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COMPATIBILITY OF REFRIGERANTS AND LUBRICANTS WITH MOTOR MATERIALS

Effects of Refrigerant Exposures on Motor Materials
Volume II

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Effects of Refrigerant Exposures on Motor Materials
Volume II

Because of the large scope of this project and the large amount of data recorded, the final report is divided into four volumes.

Volume II contains all the recorded measurements from the tests on the motor materials after exposures to the 11 pure refrigerants and to nitrogen at same temperatures. The motor materials are identified by the codes listed on page iv. A letter coding system was used to identify the motor materials in the data tables. Data for each pure refrigerant lubricant are listed in a separate appendix.

Volume I contains the abstract, scope, discussion of results, charts of motor material compatibility, test procedures, material identifications and 84 pages of data summary tables. This volume provides results of the study and other information of interest to most users of the information.

Volume III contains all the recorded measurements from the tests on the motor materials after exposure to the 17 refrigerant-lubricant combinations and to nitrogen at the same temperatures.

Volume IV contains the photographs of motor materials after exposures to a pure refrigerants or to refrigerant-lubricant combinations.

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Effect of Refrigerant Exposures on Motor Materials
Volume II

Code Chart For Motor Material Exposures

Magnet Wire

Code

A -Modified polyester overcoated with polyamide imide, as described in Section MW 73 of NEMA Standard MW 1000.

B -Modified polyester overcoated with polyamide imide and epoxy saturated glass as described in Section MW 73 and MW 46 of NEMA Standard MW 1000.

C -Polyester imide over coated with polyamide imide.

Varnishes

Code

A -U-475EH solvent epoxy

B -Y-390PG solvent epoxy-phenolic

C -ER-610 93% solids epoxy

D -Y-833 100% solids VPI epoxy

E -923 solvent epoxy

F -Isopoxy 800 water-borne epoxy

Sheet Insulation, Slot Liners and Phase Separators

Code

A -Nomex/Mylar/Nomex

B -Dacron/Mylar/Dacron

C -Mylar MO

D -Nomex 410

E -Nomex Mica 418

F -Melinex 228

Spiral Wrapped Sleeving Insulation

Code

A -Nomex

B -Mylar

C -Nomex/Mylar

Lead Wire Insulation

Code

A -Dacron/Mylar/Dacron

B -Dacron/Teflon/Mylar/Dacron

Tapes

Code

A -Heat Cleaned Glass

B -Heat Shrinkable Braided Polyester

C -Permacel P247 glass/acrylic

Tie Cords

Code

A-Polyester

#1-after 500 hour exposure to refrigerant or refrigerant/lubricant.
#2-after 500 hour exposure plus 24 hours at 127°C(302°F).

Units of Measure

Magnet Wire

Test Performed	Experimental Units
Weight Change	grams(g)
Burnout Strength	seconds(sec)
Dielectric Strength	Kilovolts(Kv)

Varnish

Test Performed	Experimental Units
Weight Change	grams(g)
Bond Strength	pounds(Ibs)

Sheet Insulation

Test Performed	Experimental Units
Weight Change	grams(g)
Tensile Strength	1000 lb_f per square inch(Ksi)
Elongation	inches
Dielectric Strength	Kilovolts(kV)

Spiral Wrapped Sleeving

Test Performed	Experimental Units
Weight Change	grams(g)

Lead Wire

Test Performed	Experimental Units
Weight Change	grams(g)
Dielectric Strength	Kilovolts(kV)

Tapes and Tie Cords

Test Performed	Experimental Units
Weight Change	grams(g)
Break Load Strength	pounds(Ibs)
Elongation	inches

Abbreviations

WT=weight
EXP=exposed or experimental
BRN OUT=burnout
VIS=visual inspection
DIE=dielectric
VARN=varnish
BND STRENGTH=bond strength
COIL=helical coil
FLEX= flexibility test
N/C=no change

Appendix A

Experimental Data for Nitrogen Exposure at 60°C(140°F)

