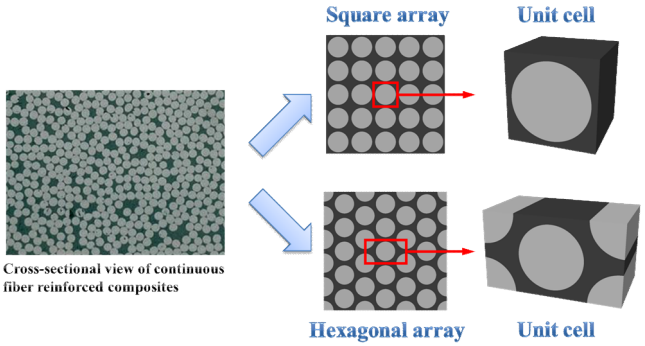
■ Theory

Representative elementary volume (RVE) is the smallest volume over which a measurement can be made that will yield a value representative of the whole. In the case of periodic materials, one simply chooses a periodic unit cell (which, however, may be non-unique), but in random media, the situation is much more complicated.



Cross-sectional view of continuous fiber reinforced composites

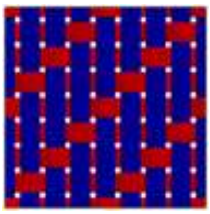
■ Material properties

☐ Weave

Brand	SK Chemical
Pattern	Woven
Fiber material	Carbon
Lay up type	Multi layer

☐ Material properties

Property	Unit	Value
E-Modulus	GPa	110
Poisson's ratio	-	0.27
Density	g/mm^3	1.88

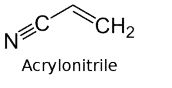


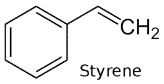
☐ Resin

Type	PE

☐ Material properties

Property	Unit	Value
E-Modulus	MPa	323
Poisson's ratio	-	0.26
Density	g/mm^3	1.69



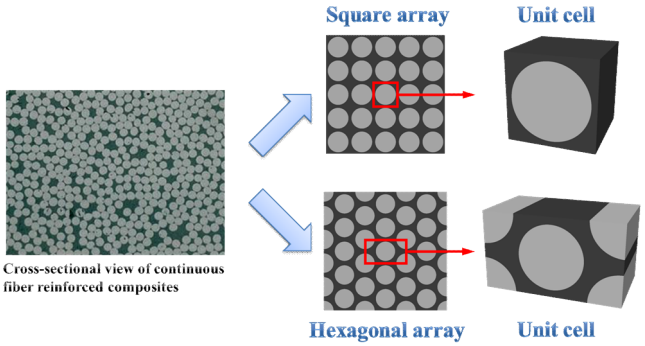


■ Property according to direction(XYZ)

No.	Symbol	Properties	Unit	Value	Notes
1	ρ	Density	g/mm^3	1.773E-09	-
2	E_1	Young's Modulus X	MPa	149388.8	Longitudinal modulus
3	E_2	Young's Modulus Y	MPa	10893.12	Transverse Modulus
4	E_3	Young's Modulus Z	MPa	11074.672	-
5	ν_{12}	Poisson's ratio XY	MPa	0.581862	-
6	ν_{13}	Poisson's ratio YZ	MPa	0.4757115	-
7	ν_{23}	Poisson's ratio XZ	MPa	0.302325	-
8	G_{12}	Shear Modulus XY	MPa	3648.848	In-plane shear modulus
9	G_{13}	Shear Modulus YZ	MPa	4039.796	Out-of-plane shear modulus
10	G_{23}	Shear Modulus XZ	MPa	4050.913	Out-of-plane shear modulus
11	S_{11T}	Longitudinal Tensile strength	MPa	5006.859	Strain: 0.03%
12	S_{11C}	Longitudinal Compressive strength	MPa	-4096.521	Strain: 0.03%
13	S_{22T}	Transverse Tensile strength	MPa	3431.358	Strain: 0.03%
14	S_{22C}	Transverse compressive strength	MPa	-403.0484	Strain: 0.03%
15	S_{33T}	Tensile strength	MPa	367.6455	Strain: 0.03%
16	S_{33C}	Compressive strength	MPa	-408.495	Strain: 0.03%
17	S_{12S}	Out-of-plane shear strength	MPa	140.8392	-
18	S_{23S}	Shear strength	MPa	169.2342	-
19	k	Thermal conductivity	W/m·K	458.5275	
20	C_p	Specific heat	kJ/kg·K	424.05	

■ Theory

Representative elementary volume (RVE) is the smallest volume over which a measurement can be made that will yield a value representative of the whole. In the case of periodic materials, one simply chooses a periodic unit cell (which, however, may be non-unique), but in random media, the situation is much more complicated.



