

## Torlon\* 5530

Torlon\* 5530 is 30% glass reinforced, compression molded PAI. It is ideal for higher load structural or electronic applications. This grade is similar in composition to Torlon 5030 PAI. It is selected for larger shapes or when the greatest degree of dimensional control is required.

Torlon is the highest performing melt processable plastic. It has superior resistance to elevated temperatures. It is capable of performing under severe stress conditions at continuous temperatures to 500°F (260°C). Parts machined from Torlon stock shapes provide greater compressive strength and higher impact resistance than most advanced engineering plastics. Its extremely low coefficient of linear thermal expansion and high creep resistance deliver excellent dimensional stability over its entire use range. Torlon is an amorphous material with a Tg (glass transition temperature) of 537°F (280°C).

Property	Method	Unit	Value
<b>Mechanical</b>			
Specific Gravity, 73°F	D792		1.61
Tensile Strength, 73°F	D638	psi	15,000
Tensile Modulus of Elasticity, 73°F	D638	psi	900,000
Elongation, 73°F	D638	%	3.0
Flexural Strength, 73°F	D790	psi	20,000
Flexural Modulus, 73°F	D790	psi	900,000
Compressive Strength, 10% Def., 73°F	D695	psi	27,000
Compressive Modulus of Elasticity, 73°F	D695	psi	600,000
Hardness, Rockwell, Scale as noted, 73°F	D785		E85 (M125)
Hardness, Durometer, Shore D scale, 73°F	D2240		D90
Izod Impact (notched), 73°F	D256 Type A	ft-lb/in	0.7
Coefficient of Friction (Dry vs Steel) Dynamic	PTM55007		0.20
Limiting PV, 73°F	PTM55007	psi-fpm	20,000
<b>Thermal</b>			
Coefficient of linear Thermal Expansion	E-831(TMA)	in/in/°F	2.60 x 10 <sup>-5</sup>
Deflection Temperature 264 psi	D648	°F	520
Tg-Glass Transition (amorphous)	D3418	°F	527
Continuous Service Temperature in Air (Max.)		°F	500
Thermal Conductivity		BTU-in/(hr-ft <sup>2</sup> °F)	2.50

**For additional information about our products call 1-800-366-0300 or via e-mail at [select.support@qplas.com](mailto:select.support@qplas.com)**

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# Product Data Sheet



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Property	Method	Unit	Value
<b>Electrical</b>			
Dielectric Strength, Short Term	D149(2)	Volts/mil	700
Surface Resistivity	EOS/ESD S11.11	Ohm/square	10 <sup>13</sup>
Dielectric Constant, 10 <sup>6</sup> Hz	D150(2)		6.30
Dissipation Factor, 10 <sup>6</sup> Hz	D150(2)		0.050
<b>Chemical</b>			
Acids, Weak, 73°F/23°C, acetic acid, dilute hydrochloric or sulfuric			Acceptable Service
Acids, Strong, 73°F/23°C, conc. hydrochloric or sulfuric			Limited Service
Alkalies, Weak, 73°F/23°C, dilute ammonia or sodium hydroxide			Limited Service
Alkalies, Strong, 73°F/23°C, conc. ammonia or sodium hydroxide			Unacceptable
Hydrocarbons-Aromatic, 73°F/23°C, benzene, toluene			Acceptable Service
Hydrocarbons-Aliphatic, 73°F/23°C, gasoline, hexane, grease			Acceptable Service
Ketones, Esters, 73°F/23°C, acetone, methyl ethyl ketone			Acceptable Service
Ethers, 73°F/23°C, diethyl ether, tetrahydrofuran			Acceptable Service
Chlorinated Solvents, 73°F/23°C, methylene chloride, chloroform			Acceptable Service
Alcohols, 73°F/23°C, methanol, ethanol, anti-freeze			Acceptable Service
Inorganic Salt Solutions, 73°F/23°C, sodium chloride, potassium cyanate			Limited Service
Continuous Sunlight, 73°F/23°C			Limited Service
<b>Miscellaneous</b>			
Water Absorption Immersion, 24 hr	D570	%	0.30
Water Absorption Immersion, Sat.	D570	%	1.50
Ionic Impurities - Na (Sodium)	Total Digestion	ppm	1,200.00
Ionic Impurities - K (Potassium)	Total Digestion	ppm	250.00
Ionic Impurities - Fe (Iron)	Total Digestion	ppm	610.00
Outgassing TML (Total Mass Loss)	E595	%	0.90
CVCM (Collected Volatile Condensable Material)	E595	%	0.00
WVR(Water Vapor Regained)	E595	%	0.20
<b>Compliance</b>			
UL94			V-0

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