	500 HRS IN Nitrogen @ 140 F									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	23.2173	23.2139	-0.015%	N/C	576	564		15.80	13.87	
					576	530	-4.3%	15.80	17.40	2.3%
					576	560		15.80	17.23	
B1	25.9485	25.9454	-0.012%	N/C	736	730		11.62	11.77	
					736	728	-0.9%	11.62	12.63	6.7%
					736	730		11.62	12.81	
C1	23.0471	23.0433	-0.016%	N/C	579	510		16.58	14.85	
					579	549	-6.3%	16.58	15.39	-3.8%
					579	568		16.58	17.63	
	-->24 HRS @ 302 F									
A2	23.2749	23.2680	-0.030%	N/C	576	588		15.80	16.01	
					576	596	-1.7%	15.80	17.49	9.4%
					576	515		15.80	18.37	
B2	25.8003	25.7984	-0.007%	N/C	736	729		11.62	11.47	
					736	729	-1.0%	11.62	11.43	0.0%
					736	728		11.62	11.97	
C2	23.0630	23.0568	-0.027%	N/C	579	550		16.58	16.90	
					579	561	-3.4%	16.58	16.31	-2.7%
					579	567		16.58	15.21	

500 HOURS IN Nitrogen @ 140 F											
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	23.8376	23.8466	0.038%	N/C	16.24	15.70		430	337	
						16.24	15.73	-6.47%	430	353	-20.70%
						16.24	14.14		430	333	
	Y-390 B1	21.9774	21.9624	-0.068%	N/C	18.77	10.10		510	442	
						18.77	20.00	-22.45%	510	440	-13.86%
						18.77	13.57		510	436	
	ER-610 C1	22.2632	22.2666	0.015%	N/C	15.57	16.37		442	403	
						15.57	16.71	2.14%	442	475	-2.79%
						15.57	14.63		442	411	
	Y-833 D1	21.5453	21.5442	-0.005%	N/C	12.04	11.80		578	577	
						12.04	11.81	-2.16%	578	555	-2.13%
						12.04	11.73		578	565	
	923 E1	22.6395	22.6448	0.023%	N/C	16.76	20.00		606	560	
						16.76	20.00	4.79%	606	441	-22.00%
						16.76	12.69		606	417	
	ISO-800 F1	21.6169	21.6172	0.001%	N/C	19.08	17.50		580	567	
						19.08	17.97	-17.30%	580	605	-1.44%
						19.08	11.87		580	543	
		24 HOURS AT 302 F									
	U-475 A2	23.9045	23.9028	-0.007%	N/C	16.24	15.24		430	361	
						16.24	17.30	-11.02%	430	292	-21.01%
						16.24	10.81		430	366	
	Y-390 B2	21.5635	21.5614	-0.010%	N/C	18.77	11.86		510	452	
						18.77	20.00	-12.40%	510	428	-6.80%
						18.77	17.47		510	546	
	ER-610 C2	22.3508	22.3444	-0.029%	N/C	15.57	11.79		442	434	
						15.57	13.14	-19.37%	442	401	-5.20%
						15.57	12.73		442	422	
	Y-833 D2	21.4100	21.4094	-0.003%	N/C	12.04	10.63		578	500	
						12.04	10.13	-9.27%	578	579	-4.73%
						12.04	12.01		578	573	
	923 E2	22.5382	22.5370	-0.005%	N/C	16.76	12.50		606	449	
						16.76	9.11	-30.19%	606	404	-26.62%
						16.76	13.49		606	481	
	ISO-800 F2	21.4983	21.4960	-0.011%	N/C	19.08	15.90		580	573	
						19.08	16.63	-11.84%	580	594	-1.15%
						19.08	17.93		580	553	

