

MATERIAL CLASSIFI- CATION	MANUFACTURER'S PRODUCT DESIGNATION		MANUFACTURER	QUALI- FYING PRODUCT GROUP	DATE
	OLD DESIGNATION	NEW DESIGNATION			
Type II, Class 1			Cytec Engineered Materials Inc. 4300 Jackson Street Greenville, TX 75402-5796		
Grade 95	- - -	CYCOM 7714A/T300 6K NT (CCF) FL 8	PERCENT GEL TIME, LC PEAK FLOW MINUTES AREA T-300 FIBER RATIO	BCA	03-DEC-2002
Grade 145	HyE 10714AC (145)	CYCOM 7714A/T300 3K UT (TY) FL 8	7 TO 19 3 TO 13 FL 1	BCA	17-OCT-1986
	HyE 10714AE (145)	CYCOM 7714A/T300 6K UT (TY) FL 8	7 TO 19 3 TO 13 FL 1	BCA	17-OCT-1986
	HyE 10714AK (145)	CYCOM 7714A/T300 12K UT (TY) FL 8	7 TO 19 3 TO 13 FL 1	BCA	17-OCT-1986
	HyE 30714AC (145)	CYCOM 7714A/T300 3K NT (CCF) FL 8	7 TO 19 3 TO 13 FL 1	BCA	24-MAY-2000
	HyE 30714AE (145)	CYCOM 7714A/T300 6K NT (CCF) FL 8	7 TO 19 3 TO 13 FL 1	BCA	24-MAY-2000
	HyE 30714AK (145)	CYCOM 7714A/T300 12K NT (CCF) FL 8	7 TO 19 3 TO 13 FL 1	BCA	24-MAY-2000
Grade 190	HyE 10714AC (190)	CYCOM 7714A/T300 3K UT (TY) FL 8	7 TO 19 3 TO 13 FL 1	BCA	17-OCT-1986
	HyE 10714AE (190)	CYCOM 7714A/T300 6K UT (TY) FL 8	7 TO 19 3 TO 13 FL 1	BCA	17-OCT-1986
	HyE 10714AK (190)	CYCOM 7714A/T300 12K UT (TY) FL 8	7 TO 19 3 TO 13 FL 1	BCA	17-OCT-1986
	HyE 30714AC (190)	CYCOM 7714A/T300 3K NT (CCF) FL 8	7 TO 19 3 TO 13 FL 1	BCA	24-MAY-2000

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Grade 190	HyE 30714AE (190)	CYCOM 7714A/T300 6K NT (CCF) FL 8	7 TO 19 3 TO 13 FL 1	BCA	24-MAY-2000
	HyE 30714AK (190)	CYCOM 7714A/T300 12K NT (CCF) FL 8	7 TO 19 3 TO 13 FL 1	BCA	24-MAY-2000
Type II, Class 1			TOHO (BMS9-8 , GRADE 12)		
Grade 145	Cycom 7714A/ G30-500 12K HTA- 7C NT (TH)	Cycom 7714A/ HTA40 12K NT (TH)	9 TO 21 3 TO 13 FL 1	BCA	17-OCT-1986
Grade 190	Cycom 7714A/ G30-500 12K HTA- 7C NT (TH)	Cycom 7714A/ HTA40 12K NT (TH)	9 TO 21 3 TO 13 FL 1	BCA	17-OCT-1986
Types II and III, Class 2	---	CYCOM 97714A/PWC T300 3K ST (TY) FL 8	7 TO 19 3 TO 13	BCA	25-FEB-1993
	---	CYCOM 97714A/PWC T300 3K ST (CCF) FL 8	7 TO 19 3 TO 13	BCA	24-MAY-2000
Style 3K-70-PW	HMF 5-322/97714AC	CYCOM 97714A/PWC T300 3K UT (TY) FL 8	7 TO 19 3 TO 13 FL 2	BCA	25-FEB-1993
	HMF 6-322/97714AC	CYCOM 97714A/PWC TR CFS T300 3K UT (TY) FL 8	7 TO 19 3 TO 13 FL 2	BCA	25-FEB-1993
	HMF 5-322D/97714AC	CYCOM 97714A/PWC T300 3K NT (CCF) FL 8	7 TO 19 3 TO 13 FL 2	BCA	24-MAY-2000
	HMF 6-322D/97714AC	CYCOM 97714A/PWC TR CFS T300 3K NT (CCF) FL 8	7 TO 19 3 TO 13 FL 2	BCA	24-MAY-2000

