

## SECTION 2.3

Rolls Royce RB211-535FAN COWL DOORS AND SUPPORT STRUCTUREMATERIAL ALLOWABLES

GRAPHITE - EPOXY FABRIC PER RMS 060 GROUP 1, TYPE 2, CLASS 1									
TEMPERATURE	- 67 ° F				72 ° F				250 ° F
	%D = 1.5	%D = 2.0	%D = 2.7	%D = 1.5	%D = 2.0	%D = 2.7	%D = 1.5	%D = 2.0	%D = 2.7
F <sub>BEARING</sub> (ULT)									
L-DIRECTION	46460	48260	61650	47780	50260	75210	40680	41380	42600
T-DIRECTION	46730	52860	66650	45820	56080	69610	36180	39940	41120
B-DIRECTION	52300	67850	77100	50040	64790	75700	48150	52540	60340
F <sub>BEARING</sub> (YIELD)									
L-DIRECTION	41540	42190	50810	29820	31280	45440	20360	24310	41820
T-DIRECTION	39790	47560	62020	28090	35030	46620	18410	21520	40560
B-DIRECTION	49340	57840	61920	38560	41080	55080	29180	31160	42210

NOTES: 1) THE VALUES OF ALLOWABLE STRESS AS TABULATED ARE (PSI) POUNDS-FORCE PER INCH<sup>2</sup>  
2) USE OF THE ABOVE ALLOWABLES MUST BE ACCOMPANIED BY THE USE OF  
THE APPROPRIATE ENVIRONMENTAL AND BATCH FACTORS AS PRESENTED  
ON THE FOLLOWING PAGE -

3) \*VALUES AS TABULATED ARE STATISTICALLY "A-BASIS" AND HAVE BEEN  
EXTRACTED FROM REFERENCE E.6 -

PM5066

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GRAPHITE - EPOXY FABRIC PER RMS 060 GROUP 1, TYPE 2, CLASS 1		72 ° F		250 ° F	
TEMPERATURE		- 67 ° F			
CHARACTERISTIC	F <sub>ULT</sub>	MODULUS	F <sub>ULT</sub>	MODULUS	F <sub>ULT</sub>
TENSION					
L-DIRECTION	92180 PSI	11.41x10 <sup>6</sup> PSI	96650 PSI	11.46x10 <sup>6</sup> PSI	99060 PSI
T-DIRECTION	88750 PSI	11.15x10 <sup>6</sup> PSI	95250 PSI	9.97x10 <sup>6</sup> PSI	97870 PSI
COMPRESSION					
L-DIRECTION	95710 PSI	10.03x10 <sup>6</sup> PSI	79080 PSI	10.53x10 <sup>6</sup> PSI	53610 PSI
T-DIRECTION	112040 PSI	10.73x10 <sup>6</sup> PSI	101480 PSI	10.53x10 <sup>6</sup> PSI	54810 PSI
SHEAR					
L-DIRECTION	12830 PSI	2.31x10 <sup>6</sup> PSI	19860 PSI	1.30x10 <sup>6</sup> PSI	8450 PSI
T-DIRECTION	17680 PSI	1.93x10 <sup>6</sup> PSI	12320 PSI	1.45x10 <sup>6</sup> PSI	9480 PSI
INTERLAMINAR SHEAR					
L-DIRECTION	8290 PSI	—	6224 PSI	—	6680 PSI
T-DIRECTION	6760 PSI	—	6770 PSI	—	5630 PSI

NOTES: 1)

VALUES AS TABULATED ARE STATISTICALLY "A-BASIS" AND ARE FROM REFERENCE E.6

2)

USE OF THESE VALUES MUST BE ACCOMPANIED BY USAGE OF THE APPROPRIATE ENVIRONMENTAL AND BATCH FACTORS.