500 HOURS IN Nitrogen @ 140 F											
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	26.6666	26.6744	0.03%	N/C	13.32	15.45		746	728	
						13.32	12.47	9.38%	746	731	-3.35%
						13.32	15.79		746	704	
	Y-390 B1	26.7664	26.7696	0.01%	N/C	12.28	14.43		755	732	
						12.28	12.67	4.29%	755	727	-3.49%
						12.28	11.32		755	727	
	ER-610 C1	24.1810	24.1680	-0.05%	N/C	12.73	10.77		734	718	
						12.73	12.39	-9.45%	734	731	-1.18%
						12.73	11.42		734	727	
	Y-833 D1	21.3290	21.3299	0.00%	N/C	12.49	11.17		734	710	
						12.49	11.10	-8.78%	734	680	-3.91%
						12.49	11.91		734	726	
	923 E1	28.2001	28.2112	0.04%	N/C	14.38	15.65		742	734	
						14.38	12.27	-6.86%	742	732	-0.90%
						14.38	12.26		742	740	
	ISO-800 F1	25.6680	25.6647	-0.01%	N/C	12.29	12.30		747	741	
						12.29	13.10	3.88%	747	736	-0.85%
						12.29	12.90		747	745	
		Nitrogen --> 24 hours @ 302 F									
	U-475 A2	23.3957	23.3984	0.01%	N/C	13.32	13.76		746	727	
						13.32	13.40	-3.10%	746	726	-2.50%
						13.32	11.56		746	729	
	Y-390 B2	26.8449	26.8416	-0.01%	N/C	12.28	12.31		755	735	
						12.28	11.31	-1.06%	755	729	-3.05%
						12.28	12.83		755	732	
	ER-610 C2	24.3963	24.3952	0.00%	N/C	12.73	11.65		734	729	
						12.73	12.81	-13.75%	734	730	-0.64%
						12.73	8.48		734	729	
	Y-833 D2	21.4484	21.4467	-0.01%	N/C	12.49	12.11		734	706	
						12.49	11.75	-5.63%	734	652	-5.50%
						12.49	11.50		734	723	
	923 E2	27.4130	27.4125	0.00%	N/C	14.38	12.50		742	726	
						14.38	14.17	-6.72%	742	727	-2.16%
						14.38	13.57		742	726	
	ISO-800 F2	25.4652	25.4628	-0.01%		12.29	12.54		747	747	
					N/C	12.29	11.59	-1.14%	747	732	-1.00%
						12.29	12.32		747	746	

500 HOURS IN Nitrogen @ 140 F											
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE	U-475 A1	24.1266	24.1319	0.022%	N/C	15.10	8.63		469	279	
						15.10	7.62	-37.53%	469	259	-39.66%
						15.10	12.05		469	311	
	Y-390 B1	21.9228	21.9312	0.038%	N/C	18.24	10.88		473	398	
						18.24	20.00	-7.02%	473	405	-5.07%
						18.24	20.00		473	544	
	ER-610 C1	22.4758	22.4809	0.023%	N/C	14.53	8.16		494	283	
						14.53	12.00	-37.16%	494	390	-30.36%
						14.53	7.23		494	359	
	Y-833 D1	22.0466	22.0549	0.038%	N/C	11.38	12.27		557	318	
						11.38	20.00	27.42%	557	366	-41.29%
						11.38	11.23		557	297	
	923 E1	23.1337	23.1408	0.031%	N/C	15.85	16.22		503	520	
						15.85	17.90	-0.76%	503	520	-4.44%
						15.85	13.07		503	402	
	ISO-800 F1	21.6704	21.6726	0.010%	N/C	14.75	17.84		632	578	
						14.75	16.97	18.71%	632	549	-10.50%
						14.75	17.72		632	570	
POLYAMIDE IMIDE		--> 24 hours @ 302 F									
	U-475 A2	24.2843	24.2840	-0.001%	N/C	15.10	16.09		469	351	
						15.10	11.63	-19.56%	469	343	-27.93%
						15.10	8.72		469	320	
	Y-390 B2	21.9349	21.9345	-0.002%	N/C	18.24	16.69		473	478	
						18.24	13.64	-36.92%	473	481	1.20%
						18.24	9.37		473	477	
	ER-610 C2	22.6978	22.6996	0.008%	N/C	14.53	13.63		494	353	
						14.53	12.55	-11.81%	494	325	-28.07%
						14.53	12.26		494	388	
	Y-833 D2	21.7187	21.7150	-0.017%	N/C	11.38	18.55		557	344	
						11.38	13.66	51.96%	557	343	-39.74%
						11.38	19.67		557	320	
	923 E2	23.2099	23.2093	-0.003%	N/C	15.85	13.16		503	401	
						15.85	12.26	-11.19%	503	472	-12.33%
						15.85	16.81		503	450	
	ISO-800 F2	21.8631	21.8472	-0.073%	N/C	14.75	15.20		632	570	
						14.75	13.83	6.51%	632	556	-11.45%
						14.75	18.10		632	553	

