


QUANTUM COMPOSITES MATERIAL SUMMARY

Material Reference	Fiber % w/w	Fiber Length (inches / mm) & Type	Description	Features / Benefits /Applications
Hybridized Polyester - Fiberglass E Grade				
QC-7810FR	58%	0.5 / 13 E glass	Flame retardant UL94 V-0 at 3mm	Electrical applications
QC-8800	63%	1 / 25 E glass	High impact / toughness	General purpose structural, prosthetics, marine, automotive, safety, industrial. Color & flame retardant versions available.
Vinyl Ester - Fiberglass E Grade				
QC-8560	60%	0.5 / 13 E glass	Higher heat resistant Vinyl Ester	High temp auto, industrial. Lower cost Aero / Mil
QC-8700	63%	1 / 25 E glass	Increased temperature resistant over the QC-8800	General purpose structural, prosthetics, marine, automotive, industrial, safety. Color & flame retardant versions available.
QC-8705-1	65%	Continuous E glass	Unidirectional fiberglass for co-molding with chopped materials such as QC-8700	Used for localized strength reinforcement, prosthetics, auto, industrial.
Vinyl Ester - Carbon Fiber - PAN based std modulus				
AMC-8590	53%	1 / 25 12K	Workhorse of AMC carbon fiber offerings	Structural automotive, inner panels, brackets, etc. Sporting goods, golf clubs, bicycle components, medical. Designed for structural applications requiring high stiffness and high strength, particularly open- and filled-hole tension and compression.
AMC-8590HT	53%	1 / 25 12K	Increased heat resistance over AMC-8590	
AMC-8590-12CFH	51%	1 / 25 12K & E glass	Hybrid fiber blend, cost / performance option	
AMC-8592	53%	2 / 51 12K	2" fiber alternative to above	
AMC-8593	50%	1 / 25 3K	Offering highest properties and lowest COV	
AMC-8593HT	50%	1 / 25 3K	Increased heat resistance over AMC-8593	
Forged Preg™ 8575	50%	Continuous 3K	Triaxial, woven carbon fiber reinforcement for very high strength, stiffness	Structural grades where exceptional strength and stiffness is required. Compatible with chopped fiber systems for co-molding for localized strength reinforcement. Enables a high-end look and feel. For applications in Automotive, Aerospace, Sporting Goods and other industries.
Forged Preg™ 8585	55%	Continuous 12K	Biaxial, woven carbon fiber reinforcement for very high strength, stiffness	
Forged Preg™ 8595	55%	Continuous 60K	Uni-Directional for co-molding with chopped carbon fiber AMC materials	
Epoxy - Fiberglass E grade				
LYTEX™ 9063	63%	0.5 / 13 E glass	Lytex 9063 is specified by numerous aero and military OEMs. Short cure time for complex geometry molded parts solutions.	Aerospace secondary and tertiary components, fairings, brackets, etc. Industrial, high temperature / high pressure. Suitable for molding thick cross sections (3" +). Flame retardant & low density versions available.
LYTEX™ SF 6500 LD	35%	1 / 25 E glass	Low density, long shelf life	Oil and Gas applications, low density, low VOC
LYTEX™ SF 6700	57%	1 / 25 E glass	Fast cure, high thermal performance	Oil and Gas applications, degradable
Epoxy - Carbon Fiber - PAN based std modulus				
LYTEX™ 4149	55%	1 / 25 3K	Lytex 4149 is specified by numerous aero & military OEMs	Aerospace secondary and tertiary structures, components, fairings, brackets, panels. Advantages of Lytex resin system with light weight and stiffness of carbon fiber. Flame retardant version available.