Cross-sectional view of continuous fiber reinforced composites

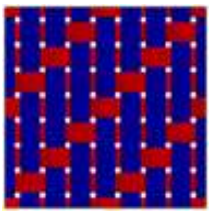
■ Material properties

☐ Weave

Brand	SK Chemical
Pattern	Woven
Fiber material	Carbon
Lay up type	Multi layer

☐ Material properties

Property	Unit	Value
E-Modulus	GPa	102
Poisson's ratio	-	0.27
Density	g/mm^3	1.61

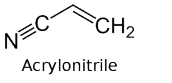


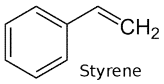
☐ Resin

Type	PE

☐ Material properties

Property	Unit	Value
E-Modulus	GPa	365
Poisson's ratio	-	0.27
Density	g/mm^3	1.55



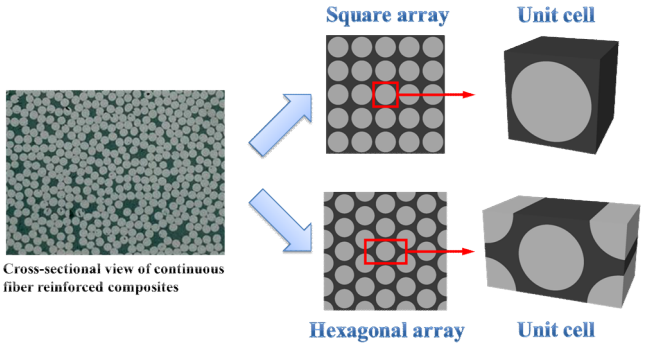


■ Property according to direction(XYZ)

No.	Symbol	Properties	Unit	Value	Notes
1	ρ	Density	g/mm^3	1.887E-09	-
2	E_1	Young's Modulus X	MPa	123712.6	Longitudinal modulus
3	E_2	Young's Modulus Y	MPa	13253.296	Transverse Modulus
4	E_3	Young's Modulus Z	MPa	11800.88	-
5	ν_{12}	Poisson's ratio XY	MPa	0.5543415	-
6	ν_{13}	Poisson's ratio YZ	MPa	0.566136	-
7	ν_{23}	Poisson's ratio XZ	MPa	0.3482784	-
8	G_{12}	Shear Modulus XY	MPa	3583.69	In-plane shear modulus
9	G_{13}	Shear Modulus YZ	MPa	3616.269	Out-of-plane shear modulus
10	G_{23}	Shear Modulus XZ	MPa	5262.401	Out-of-plane shear modulus
11	S_{11T}	Longitudinal Tensile strength	MPa	4306.599	Strain: 0.03%
12	S_{11C}	Longitudinal Compressive strength	MPa	-4341.612	Strain: 0.03%
13	S_{22T}	Transverse Tensile strength	MPa	2941.164	Strain: 0.03%
14	S_{22C}	Transverse compressive strength	MPa	-367.6455	Strain: 0.03%
15	S_{33T}	Tensile strength	MPa	362.1989	Strain: 0.03%
16	S_{33C}	Compressive strength	MPa	-285.9465	Strain: 0.03%
17	S_{12S}	Out-of-plane shear strength	MPa	130.617	-
18	S_{23S}	Shear strength	MPa	147.654	-
19	k	Thermal conductivity	W/m·K	380.408	
20	C_p	Specific heat	kJ/kg·K	424.05	

■ Theory

Representative elementary volume (RVE) is the smallest volume over which a measurement can be made that will yield a value representative of the whole. In the case of periodic materials, one simply chooses a periodic unit cell (which, however, may be non-unique), but in random media, the situation is much more complicated.