		500 HRS IN Nitrogen @ 140 F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	39.4479	39.4547	0.017%	N/C	73.73	53.20	
						73.73	44.80	-33.13%
						73.73	49.90	
	Y-390 B1	39.7842	39.7912	0.018%	N/C	43.78	55.72	
						43.78	70.82	38.31%
						43.78	55.12	
	ER-610 C1	38.6643	38.6724	0.021%	N/C	51.81	55.55	
						51.81	56.42	4.47%
						51.81	50.40	
	Y-833 D1	37.1538	37.1531	-0.002%	N/C	9.85	10.00	
						9.85	8.00	-8.63%
						9.85	9.00	
	923 E1	37.5887	37.5817	-0.019%	N/C	41.28	41.50	
						41.28	42.25	3.44%
						41.28	44.35	
	ISO-800 F1	37.9406	37.9483	0.020%	N/C	45.01	31.20	
						45.01	33.72	-27.88%
						45.01	31.95	
		Nitrogen -> 24 HRS 302 F						
	U-475 A2	38.9104	38.9051	-0.014%	N/C	73.73	80.75	
						73.73	68.20	-5.84%
						73.73	70.65	
	Y-390 B2	40.1575	40.1498	-0.019%	N/C	43.78	64.45	
						43.78	49.07	23.82%
						43.78	49.10	
	ER-610 C2	38.9211	38.9164	-0.012%	N/C	51.81	59.12	
						51.81	54.02	6.92%
						51.81	53.05	
	Y-833 D2	37.1643	37.1609	-0.009%	N/C	9.85	22.17	
						9.85	10.00	56.24%
						9.85	14.00	
	923 E2	37.6939	37.6891	-0.013%	N/C	41.28	40.25	
						41.28	49.07	12.94%
						41.28	50.55	
	ISO-800 F2	37.9011	37.8978	-0.009%	N/C	45.01	31.37	
						45.01	35.60	-23.51%
						45.01	36.32	

		500 HRS IN Nitrogen @ 140 F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	38.1533	38.1567	0.009%	N/C	40.14	32.05	-14.99%
						40.14	36.62	
						40.14	33.70	
	Y-390 B1	36.9446	36.9541	0.026%	N/C	36.12	27.85	-10.56%
						36.12	37.22	
						36.12	31.85	
	ER-610 C1	36.5143	36.5194	0.014%	N/C	35.96	35.17	-9.42%
						35.96	32.55	
						35.96	30.00	
	Y-833 D1	36.8104	36.8171	0.018%	N/C	33.14	33.57	-20.57%
						33.14	14.30	
						33.14	31.10	
	923 E1	35.7969	35.8063	0.026%	N/C	40.52	36.27	-7.28%
						40.52	39.42	
						40.52	37.02	
	ISO-800 F1	35.4549	35.4568	0.005%	N/C	20.20	18.65	-3.48%
						20.20	19.67	
						20.20	20.17	
		Nitrogen -> 24 HRS 302 F						
	U-475 A2	37.9895	37.9820	-0.020%	N/C	40.14	38.62	-7.05%
						40.14	broken	
						40.14	36.00	
	Y-390 B2	37.3761	37.3713	-0.013%	Varnish Pockets	36.12	32.97	-9.50%
						36.12	32.80	
						36.12	32.30	
	ER-610 C2	37.1049	37.1018	-0.008%	N/C	35.96	38.02	2.21%
						35.96	35.67	
						35.96	36.57	
	Y-833 D2	36.9632	36.9617	-0.004%	N/C	33.14	27.75	-9.98%
						33.14	24.80	
						33.14	36.95	
	923 E2	36.9032	36.8978	-0.015%	N/C	40.52	35.90	-9.37%
						40.52	39.40	
						40.52	34.87	
	ISO-800 F2	35.4208	35.4168	-0.011%	N/C	20.20	19.92	-4.19%
						20.20	19.67	
						20.20	18.47	