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	OLD DESIGNATION	NEW DESIGNATION					
Types II and III, Class 2			TOHO				
Style 3K-70-PW	Cycom 97714A/ PWC G30- 500 HTA- 7C NT (TH) 3K	Cycom 97714A/ PWC HTA40 NT (TH) 3K	9 TO 21	3 TO 13	FL 2	BCA	25-FEB-1993
	Cycom 97714A/ PWC TR CFS G30- 500 HTA- 7C NT (TH) 3K	Cycom 97714A/ PWC TR CFS HTA40 NT (TH) 3K	9 TO 21	3 TO 13	FL 2	BCA	25-FEB-1993
Style 3K-135-8H	Cycom 97714A/ 8HS G30- 500 3K HTA-7W (TH)	Cycom 97714A/ 8HS HTA40 3K ST (TH)	9 TO 21	3 TO 13	FL 2	BCA	25-FEB-1993
Types II and III, Class 2			Cytec Engineered Materials (Shanghai) Co. Ltd. No. 1800 Yezhuang Road, Zhuanghang, Fengxian, Shanghai 201415, P.R. China				
			<div> <div>PERCENT</div> <div>GEL TIME,</div> <div>LC PEAK</div> <div>FLOW</div> <div>MINUTES</div> <div>AREA</div> <div>T-300 FIBER</div> <div>RATIO</div> </div>				
Style 3K-70-PW	---	CYCOM 97714A/PWC T300 3K ST (TY) FL 8	7 TO 19	3 TO 13	FL 2	BCA	22-APR -2011
	---	CYCOM 97714A/PWC T300 3K ST (CCF) FL 8	7 TO 19	3 TO 13	FL 2	BCA	22-APR -2011
		CYCOM 97714A/PWC T300 3K UT (TY) FL 8	7 TO 19	3 TO 13	FL 2	BCA	22-APR -2011
		CYCOM 97714A/PWC TR CFS T300 3K UT (TY) FL 8	7 TO 19	3 TO 13	FL 2	BCA	22-APR -2011
		CYCOM 97714A/PWC TR CFS T300 3K NT (CCF) FL 8	7 TO 19	3 TO 13	FL 2	BCA	22-APR -2011
		CYCOM 97714A/PWC TR CFS T300 3K NT (CCF) FL 8	7 TO 19	3 TO 13	FL 2	BCA	22-APR -2011

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	OLD DESIGNATION	NEW DESIGNATION			
Types II and III, Class 2 Style 3K-70-PW			Hexcel Corporation 6700 West 5400 South West Valley City, UT 84118		
			LC PEAK PERCENT GEL TIME, AREA FLOW MINUTES RATIO T-300 FIBER (BMS9-8, GRADE 3)		
		W3L 282 XX" F155-76:42 percent FL 5	4 TO 16 3 TO 10 FL 3	BCA	12-APR-2007
		W3T 282(Y) xx" F155-76:42 percent FL 5	4 TO 16 3 TO 10 FL 3	BCA	12-APR-2007
		W3G 282(Y) xx" F155-76:42 percent FL 5	4 TO 16 3 TO 10 FL 3	BCA	12-APR-2007
		W3GR 282(N)-xx" F155-76:42 percent FL 5	4 TO 16 3 TO 10 FL 3	BCA	12-APR-2007
Type 2 and 3 Class 2 Style 3K-135-8H		F3GR584 (N) xx" F155-76:42 percent FL 5	4 TO 16 3 TO 10 FL 3	BCA	12-APR-2007
		F3T584 (T) xx" F155-76:42 percent FL 5	4 TO 16 3 TO 10 FL 3	BCA	12-APR-2007
Types II and III, Class 2 Style 3K-70-PW		W3C 282 xx" F155-76:42 percent FL 5	TOHO (BMS9-8, GRADE 3) 4 TO 16 3 TO 10 FL 3	BCA	12-APR-2007
Type II and III Class 1			LC PEAK PERCENT GEL TIME, AREA FLOW MINUTES RATIO TOHO		
Grade 95	G30-500 6K/F155;40%; 95AW;24 FL 9 FL 10	JHTA40H13 6K/ F155;40%; 95AW;24 FL 9 FL 10	4 TO 16 3 TO 10 FL 4	BCA	10-FEB-2009
Grade 95	G30-500 12K/ F155;40%;95AW;24 FL 9 FL 10	JHTA40H13 12K/ F155;40%; 95AW;24 FL 9 FL 10	4 TO 16 3 TO 10 FL 4	BCA	10-FEB-2009
Grade 145	G30-500 6K/F155;40%; 145AW;24 FL 9 FL 10	JHTA40H13 6K/ F155;40%; 145AW;24 FL 9 FL 10	4 TO 16 3 TO 10 FL 4	BCA	10-FEB-2009