Cross-sectional view of continuous fiber reinforced composites

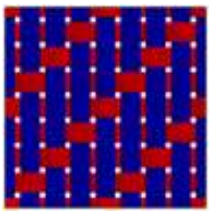
■ Material properties

☐ Weave

Brand	SK Chemical
Pattern	Woven
Fiber material	Carbon
Lay up type	Multi layer

☐ Material properties

Property	Unit	Value
E-Modulus	GPa	105
Poisson's ratio	-	0.26
Density	g/mm^3	1.85

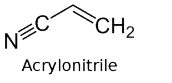


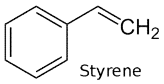
☐ Resin

Type	PE

☐ Material properties

Property	Unit	Value
E-Modulus	MPa	316
Poisson's ratio	-	0.29
Density	g/mm^3	1.87



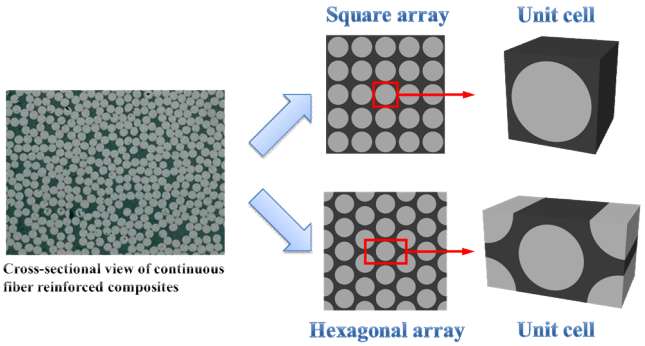


■ Property according to direction(XYZ)

No.	Symbol	Properties	Unit	Value	Notes
1	ρ	Density	g/mm^3	2.002E-09	-
2	E_1	Young's Modulus X	MPa	140052	Longitudinal modulus
3	E_2	Young's Modulus Y	MPa	13071.744	Transverse Modulus
4	E_3	Young's Modulus Z	MPa	10166.912	-
5	ν_{12}	Poisson's ratio XY	MPa	0.5779305	-
6	ν_{13}	Poisson's ratio YZ	MPa	0.39315	-
7	ν_{23}	Poisson's ratio XZ	MPa	0.3192552	-
8	G_{12}	Shear Modulus XY	MPa	4365.586	In-plane shear modulus
9	G_{13}	Shear Modulus YZ	MPa	4333.007	Out-of-plane shear modulus
10	G_{23}	Shear Modulus XZ	MPa	4050.913	Out-of-plane shear modulus
11	S_{11T}	Longitudinal Tensile strength	MPa	3851.43	Strain: 0.03%
12	S_{11C}	Longitudinal Compressive strength	MPa	-3991.482	Strain: 0.03%
13	S_{22T}	Transverse Tensile strength	MPa	2941.164	Strain: 0.03%
14	S_{22C}	Transverse compressive strength	MPa	-285.9465	Strain: 0.03%
15	S_{33T}	Tensile strength	MPa	389.4319	Strain: 0.03%
16	S_{33C}	Compressive strength	MPa	-313.1795	Strain: 0.03%
17	S_{12S}	Out-of-plane shear strength	MPa	153.333	-
18	S_{23S}	Shear strength	MPa	132.8886	-
19	k	Thermal conductivity	W/m·K	427.959	
20	C_p	Specific heat	kJ/kg·K	508.86	

■ Theory

Representative elementary volume (RVE) is the smallest volume over which a measurement can be made that will yield a value representative of the whole. In the case of periodic materials, one simply chooses a periodic unit cell (which, however, may be non-unique), but in random media, the situation is much more complicated.



Cross-sectional view of continuous fiber reinforced composites

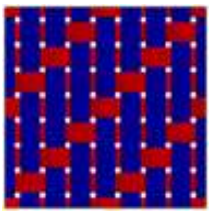
■ Material properties

☐ Weave

Brand	SK Chemical
Pattern	Woven
Fiber material	Carbon
Lay up type	Multi layer

☐ Material properties

Property	Unit	Value
E-Modulus	GPa	123
Poisson's ratio	-	0.26
Density	g/mm^3	1.56

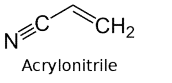


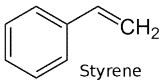
☐ Resin

Type	PE

☐ Material properties

Property	Unit	Value
E-Modulus	GPa	342
Poisson's ratio	-	0.27
Density	g/mm^3	1.87



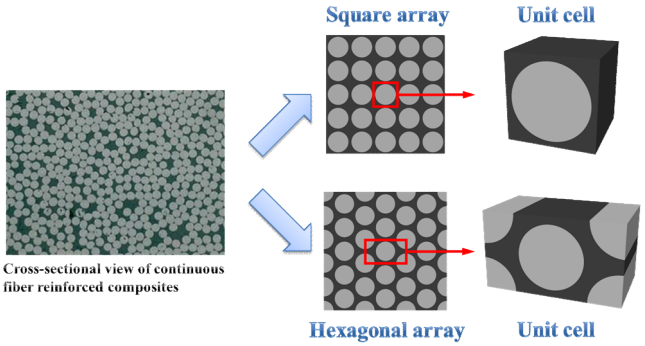


■ Property according to direction(XYZ)