		500 HRS IN Nitrogen @ 140 F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE	U-475 A1	37.5011	37.5052	0.011%	N/C	51.21	65.77	
						51.21	66.77	30.73%
						51.21	68.30	
	Y-390 B1	39.2874	39.2822	-0.013%	N/C	50.72	60.07	
						50.72	54.05	2.14%
						50.72	41.30	
	ER-610 C1	37.3294	37.3346	0.014%	N/C	58.33	54.92	
						58.33	62.92	-0.66%
						58.33	56.00	
	Y-833 D1	36.8415	36.8416	0.000%	N/C	5.84	9.00	
						5.84	5.00	54.11%
						5.84	13.00	
	923 E1	38.6136	38.6166	0.008%	N/C	49.26	41.25	
						49.26	38.07	-19.28%
						49.26	39.97	
	ISO-800 F1	38.5336	38.5334	-0.001%	N/C	36.08	43.35	
						36.08	55.65	12.85%
						36.08	23.15	
POLYAMIDE IMIDE		Nitrogen-> 24 HRS 302 F						
	U-475 A2	37.5624	37.5515	-0.029%	N/C	51.21	71.87	
						51.21	74.97	42.71%
						51.21	72.40	
	Y-390 B2	39.7222	39.7177	-0.011%	N/C	50.72	58.70	
						50.72	55.10	9.79%
						50.72	53.25	
	ER-610 C2	37.6181	37.6148	-0.009%	N/C	58.33	57.00	
						58.33	51.57	-8.41%
						58.33	51.70	
	Y-833 D2	37.1415	37.1361	-0.015%	N/C	5.84	24.45	
						5.84	21.40	190.24%
						5.84	5.00	
	923 E2	38.4291	38.4248	-0.011%	N/C	49.26	43.42	
						49.26	49.97	-8.13%
						49.26	42.37	
	ISO-800 F2	38.5579	38.5534	-0.012%	N/C	36.08	58.92	
						36.08	52.12	45.43%
						36.08	46.37	

	500 HRS IN Nitrogen @ 140 F				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	4.7448	4.7437	-0.023%	N/C	
					YES
B1	6.2039	6.2061	0.035%	N/C	
					YES
C1	5.5886	5.5881	-0.009%	N/C	
					YES
	Nitrogen -> 302F 24 HRS				
A2	4.7642	4.7618	-0.050%	N/C	
					YES
B2	6.2798	6.2829	0.049%	N/C	
					YES
C2	5.6049	5.6001	-0.086%	N/C	
					YES

	500 hrs in Nitrogen at 140 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE	U-475 A1	5.3987	5.3988	0.002%	N/C	NO
	Y-390 B1	5.6517	5.6513	-0.007%	N/C	NO
	ER-610 C1	5.5375	5.5378	0.005%	N/C	YES
	Y-833 D1	5.2044	5.2019	-0.048%	N/C	YES
	923 E1	5.8351	5.8325	-0.045%	N/C	NO
	ISO-800 F1	5.6257	5.6257	0.000%	N/C	NO
		Nitrogen-> 24 HRS @ 302F				
	U-475 A2	5.4607	5.4606	-0.002%	N/C	NO
	Y-390 B2	5.7077	5.7067	-0.018%	N/C	NO
	ER-610 C2	5.5527	5.5499	-0.050%	N/C	YES
	Y-833 D2	5.1036	5.1020	-0.031%	N/C	YES
	923 E2	5.8104	5.8091	-0.022%	N/C	NO
	ISO-800 F2	5.5716	5.5716	0.000%	N/C	NO

		500 hour in nitrogen at 140°F(60°C)				
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	5.8060	5.8073	0.022%	N/C	NO
	Y-390 B1	6.0089	6.0131	0.070%	N/C	NO
	ER-610 C1	5.2470	5.2441	-0.055%	N/C	YES
	Y-833 D1	6.1270	6.1279	0.015%	N/C	YES
	923 E1	5.5459	5.5492	0.060%	N/C	NO
	ISO-800 F1	5.6529	5.6536	0.012%	N/C	NO
		nitrogen -> 24 HRS @ 302F				
	U-475 A2	5.9368	5.9379	0.019%	N/C	NO
	Y-390 B2	6.1031	6.1035	0.007%	N/C	NO
	ER-610 C2	5.2739	5.2739	0.000%	N/C	YES
	Y-833 D2	5.9790	5.9794	0.007%	N/C	YES
	923 E2	5.5961	5.5956	-0.009%	N/C	NO
	ISO-800 F2	5.5924	5.5903	-0.038%	N/C	NO

