

Arnitel® TPE

General Information

Product Description

>50% Renewable Content, 3D printing grade

Special Features:

- Contains renewable content

Arnitel® is a high-performance ThermoPlastic Copolyester (TPC) that offers you a unique combination of flexibility, high temperature resistance and strength - plus excellent processing characteristics. In industries ranging from automotive to E&E, Arnitel® is increasingly being used as a lighter, smarter, greener alternative to conventional rubbers, reducing environmental impact and ultimately, system costs. The product is supported by an experienced and knowledgeable global team continuously working on new ideas and applications, as well as exploring new markets. By listening to your needs and understanding your process and products, we develop solutions that make a real difference.

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Features	• Renewable Resource Content
Processing Method	• 3D Printing, Fused Filament Fabrication (FFF)
Resin ID (ISO 1043)	• TPC

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.10	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	45.0	cm ³ /10min	ISO 1133
Water Absorption (Equilibrium, 23°C, 50% RH)	0.040	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ISO 527-2
3D Printed ²	29.0	MPa	
3D Printed ³	29.0	MPa	
Tensile Stress			ISO 527-2
Break, 3D Printed ⁴	7.60	MPa	
Break, 3D Printed ⁵	8.00	MPa	
Tensile Strain			ISO 527-2
Break, 3D Printed ⁴	390	%	
Break, 3D Printed ⁵	350	%	
Nominal Tensile Strain at Break	> 50	%	ISO 527-2
Elastomers	Nominal Value	Unit	Test Method
Tear Strength	75	kN/m	ISO 34-1
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, 3 sec)	34		ISO 868
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature ⁶	-35.0	°C	ISO 11357-2
Vicat Softening Temperature	90.0	°C	ISO 306/A50
Melting Temperature ⁶	158	°C	ISO 11357-3
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	20	kV/mm	IEC 60243-1
Flammability	Nominal Value	Unit	Test Method
Flammability Classification (1.6 mm)	HB		IEC 60695-11-10, -20

Notes

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

² Tensile Bar 45°-45°

³ Tensile Bar 0°-90°

⁴ Tensile bar 45°-45°

⁵ Tensile bar 0°-90°

⁶ 10°C/min

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