No.	Symbol	Properties	Unit	Value	Notes
1	ρ	Density	g/mm^3	1.630E-09	-
2	E_1	Young's Modulus X	MPa	136550.7	Longitudinal modulus
3	E_2	Young's Modulus Y	MPa	10166.912	Transverse Modulus
4	E_3	Young's Modulus Z	MPa	11710.104	-
5	ν_{12}	Poisson's ratio XY	MPa	0.456054	-
6	ν_{13}	Poisson's ratio YZ	MPa	0.4285335	-
7	ν_{23}	Poisson's ratio XZ	MPa	0.2515344	-
8	G_{12}	Shear Modulus XY	MPa	4333.007	In-plane shear modulus
9	G_{13}	Shear Modulus YZ	MPa	3616.269	Out-of-plane shear modulus
10	G_{23}	Shear Modulus XZ	MPa	4013.054	Out-of-plane shear modulus
11	S_{11T}	Longitudinal Tensile strength	MPa	3606.339	Strain: 0.03%
12	S_{11C}	Longitudinal Compressive strength	MPa	-3606.339	Strain: 0.03%
13	S_{22T}	Transverse Tensile strength	MPa	3050.096	Strain: 0.03%
14	S_{22C}	Transverse compressive strength	MPa	-348.5824	Strain: 0.03%
15	S_{33T}	Tensile strength	MPa	392.1552	Strain: 0.03%
16	S_{33C}	Compressive strength	MPa	-403.0484	Strain: 0.03%
17	S_{12S}	Out-of-plane shear strength	MPa	169.2342	-
18	S_{23S}	Shear strength	MPa	155.6046	-
19	k	Thermal conductivity	W/m·K	478.9065	
20	C_p	Specific heat	kJ/kg·K	539.7	

■ Theory

Representative elementary volume (RVE) is the smallest volume over which a measurement can be made that will yield a value representative of the whole. In the case of periodic materials, one simply chooses a periodic unit cell (which, however, may be non-unique), but in random media, the situation is much more complicated.



Cross-sectional view of continuous fiber reinforced composites

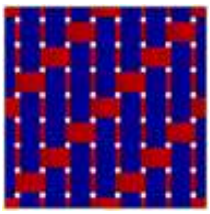
■ Material properties

☐ Weave

Brand	SK Chemical
Pattern	Woven
Fiber material	Carbon
Lay up type	Multi layer

☐ Material properties

Property	Unit	Value
E-Modulus	GPa	102
Poisson's ratio	-	0.29
Density	g/mm^3	1.9

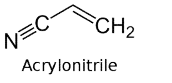


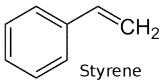
☐ Resin

Type	PE

☐ Material properties

Property	Unit	Value
E-Modulus	MPa	378
Poisson's ratio	-	0.28
Density	g/mm^3	1.67



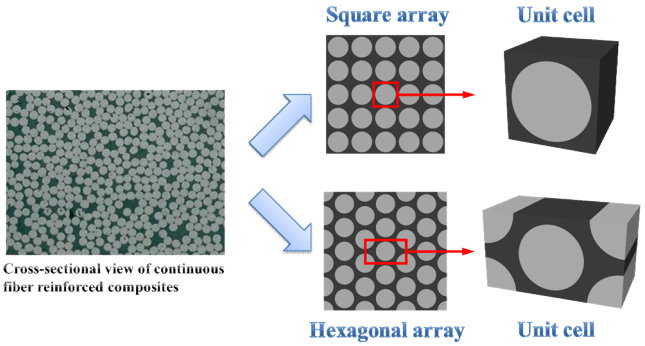


■ Property according to direction(XYZ)

No.	Symbol	Properties	Unit	Value	Notes
1	ρ	Density	g/mm^3	1.444E-09	-
2	E_1	Young's Modulus X	MPa	164561.1	Longitudinal modulus
3	E_2	Young's Modulus Y	MPa	11165.448	Transverse Modulus
4	E_3	Young's Modulus Z	MPa	10620.792	-
5	ν_{12}	Poisson's ratio XY	MPa	0.39315	-
6	ν_{13}	Poisson's ratio YZ	MPa	0.479643	-
7	ν_{23}	Poisson's ratio XZ	MPa	0.326511	-
8	G_{12}	Shear Modulus XY	MPa	3974.638	In-plane shear modulus
9	G_{13}	Shear Modulus YZ	MPa	3746.585	Out-of-plane shear modulus
10	G_{23}	Shear Modulus XZ	MPa	5375.978	Out-of-plane shear modulus
11	S_{11T}	Longitudinal Tensile strength	MPa	4516.677	Strain: 0.03%
12	S_{11C}	Longitudinal Compressive strength	MPa	-4971.846	Strain: 0.03%
13	S_{22T}	Transverse Tensile strength	MPa	4003.251	Strain: 0.03%
14	S_{22C}	Transverse compressive strength	MPa	-343.1358	Strain: 0.03%
15	S_{33T}	Tensile strength	MPa	354.029	Strain: 0.03%
16	S_{33C}	Compressive strength	MPa	-386.7086	Strain: 0.03%
17	S_{12S}	Out-of-plane shear strength	MPa	148.7898	-
18	S_{23S}	Shear strength	MPa	145.3824	-
19	k	Thermal conductivity	W/m·K	353.236	
20	C_p	Specific heat	kJ/kg·K	547.41	