		Nitrogen at 140 F				
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER IMIDE POLYAMIDE IMIDE	U-475 A1	5.4915	5.4930	0.027%	N/C	NO
	Y-390 B1	5.8168	5.8181	0.022%	N/C	NO
	ER-610 C1	5.6305	5.6303	-0.004%	N/C	YES
	Y-833 D1	5.4779	5.4787	0.015%	N/C	YES
	923 E1	5.9327	5.9396	0.116%	N/C	NO
	ISO-800 F1	5.7085	5.7092	0.012%	N/C	NO
		Nitrogen -> 24 HRS @ 302F				
	U-475 A2	5.5273	5.5262	-0.020%	N/C	NO
	Y-390 B2	5.6196	5.6191	-0.009%	N/C	NO
	ER-610 C2	5.6763	5.6752	-0.019%	N/C	YES
	Y-833 D2	5.1930	5.1908	-0.042%	N/C	YES
	923 E2	5.6963	5.6952	-0.019%	N/C	NO
	ISO-800 F2	5.7040	5.7031	-0.016%	N/C	NO

500 HRS IN Nitrogen @ 140 F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	2.2051	2.2120	0.31%	N/C	N/C
Y-390 B1	2.1027	2.1088	0.29%	slightly warped	N/C
ER-610 C1	2.5004	2.5099	0.38%	N/C	N/C
Y-833 D1	2.3183	2.3224	0.18%	N/C	N/C
923 E1	1.7684	1.7734	0.28%	N/C	N/C
ISO-800 F1	1.0921	1.0942	0.19%	Slightly warped	N/C
	Nitrogen at ->302F 24 HRS				
U-475 A2	2.4477	2.4291	-0.76%	Darkened Slightly Warped	N/C
Y-390 B2	2.4425	2.4091	-1.37%	slightly warped	N/C
ER-610 C2	1.9845	1.9786	-0.30%	Darkened	N/C
Y-833 D2	2.7184	2.7198	0.05%	N/C	N/C
923 E2	1.7253	1.7250	-0.02%		N/C
ISO-800 F2	1.1148	1.0965	-1.64%	Warped	N/C

500 HR IN Nitrogen @ 140 F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS Mils	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	4.6428	4.6411	-0.04%	0.421	136.60	21	17.4	15.45	
				0.430	146.80	21	17.4	16.26	-10.15%
				0.455	145.20	21	17.4	15.20	
DA/MY/DA B1	4.2692	4.2732	0.09%	0.510	149.90	21	13.7	14.00	
				0.453	126.30	21	13.7	13.28	-0.94%
				0.463	130.70	21	13.7	13.44	
MYLAR MO C1	2.2468	2.2476	0.04%	0.423	88.10	10	21.7	20.83	
				0.441	89.10	10	21.7	20.20	-7.59%
				0.434	83.00	10	21.7	19.12	
NO 410 D1	2.1912	2.1981	0.31%	0.445	88.65	10	18.7	19.92	
				0.435	75.95	10	18.7	17.46	0.45%
				0.403	76.45	10	18.7	18.97	
NO MI 418 E1	2.3400	2.3453	0.23%	0.482	26.70	9	7.5	6.15	
				0.496	26.60	9	7.5	5.96	-17.53%
				0.520	30.15	9	7.5	6.44	
MEL 228 F1	2.3060	2.3062	0.01%	0.440	73.70	10	21.7	16.75	
				0.387	84.75	10	21.7	21.90	-10.65%
				0.479	93.50	10	21.7	19.52	
	500 HRS IN Nitrogen ->24 HRS @ 302 F								
NO/MY/NO A2	4.7133	4.7076	-0.12%	0.349	"70.25	21	17.4	#VALUE!	
				0.447	150.60	21	17.4	16.04	-7.20%
				0.320	109.20	21	17.4	16.25	
DA/MY/DA B2	4.2851	4.2836	-0.04%	0.430	122.40	21	13.7	13.55	
				0.402	118.80	21	13.7	14.07	1.18%
				0.448	131.30	21	13.7	13.96	
MYLAR MO C2	2.1042	2.1036	-0.03%	0.476	98.70	10	21.7	20.74	
				0.488	100.00	10	21.7	20.49	-5.05%
				0.411	84.60	10	21.7	20.58	
NOMEX 410 D2	2.1778	2.1746	-0.15%	0.494	96.85	11	18.7	17.82	
				0.445	85.25	11	18.7	17.42	-4.70%
				0.442	88.60	11	18.7	18.22	
NO/MI 418 E2	2.3465	2.3404	-0.26%	0.485	27.30	9	7.5	6.25	
				0.468	23.80	9	7.5	5.65	-21.56%
				0.499	25.80	9	7.5	5.74	
MEL 228 F2	2.3149	2.3181	0.14%	0.484	90.80	10	21.7	18.76	
				0.388	75.85	10	21.7	19.55	-11.07%
				0.460	90.10	10	21.7	19.59	

