



**Technical Products, Inc.**

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## Torlon® 4301 Material Specifications

Torlon® has superior resistance to elevated temperatures. It is capable of performing under severe stress conditions at continuous temperatures to 500°F (260°C). Torlon® has extremely low coefficient of linear thermal expansion.

Physical Properties	Units	Test	4301
Density	lb/in <sup>3</sup> g/cm <sup>3</sup>	D792	0.052 1.45
Water Absorption, 24 hrs.	%	D570	0.4
Water Absorption, Saturation	%	D570	-

Mechanical Properties	Units	Test	4301
Tensile Strength	psi	D638	12,000
Tensile Modulus	psi	D638	800,000
Tensile Elongation at Break	%	D638	3
Flexural Strength	psi	D790	23,000
Flexural Modulus	psi	D790	800,000
Compressive Strength	psi	D695	22,000
Compressive Modulus	psi	D695	950,000
Hardness Rockwell	-	D785	M106 (E70)
Izod Impact Notched	ft-lb/in	D256	0.8

Thermal Properties	Units	Test	4301
Coefficient of Linear Thermal Expansion	X 10 <sup>-5</sup> in./in./°F	D696 E831	1.4 -
Heat Deflection Temperature	@264 psi °F/°C	D648	534 / 279
Melting Temperature	°F/°C	D3418	527 / 275
Max. Operating Temperature	°F/°C	-	500 / 260
Thermal Conductivity	BTU- in/ft <sup>2</sup> -hr.-°F x 10 <sup>-4</sup> cal/cm-sec-°C	C177	3.70 12.8
Flammability Rating	-	UL94	V - 0

Electrical Properties	Units	Test	4301
Dielectric Strength	(V/mil) short time, 1/8" thick	D149	-
Dielectric Constant	@1 MHz	D150	6.0
Dissipation Factor	@1 MHz	D150	0.037
Volume Resistivity	Ohm-cm @50% RH	D257	> 10 <sup>13</sup>

\*\*The information provided in this table is a compilation of publicly available data. This information is provided for comparison purposes only, and is not intended to be warrantable. Further, Technical Products, Inc. disclaims any and all liability from errors, in accuracies, or omissions.