■ Theory

Representative elementary volume (RVE) is the smallest volume over which a measurement can be made that will yield a value representative of the whole. In the case of periodic materials, one simply chooses a periodic unit cell (which, however, may be non-unique), but in random media, the situation is much more complicated.



Cross-sectional view of continuous fiber reinforced composites

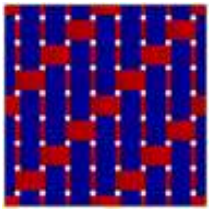
■ Material properties

☐ Weave

Brand	SK Chemical
Pattern	Woven
Fiber material	Carbon
Lay up type	Multi layer

☐ Material properties

Property	Unit	Value
E-Modulus	GPa	104
Poisson's ratio	-	0.27
Density	g/mm^3	1.74

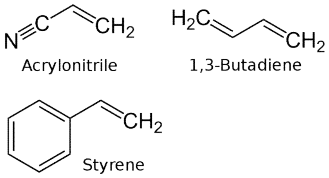


☐ Resin

Type	PE

☐ Material properties

Property	Unit	Value
E-Modulus	MPa	444
Poisson's ratio	-	0.27
Density	g/mm^3	1.72

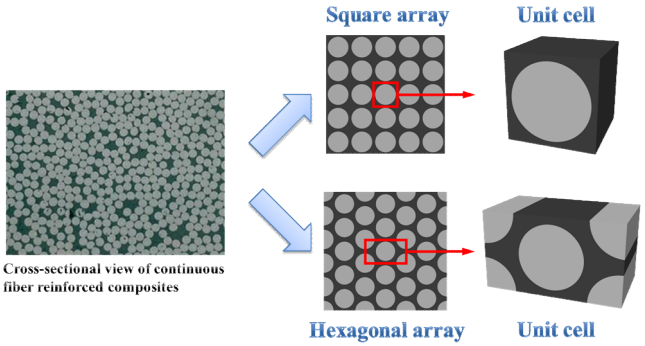


■ Property according to direction(XYZ)

No.	Symbol	Properties	Unit	Value	Notes
1	ρ	Density	g/mm^3	1.916E-09	-
2	E_1	Young's Modulus X	MPa	166895.3	Longitudinal modulus
3	E_2	Young's Modulus Y	MPa	9894.584	Transverse Modulus
4	E_3	Young's Modulus Z	MPa	10076.136	-
5	ν_{12}	Poisson's ratio XY	MPa	0.4128075	-
6	ν_{13}	Poisson's ratio YZ	MPa	0.5071635	-
7	ν_{23}	Poisson's ratio XZ	MPa	0.24186	-
8	G_{12}	Shear Modulus XY	MPa	4626.218	In-plane shear modulus
9	G_{13}	Shear Modulus YZ	MPa	3323.058	Out-of-plane shear modulus
10	G_{23}	Shear Modulus XZ	MPa	4505.221	Out-of-plane shear modulus
11	S_{11T}	Longitudinal Tensile strength	MPa	4096.521	Strain: 0.03%
12	S_{11C}	Longitudinal Compressive strength	MPa	-3641.352	Strain: 0.03%
13	S_{22T}	Transverse Tensile strength	MPa	3812.62	Strain: 0.03%
14	S_{22C}	Transverse compressive strength	MPa	-299.563	Strain: 0.03%
15	S_{33T}	Tensile strength	MPa	294.1164	Strain: 0.03%
16	S_{33C}	Compressive strength	MPa	-296.8397	Strain: 0.03%
17	S_{12S}	Out-of-plane shear strength	MPa	163.5552	-
18	S_{23S}	Shear strength	MPa	123.8022	-
19	k	Thermal conductivity	W/m·K	373.615	
20	C_p	Specific heat	kJ/kg·K	562.83	

■ Theory

Representative elementary volume (RVE) is the smallest volume over which a measurement can be made that will yield a value representative of the whole. In the case of periodic materials, one simply chooses a periodic unit cell (which, however, may be non-unique), but in random media, the situation is much more complicated.