" sample slipped in grips, did not use number in average

After 500 hour exposure at 140°F(60°C)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO A1	0.33	8.3%	20.0%		>18.97	>13.39		N/C
	0.65	16.3%	20.0%	-40.0%	>18.97	>13.96	flash	
	0.46	11.5%	20.0%		>18.97	>15.12		
DA/MY/DA B1	0.61	30.5%	46.0%		>15.27	>12.56		N/C
	0.56	28.0%	46.0%	-36.2%	>15.27	>14.63	flash	
	0.59	29.5%	46.0%		>15.27	>13.63		
MYLAR MO C1	2.96	148.0%	131.0%		>14.91	>12.31		N/C
	2.86	143.0%	131.0%	5.5%	>14.91	>13.09	flash	
	2.47	123.5%	131.0%		>14.91	>13.21		
NO 410 D1	0.68	17.0%	17.0%		10.67	11.27		N/C
	0.46	11.5%	17.0%	-11.8%	10.67	9.92	0.9%	
	0.66	16.5%	17.0%		10.67	11.12		
NO MI 418 E1	0.08	2.0%	4.0%		10.23	8.47		N/C
	0.09	2.3%	4.0%	-43.8%	10.23	9.46	-14.5%	
	0.10	2.5%	4.0%		10.23	8.31		
MEL 228 F1	3.24	162.0%	160.0%		>14.22	>13.03		N/C
	3.26	163.0%	160.0%	2.9%	>14.22	>11.73	flash	
	3.38	169.0%	160.0%		>14.22	>13.20		
	After 500 hour exposure plus 24 hour air bake @ 302°F(150°C)							
NO/MY/NO A2	0.11	2.8%	20.0%		>18.97	>14.26		N/C
	0.46	11.5%	20.0%	-42.5%	>18.97	>13.64	flash	
	0.46	11.5%	20.0%		>18.97	>14.31		
DA/MY/DA B2	0.52	26.0%	46.0%		>15.27	>13.18		N/C
	0.57	28.5%	46.0%	-40.2%	>15.27	>12.97	flash	
	0.56	28.0%	46.0%		>15.27	>14.06		
MYLAR MO C2	2.82	141.0%	131.0%		>14.91	>12.05		N/C
	3.08	154.0%	131.0%	12.7%	>14.91	>10.62	flash	
	2.96	148.0%	131.0%		>14.91	>11.47		
NOMEX 410 D2	0.54	13.5%	17.0%		10.67	9.64		N/C
	0.46	11.5%	17.0%	-23.5%	10.67	10.04	-4.0%	
	0.56	14.0%	17.0%		10.67	11.04		
NO/MI 418 E2	0.10	2.5%	4.0%		10.23	9.90		N/C
	0.08	2.0%	4.0%	-47.9%	10.23	8.46	-12.6%	
	0.07	1.8%	4.0%		10.23	8.45		
MEL 228 F2	3.14	157.0%	160.0%		>14.22	>13.09		N/C
	3.28	164.0%	160.0%	0.3%	>14.22	>13.46	flash	
	3.21	160.5%	160.0%		>14.22	>11.99		

