

3D P30 Carbon/Carbon  
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 Compiled by BTR

<b>Property</b>	<b>Radial Direction</b>	<b>Hoop Direction</b>	<b>Thickness Direction</b>
$E^T$ , msi	5.2 (5.6)	5.4	
$F^{TU}$ , ksi	12.6 (8.5)	11.2	1.89 (2.45)
$E^C$ , msi	2.94	4.92	0.53
$F^{CU}$ , ksi	11.8	14.5	17.5
$E^{FLEX}$ , msi	4.7 (5.25)		
$F^{FLEX}$ , ksi	18.1 (13.06)		
$k$ , W/m <sup>0</sup> K	209 (212)	199 (205)	129 (193)
$\alpha$ , ppm <sup>0</sup> K	0.3	0.5	4.3

Notes:

1. Symbols E, F, k, and  $\alpha$  denote Young's modulus, strength, thermal conductivity, and CTE, respectively.
2. Superscripts T, C, and FLEX designate tension, compression, and flexure, respectively.
3. Values in parentheses are design properties specified in Tracker's lower-tray stress-analysis.