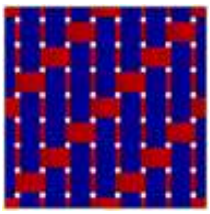
■ Material properties

☐ Weave

Brand	SK Chemical
Pattern	Woven
Fiber material	Carbon
Lay up type	Multi layer

☐ Material properties

Property	Unit	Value
E-Modulus	GPa	111
Poisson's ratio	-	0.27
Density	g/mm^3	1.76

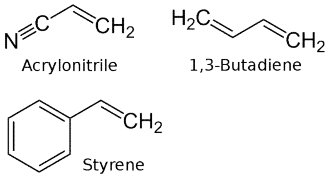


☐ Resin

Type	PE

☐ Material properties

Property	Unit	Value
E-Modulus	MPa	434
Poisson's ratio	-	0.26
Density	g/mm^3	1.59

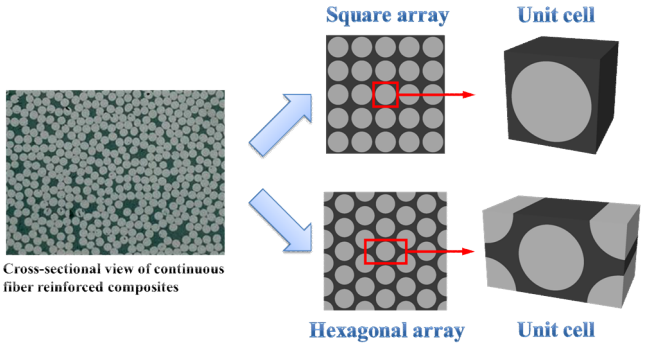


■ Property according to direction(XYZ)

No.	Symbol	Properties	Unit	Value	Notes
1	ρ	Density	g/mm^3	1.744E-09	-
2	E_1	Young's Modulus X	MPa	122545.5	Longitudinal modulus
3	E_2	Young's Modulus Y	MPa	9168.376	Transverse Modulus
4	E_3	Young's Modulus Z	MPa	9622.256	-
5	ν_{12}	Poisson's ratio XY	MPa	0.432465	-
6	ν_{13}	Poisson's ratio YZ	MPa	0.5228895	-
7	ν_{23}	Poisson's ratio XZ	MPa	0.314418	-
8	G_{12}	Shear Modulus XY	MPa	4691.376	In-plane shear modulus
9	G_{13}	Shear Modulus YZ	MPa	4039.796	Out-of-plane shear modulus
10	G_{23}	Shear Modulus XZ	MPa	5262.401	Out-of-plane shear modulus
11	S_{11T}	Longitudinal Tensile strength	MPa	3571.326	Strain: 0.03%
12	S_{11C}	Longitudinal Compressive strength	MPa	-4796.781	Strain: 0.03%
13	S_{22T}	Transverse Tensile strength	MPa	4030.484	Strain: 0.03%
14	S_{22C}	Transverse compressive strength	MPa	-310.4562	Strain: 0.03%
15	S_{33T}	Tensile strength	MPa	288.6698	Strain: 0.03%
16	S_{33C}	Compressive strength	MPa	-302.2863	Strain: 0.03%
17	S_{12S}	Out-of-plane shear strength	MPa	122.6664	-
18	S_{23S}	Shear strength	MPa	147.654	-
19	k	Thermal conductivity	W/m·K	482.303	
20	C_p	Specific heat	kJ/kg·K	431.76	

■ Theory

Representative elementary volume (RVE) is the smallest volume over which a measurement can be made that will yield a value representative of the whole. In the case of periodic materials, one simply chooses a periodic unit cell (which, however, may be non-unique), but in random media, the situation is much more complicated.