LYTEX™ 4197	55%	2 / 51 3K	2" fiber version of Lytex 4149	
LYTEX™ 4181	55%	1 / 25 12K	12K carbon fiber	
LYTEX™ SF 6093	50%	1&2/ 25&50 3K	3K carbon fiber styrene free	High strength, stiffness, light weight
LYTEX™ SF 6090	50%	1&2/ 25&50 12K	12K version styrene free	High strength, stiffness, light weight
LYTEX™ SF 6075	50%	Continuous 3K	Triaxial, woven carbon fiber reinforcement for very high strength, stiffness	Continuous fiber compatible with LYTEX™ systems
LYTEX™ SF 6593	50%	1 / 25 3K	Styrene free, Low VOC, Low Odor	Styrene free, Low VOC, Low Odor automotive interior
Phenolic - Fiberglass E grade				
QC-2150	50%	1 / 25 E glass	FAR 25.853 (FST) compliant	Interior of mass transit (air, rail, etc.)
QC-2150 LD	25%	1 / 25 E glass	Low density - FAR 25.853 (FST) compliant	Interior of mass transit (air, rail, etc.), used for crush-core molding. Co-molding with pre-preg
QC-2550	50%	1 / 25 E glass	Flame Smoke & Toxicity (FST) properties	Industrial, low flammability elevated temp applications
Phenolic - Carbon Fiber - PAN based std modulus				
AMC-2593	45%	1 / 25 3K	FAR 25.853 (FST) compliant	Structures for aircraft interiors & mass transit
Bismaleimide (BMI) - Fiberglass E grade				
HTC-9510	52%	1 / 25 E glass	High temperature composite, Tg > 375°C	High temperature / high pressure, industrial, aero
Bismaleimide (BMI) - Carbon Fiber - PAN based std modulus				
HTC-9593	55%	1 / 25 3K	High temperature composite, Tg > 375°C	High temperature / high pressure, industrial, aero


QUANTUM COMPOSITES MATERIAL SUMMARY (cont'd)

Material Reference	SG	Flexural Modulus D-790 Net Shape / Machined		Flexural Strength D-790 Net Shape / Machined		Tensile Modulus D-638 Net Shape / D-3039 Machined		Tensile Strength D-638 Net Shape / D-3039 Machined		Glass Transition Temp Tan Delta	
		g / cc	10 ⁶ psi	GPa	ksi	MPa	10 ⁶ psi	GPa	ksi	MPa	F°
Hybridized Polyester - Fiberglass E Grade											
QC-7810FR	1.83	2.8 / -	19 / -	70 / -	483 / -	3.3 / -	23 / -	44 / -	304 / -	257	125
QC-8800	1.88	2.9 / 2.9	20 / 20	80 / 71	552 / 485	3.5 / 2.8	24 / 19	50 / 36	345 / 245	-	-
Vinyl Ester - Fiberglass E Grade											
QC-8560	1.89	3.1 / 2.9	21 / 20	72 / 62	497 / 424	3.4 / 3.0	23 / 21	41 / 31	283 / 210	329	165
QC-8700	1.85	3.2 / 3.0	22 / 21	87 / 70	600 / 483	3.2 / 2.9	22 / 20	49 / 35	338 / 242	260	127
QC-8705-1	1.95	NA / 6.0	NA / 41	NA / 190	NA / 1311	NA / 6.0	NA / 41	NA / 120	NA / 828	260	127
Vinyl Ester - Carbon Fiber - PAN based std modulus											
AMC-8590	1.48	5.2 / 4.1	36 / 28	90 / 65	621 / 448	9.0 / 5.3	62 / 37	40 / 24	276 / 162	288	142
