Department of Aerospace Engineering
AE-681A Composite Materials
Fibre Matrix properties for Project

Fibre type	AS4	T300	E-glass 21xK43 Gevetex	Silenka E-Glass 1200tex
Longitudinal modulus, E_1 (GPa)	225	230	80	74
Transverse modulus, E_2 (GPa)	15	15	80	74
In-plane shear modulus, G_{12} (GPa)	15	15	33·33	30·8
Major Poisson's ratio, ν_{12}	0·2	0·2	0·2	0·2
Transverse shear modulus, G_{23} (GPa)	7	7	33·33	30·8
Longitudinal thermal coefficient, α_1 (10^{-6}/°C)	−0·5	−0·7	4·9	4·9
Transverse thermal coefficient, α_2 (10^{-6}/°C)	15	12	4·9	4·9

Matrix type	3501-6 epoxy	BSL914C epoxy	LY556/HT907/ DY063 epoxy	MY750/HY917/ DY063 epoxy
Modulus, E_m (GPa)	4·2	4·0	3·35	3.35
Poisson's ratio, ν_m	0·34	0·35	0·35	0·35
Thermal coefficient, α_m (10^{-6}/°C)	45	55	58	58

Material ID	Fibre Type	Matrix Type
1	AS4	3501-6 epoxy
2	T300	BSL914C epoxy
3	E-glass 21xK43 Gevetex	LY556/HT907/ DY063 epoxy
4	Silenka E-Glass 1200tex	MY750/HY917/ DY063 epoxy
5	AS4	BSL914C epoxy
6	T300	3501-6 epoxy
7	E-glass 21xK43 Gevetex	MY750/HY917/ DY063 epoxy
8	Silenka E-Glass 1200tex	LY556/HT907/ DY063 epoxy
9	AS4	LY556/HT907/ DY063 epoxy
10	T300	MY750/HY917/ DY063 epoxy
11	E-glass 21xK43 Gevetex	3501-6 epoxy
12	Silenka E-Glass 1200tex	BSL914C epoxy
13	AS4	MY750/HY917/ DY063 epoxy
14	T300	LY556/HT907/ DY063 epoxy
15	E-glass 21xK43 Gevetex	BSL914C epoxy
16	Silenka E-Glass 1200tex	3501-6 epoxy