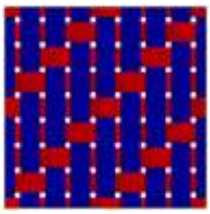
■ Material properties

☐ Weave

Brand	SK Chemical
Pattern	Woven
Fiber material	Carbon
Lay up type	Multi layer

☐ Material properties

Property	Unit	Value
E-Modulus	GPa	116
Poisson's ratio	-	0.25
Density	g/mm^3	1.71

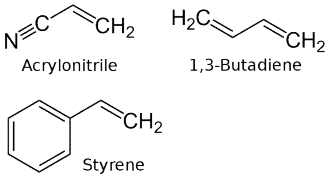


☐ Resin

Type	PE

☐ Material properties

Property	Unit	Value
E-Modulus	MPa	309
Poisson's ratio	-	0.25
Density	g/mm^3	1.61

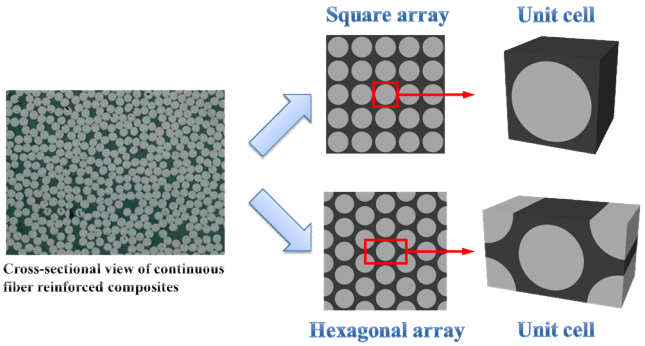


■ Property according to direction(XYZ)

No.	Symbol	Properties	Unit	Value	Notes
1	ρ	Density	g/mm^3	1.444E-09	-
2	E_1	Young's Modulus X	MPa	162226.9	Longitudinal modulus
3	E_2	Young's Modulus Y	MPa	9803.808	Transverse Modulus
4	E_3	Young's Modulus Z	MPa	10620.792	-
5	ν_{12}	Poisson's ratio XY	MPa	0.5071635	-
6	ν_{13}	Poisson's ratio YZ	MPa	0.5307525	-
7	ν_{23}	Poisson's ratio XZ	MPa	0.2515344	-
8	G_{12}	Shear Modulus XY	MPa	4007.217	In-plane shear modulus
9	G_{13}	Shear Modulus YZ	MPa	4854.271	Out-of-plane shear modulus
10	G_{23}	Shear Modulus XZ	MPa	5489.555	Out-of-plane shear modulus
11	S_{11T}	Longitudinal Tensile strength	MPa	5251.95	Strain: 0.03%
12	S_{11C}	Longitudinal Compressive strength	MPa	-4761.768	Strain: 0.03%
13	S_{22T}	Transverse Tensile strength	MPa	3104.562	Strain: 0.03%
14	S_{22C}	Transverse compressive strength	MPa	-340.4125	Strain: 0.03%
15	S_{33T}	Tensile strength	MPa	381.262	Strain: 0.03%
16	S_{33C}	Compressive strength	MPa	-345.8591	Strain: 0.03%
17	S_{12S}	Out-of-plane shear strength	MPa	138.5676	-
18	S_{23S}	Shear strength	MPa	138.5676	-
19	k	Thermal conductivity	W/m·K	475.51	
20	C_p	Specific heat	kJ/kg·K	385.5	

■ Theory

Representative elementary volume (RVE) is the smallest volume over which a measurement can be made that will yield a value representative of the whole. In the case of periodic materials, one simply chooses a periodic unit cell (which, however, may be non-unique), but in random media, the situation is much more complicated.



Cross-sectional view of continuous fiber reinforced composites

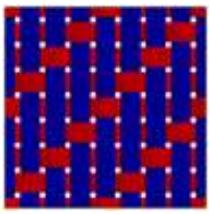
■ Material properties

☐ Weave

Brand	SK Chemical
Pattern	Woven
Fiber material	Carbon
Lay up type	Multi layer

☐ Material properties

Property	Unit	Value
E-Modulus	GPa	116
Poisson's ratio	-	0.27
Density	g/mm^3	1.66

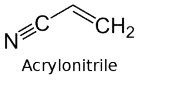


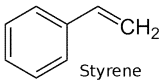
☐ Resin

Type	PE

☐ Material properties

Property	Unit	Value
E-Modulus	MPa	450
Poisson's ratio	-	0.3
Density	g/mm^3	1.58



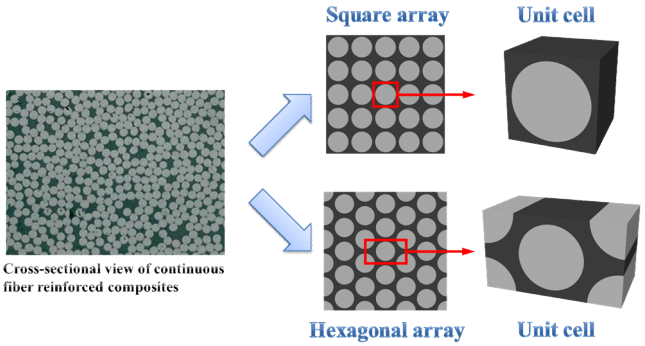


■ Property according to direction(XYZ)