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	OLD DESIGNATION	NEW DESIGNATION			
Grade 145	G30-500 12K/ F155;40%;145AW;24 FL 9 FL 10	JHTA40H13 12K/ F155;40%; 145AW;24 FL 9 FL 10	4 TO 16 3 TO 10 FL 4	BCA	10-FEB-2009
Grade 190	G30-500 6K/F155;40%; 190AW;24 FL 9 FL 10	JHTA40H13 6K/ F155;40%; 190AW;24 FL 9 FL 10	4 TO 16 3 TO 10 FL 4	BCA	10-FEB-2009
Grade 190	G30-500 12K/ F155;40%;190AW;24 FL 9 FL 10	JHTA40H13 12K/ F155;40%; 190AW;24 FL 9 FL 10	4 TO 16 3 TO 10 FL 4	BCA	10-FEB-2009
Type II & III Class 1			Hexcel Corporation 6700 West 5400 South West Valley City, UT 84118 LC PEAK PERCENT GEL TIME, AREA FLOW MINUTES RATIO TOHO		
Grade 95	---	E-HTS40F13 12K/F155;40%;9 5;24 FL 9 FL 10	4 TO 16 3 TO 10 FL 4	BR&T	31-MAY-2013
Grade 145	---	E-HTS40F13 12K/F155;40%;1 45;12 FL 9 FL 10	4 TO 16 3 TO 10 FL 4	BR&T	31-MAY-2013
Grade 145	---	E-HTS40F13 12K/F155;40%;1 45;24 FL 9 FL 10	4 TO 16 3 TO 10 FL 4	BR&T	31-MAY-2013
Grade 190	---	E-HTS40F13 12K/F155;40%;1 90;12 FL 9 FL 10	4 TO 16 3 TO 10 FL 4	BR&T	31-MAY-2013
Grade 190	---	E-HTS40F13 24K/F155;40%;1 90;24 FL 9 FL 10	4 TO 16 3 TO 10 FL 4	BR&T	31-MAY-2013
Type II & III Class 1			T-300 FIBER (BMS9-8, GRADE 12)		
Grade 145		T300B 12K/F155;40%;145AW; 24 FL 9 FL 10	4 TO 16 3 TO 10 FL 4	BCA	18-JUL-2006

