

Arnitel® ECO L550
Envalior - Thermoplastic Copolyester Elastomer
General Information
Product Description

34% Renewable Content, Injection Molding, Food Contact Quality

Design Challenge

Haptics & Aesthetics | Stain and scratch resistance

Life cycle assessment

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Features	• Food Contact Acceptable • Renewable Resource Content
Processing Method	• Injection Molding
Resin ID	• TPC

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.17	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	44	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.5	%	
Flow	1.3	%	
Water Absorption (24 hr, 73°F)	0.15	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.030	%	ISO 62
Biobased Carbon Content	34	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	23900	psi	ISO 527-1
Tensile Stress (Break)	3920	psi	ISO 527-2
Tensile Stress			ISO 527-2
5.0% Strain	1190	psi	
10% Strain	1780	psi	
50% Strain	2130	psi	
100% Strain	2020	psi	
Tensile Strain (Break)	• > 50 % • > 300		ISO 527-2
Nominal Tensile Strain at Break	600	%	ISO 527-2
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ²	754	lbf/in	ISO 34-1
Compression Set (158°F)	38	%	ISO 815
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	2.4	ft·lb/in ²	
73°F	No Break		
Notched Izod Impact Strength			ISO 180/1A
-22°F	2.0	ft·lb/in ²	
73°F	No Break		
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, 3 sec)	55		ISO 868



Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature ³	1.40	°F	ISO 11357-2
Vicat Softening Temperature	--	138 °F	ISO 306/B50
--	--	313 °F	ISO 306/A50
Melting Temperature ³	385	°F	ISO 11357-3
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 62631-3-2
Volume Resistivity	> 1.0E+13	ohms·m	IEC 62631-3-1
Electric Strength	510	V/mil	IEC 60243-1
Additional Information	Nominal Value	Unit	Test Method
Sustainability	Bio-based		

Notes

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

² Method B, Angle

³ 10°C/min