No.	Symbol	Properties	Unit	Value	Notes
1	ρ	Density	g/mm^3	1.916E-09	-
2	E_1	Young's Modulus X	MPa	119044.2	Longitudinal modulus
3	E_2	Young's Modulus Y	MPa	12436.312	Transverse Modulus
4	E_3	Young's Modulus Z	MPa	9985.36	-
5	ν_{12}	Poisson's ratio XY	MPa	0.518958	-
6	ν_{13}	Poisson's ratio YZ	MPa	0.573999	-
7	ν_{23}	Poisson's ratio XZ	MPa	0.338604	-
8	G_{12}	Shear Modulus XY	MPa	4267.849	In-plane shear modulus
9	G_{13}	Shear Modulus YZ	MPa	4300.428	Out-of-plane shear modulus
10	G_{23}	Shear Modulus XZ	MPa	4959.529	Out-of-plane shear modulus
11	S_{11T}	Longitudinal Tensile strength	MPa	4551.69	Strain: 0.03%
12	S_{11C}	Longitudinal Compressive strength	MPa	-3851.43	Strain: 0.03%
13	S_{22T}	Transverse Tensile strength	MPa	3567.523	Strain: 0.03%
14	S_{22C}	Transverse compressive strength	MPa	-373.0921	Strain: 0.03%
15	S_{33T}	Tensile strength	MPa	345.8591	Strain: 0.03%
16	S_{33C}	Compressive strength	MPa	-354.029	Strain: 0.03%
17	S_{12S}	Out-of-plane shear strength	MPa	126.0738	-
18	S_{23S}	Shear strength	MPa	163.5552	-
19	k	Thermal conductivity	W/m·K	407.58	
20	C_p	Specific heat	kJ/kg·K	485.73	

■ Theory

Representative elementary volume (RVE) is the smallest volume over which a measurement can be made that will yield a value representative of the whole. In the case of periodic materials, one simply chooses a periodic unit cell (which, however, may be non-unique), but in random media, the situation is much more complicated.



Cross-sectional view of continuous fiber reinforced composites

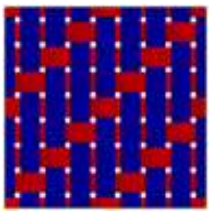
■ Material properties

☐ Weave

Brand	SK Chemical
Pattern	Woven
Fiber material	Carbon
Lay up type	Multi layer

☐ Material properties

Property	Unit	Value
E-Modulus	GPa	114
Poisson's ratio	-	0.29
Density	g/mm^3	1.84

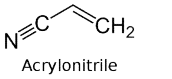


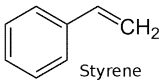
☐ Resin

Type	PE

☐ Material properties

Property	Unit	Value
E-Modulus	MPa	427
Poisson's ratio	-	0.26
Density	g/mm^3	1.67





■ Property according to direction(XYZ)

No.	Symbol	Properties	Unit	Value	Notes
1	ρ	Density	g/mm^3	1.630E-09	-
2	E_1	Young's Modulus X	MPa	137717.8	Longitudinal modulus
3	E_2	Young's Modulus Y	MPa	12254.76	Transverse Modulus
4	E_3	Young's Modulus Z	MPa	10166.912	-
5	ν_{12}	Poisson's ratio XY	MPa	0.4363965	-
6	ν_{13}	Poisson's ratio YZ	MPa	0.5150265	-
7	ν_{23}	Poisson's ratio XZ	MPa	0.2805576	-
8	G_{12}	Shear Modulus XY	MPa	3453.374	In-plane shear modulus
9	G_{13}	Shear Modulus YZ	MPa	3876.901	Out-of-plane shear modulus
10	G_{23}	Shear Modulus XZ	MPa	5186.683	Out-of-plane shear modulus
11	S_{11T}	Longitudinal Tensile strength	MPa	3746.391	Strain: 0.03%
12	S_{11C}	Longitudinal Compressive strength	MPa	-4656.729	Strain: 0.03%
13	S_{22T}	Transverse Tensile strength	MPa	4084.95	Strain: 0.03%
14	S_{22C}	Transverse compressive strength	MPa	-324.0727	Strain: 0.03%
15	S_{33T}	Tensile strength	MPa	405.7717	Strain: 0.03%
16	S_{33C}	Compressive strength	MPa	-291.3931	Strain: 0.03%
17	S_{12S}	Out-of-plane shear strength	MPa	124.938	-
18	S_{23S}	Shear strength	MPa	165.8268	-
19	k	Thermal conductivity	W/m·K	482.303	
20	C_p	Specific heat	kJ/kg·K	385.5	