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Type II, Class 1 Grade 190	C3U190/F6986S03	Yokohama Rubber Company, Ltd. c/o Toray Industries, Inc. Ehime Plant 1515, Tsutsui Masaki-cho Iyo-gun, Ehime 791-3193 Japan T-300 FIBER (BMS9-8, GRADE 3) 9 TO 19 3 TO 13 FL 7	BCA	25-FEB-1993
Type II, Class 2 Style 3K-70-PW	C3WPW/F6986S03	Yokohama Rubber Company, Ltd. Aerospace Division 2-1 Oiwake, Hiratsuka-shi Kanagawa-Ken, 254-8061 Japan T-300 FIBER (BMS9-8 GRADE 3) 6 TO 19 3 TO 14 FL 6	BCA	24-MAR-1981
Type III, Class 2 Style 3K-70-PW	C3WPW/F6986S03	Yokohama Rubber Company, Ltd. Aerospace Division 2-1 Oiwake, Hiratsuka-shi Kanagawa-Ken, 254-8061 Japan T-300 FIBER (BMS9-8 GRADE 3) 6 TO 19 3 TO 14 FL 6	BCA	24-MAR-1981
Type II, Class 2		Yokohama Rubber Company, Ltd. 2-1 Oiwake, Hiratsuka-shi Kanagawa-Ken, 254-8601 Japan (Continued) TOHO (BMS9-8, GRADE 3) LC PEAK PERCENT GEL TIME, AREA FLOW MINUTES RATIO 6 TO 19 3 TO 14 FL 6	BCA	25-FEB-1983
Style 3K-70-PW	C3BWPW/F6986S03	Yokohama Rubber Company, Ltd. 2-1 Oiwake, Hiratsuka-shi Kanagawa-Ken, 254-8601 Japan (Continued) TOHO (BMS9-8, GRADE 3) LC PEAK PERCENT GEL TIME, AREA FLOW MINUTES RATIO 6 TO 19 3 TO 14 FL 6	BCA	25-FEB-1983
Type III, Class 2 Style 3K-70-PW	C3BWPW/F6986S03	Yokohama Rubber Company, Ltd. 2-1 Oiwake, Hiratsuka-shi Kanagawa-Ken, 254-8601 Japan (Continued) TOHO (BMS9-8, GRADE 3) LC PEAK PERCENT GEL TIME, AREA FLOW MINUTES RATIO 6 TO 19 3 TO 14 FL 6	BCA	25-FEB-1983

FL 1 Ratios and baseline shall be in accordance with D6-53307 and as follows:

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R ₁	R ₂	R ₃	R ₄	R ₅	R ₆
0.170 to 0.360	0.075 to 0.131	0.218 to 0.332	0.383 to 0.542	0.159 to 0.215	0.080 to 0.176

FL 2 Ratios and baseline shall be in accordance with D6-53307 and as follows:

R ₁	R ₂	R ₃	R ₄	R ₅	R ₆
0.085 to 0.309	0.070 to 0.126	0.229 to 0.329	0.385 to 0.540	0.170 to 0.222	0.078 to 0.170

FL 3 Ratios and baseline shall be in accordance with D6-53305 and as follows:

R ₁	R ₂	R ₃	R ₄
0.12 to 0.55	0.15 to 0.21	0.07 to 0.10	0.12 to 0.21

FL 4 Ratios and baseline shall be in accordance with D6-53305 and as follows:

R ₁	R ₂	R ₃	R ₄
0.19 to 0.28	0.12 to 0.15	0.04 to 0.09	0.14 to 0.19

FL 5 XX - designates the width to be specified on the purchase order.
(Y) - designates fiber twist: N = never twisted, T = twisted, U = untwisted. Allowed values for (Y) for W3T are (U) and (T), allowed values for (Y) for W3G and W3GR are (N) and (T).

FL 6 Ratios and baseline shall be in accordance with D6-81510 and as follows:

R ₁	R ₂	R ₃	R ₄
0.176 to 0.448	5.62 to 12.71	1.88 to 3.85	0.105 to 0.496

FL 7 Ratios and baseline shall be in accordance with D6-81510 and as follows:

R ₁	R ₂	R ₃	R ₄
0.34 to 0.52	8.49 to 11.92	2.96 to 4.14	0.00 to 0.85

FL 8 UT = untwisted fiber, NT = never twisted fiber, ST = twisted fiber, (TY) = Toray fiber, (CCF) = Cytec Carbon fiber, (TH) = Toho fiber.

FL 9 Material Properties

Test	Minimum Average	Minimum Individual
Tensile Strength Ultimate, KSI, RT	205	170
Compression Strength Ultimate, KSI 160F	125	100
Flatwise Tension PSI	500	400

FL 10 Material width less than that listed on the QPL are considered to be qualified.

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