/°F	ISO 11359-2
<b>Electrical</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Volume Resistivity	> 1.0E+13 ohms·m	IEC 62631-3-1
Electric Strength	640 V/mil	IEC 60243-1
Relative Permittivity		IEC 62631-2-1
100 Hz	4.34	
1 MHz	3.58	
Dissipation Factor		IEC 62631-2-1
100 Hz	0.021	
1 MHz	0.046	
Comparative Tracking Index	600 V	IEC 60112

#### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Method B, Angle

<sup>3</sup> 10°C/min