AMC-8590HT	1.48	5.9 / 3.8	41 / 26	82 / 54	565 / 372	10.0 / 4.6	69 / 32	40 / 20	276 / 137	347	175
AMC-8590-12CFH	1.58	3.4 / 2.5	23 / 17	70 / 51	483 / 352	5.0 / 3.1	35 / 21	40 / 26	276 / 179	288	142
AMC-8592	1.48	5.7 / 3.8	32 / 26	92 / 61	634 / 420	10.0 / 5.5	69 / 38	55 / 37	379 / 255	288	142
AMC-8593	1.47	6.5 / 4.5	45 / 31	115 / 73	794 / 504	9.5 / 5.2	66 / 36	61 / 42	421 / 290	288	142
AMC-8593HT	1.47	6.2 / 4.5	43 / 31	98 / 72	676 / 497	10.0 / 5.5	69 / 38	52 / 39	359 / 269	347	175
Forged Preg™ 8575	1.48	NA / 4.8	NA / 33	NA / 99	NA / 682	NA / 4.8	NA / 33	NA / 73	NA / 503	288	142
Forged Preg™ 8585	1.50	NA / 6.0	NA / 41	NA / 75	NA / 517	NA / 8.0	NA / 55	NA / 90	NA / 620	288	142
Forged Preg™ 8595	1.48	NA / 13.5	NA / 93	NA / 174	NA / 1202	NA / 14	NA / 99	NA / 185	NA / 1276	288	142
Epoxy - Fiberglass E grade											
LYTEX™ 9063	1.82	2.6 / 2.6	18 / 18	66 / 59	455 / 407	3.3 / 2.6	23 / 18	35 / 28	242 / 193	329	165
LYTEX™ SF 6500 LD	1.25	1.5 / 1.4	10 / 10	32 / 28	220 / 193	1.5 / 1.4	10 / 10	13 / 11	89 / 76	329	165
LYTEX™ SF 6700	1.80	3.3 / -	26 / -	60 / -	414 / -	3.8 / -	26 / -	22 / -	152 / -	500	260
Epoxy - Carbon Fiber - PAN based std modulus											
LYTEX™ 4149	1.48	5.0 / 4.6	35 / 32	89 / 77	614 / 531	8.0 / 5.0	55 / 35	43 / 32	297 / 221	329	165
LYTEX™ 4197	1.48	7.2 / 4.6	50 / 32	107 / 80	738 / 552	11.0 / 5.0	76 / 35	42 / 37	290 / 255	329	165
LYTEX™ 4181	1.48	5.5 / 4.3	38 / 30	71 / 53	490 / 366	7.8 / 4.6	54 / 32	25 / 17	173 / 117	329	165
LYTEX™ SF 6093	1.45	7.5 / 5.0	52 / 34	100 / 78	689 / 538	9.5 / 5.5	65 / 38	55 / 42	379 / 290	320	160
LYTEX™ SF 6090	1.45	7.5 / 4.7	52 / 32	95 / 67	655 / 462	9.5 / 5.0	65 / 34	35 / 26	241 / 179	320	160
LYTEX™ SF 6075	1.45	NA / 4.0	NA / 28	NA / 95	NA / 655	NA / 4.5	NA / 31	NA / 55	NA / 379	320	160
LYTEX™ SF 6593	1.45	6.5 / 4.0	45 / 27	110 / 72	758 / 500	9.5 / 5.0	65 / 34	59 / 37	407 / 259	320	160
Phenolic - Fiberglass E grade											
QC-2150	1.82	3.0 / -	21 / -	52 / -	359 / -	- / -	- / -	33 / -	228 / -	392	200
QC-2150 LD	1.25	1.2 / -	8 / -	17 / -	117 / -	1.2 / -	8 / -	8 / -	55 / -	392	200
QC-2550	1.80	2.8 / -	19 / -	57 / -	393 / -	3.0 / -	21 / -	34 / -	235 / -	392	200
Phenolic - Carbon Fiber - PAN based std modulus											
AMC-2593	1.55	6.5 / 4.2	45 / 29	72 / 56	497 / 386	9.0 / 5.1	62 / 35	36 / 24	248 / 166	484	251
Bismaleimide (BMI) - Fiberglass E grade											
HTC-9510	1.82	4.0 / 2.6	28 / 18	94 / 53	649 / 366	4.0 / -	28 / -	35 / 25	242 / 173	700	371
Bismaleimide (BMI) - Carbon Fiber - PAN based std modulus											
HTC-9593	1.55	7.0 / 4.8	48 / 33	75 / 54	518 / 373	9.0 / 5.4	62 / 37	26 / 22	179 / 152	714	379