	500 HRS IN Nitrogen @ 140 F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5893	0.5871	-0.37%	N/C
B1 MYLAR	0.4572	0.4577	0.11%	N/C
C1 NO/MY	0.3972	0.3996	0.60%	N/C
	Nitrogen ---->24 hrs @ 302F			
A2 NOMEX	0.5430	0.5417	-0.24%	N/C
B2 MYLAR	0.4604	0.4608	0.09%	N/C
C2 NO/MY	0.4039	0.4039	0.00%	Pockects where mylar pulled away *see photo

	500 HRS IN Nitrogen @ 140 F									
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS	
A1 Glass	1.4977	1.4967	-0.07%	39.02	43.85		0.04	2.00%	N/C	
				39.02	37.65	9.56%	0.05	2.50%		
				39.02	46.75		0.05	2.50%		
B1 Polyester	0.6202	0.6232	0.48%	56.12	55.75		0.68	34.00%	N/C	
				56.12	60.00	5.40%	0.57	28.50%		
				56.12	61.70		0.49	24.50%		
C1 Permacel	1.4650	1.4702	0.35%	88.50	42.55		0.10	5.00%	N/C	
				88.50	79.48	-31.44%	0.10	5.00%		
				88.50	60.00		0.11	5.50%		
	500 HRS in Nitrogen -> 302 F 24 HRS									
A2 Glass	1.3523	1.3512	-0.08%	39.02	41.20		0.05	2.50%	N/C	
				39.02	28.65	-3.94%	0.04	2.00%		
				39.02	42.60		0.05	2.50%		
B2 Polyester	0.5681	0.5690	0.16%	56.12	54.55		0.49	24.50%	N/C	
				56.12	60.35	1.48%	0.66	33.00%		
				56.12	55.95		0.57	28.50%		
C2 Permacel	1.3383	1.3228	-1.16%	88.50	109.50		0.13	6.50%	Slightly	
				88.50	114.00	20.41%	0.11	5.50%	darker in	
				88.50	96.20		0.11	5.50%	color	

	500 HRS IN Nitrogen @ 140 F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1	0.2686	0.27	0.52%	N/C	28.36	33.15		0.24	12.0%
					28.36	36.30	20.00%	0.27	13.5%
					28.36	32.65		0.24	12.0%
	500 HRS IN Nitrogen -> 24 HRS @ 302F								
A2	0.2794	0.2801	0.251%	N/C	28.36	37.95		0.43	21.5%
					28.36	37.35	29.29%	0.55	27.5%
					28.36	34.70		0.40	20.0%

	500 HRS IN Nitrogen @ 140 F						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	3.9798	3.9775	-0.06%	N/C	9.61	9.00	
A1					9.61	9.69	-0.28%
					9.61	10.06	
DTMD	4.2369	4.2366	-0.01%	N/C	9.95	9.57	
B1					9.95	9.11	-1.21%
					9.95	10.81	
	- -> 24 HRS @ 302F						
DMD	4.1012	4.0980	-0.08%	N/C	9.61	9.10	
A2					9.61	9.61	-0.73%
					9.61	9.91	
DTMD	4.2288	4.2271	-0.04%	N/C	9.95	7.93	
B2					9.95	10.01	-7.47%
					9.95	9.68	

Appendix B

Experimental Data for Nitrogen Exposure at 90°C(194°F)

	500 HRS IN Nitrogen @ 194 F									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	25.0173	25.0131	-0.017%	N/C	576	561		15.80	15.07	
					576	563	-2.3%	15.80	14.51	-7.9%
					576	565		15.80	14.09	
B1	23.8352	23.8317	-0.015%	N/C	736	729		11.62	12.10	
					736	721	-1.3%	11.62	12.07	5.1%
					736	730		11.62	12.46	
C1	24.4929	24.4932	0.001%	N/C	579	589		16.58	17.25	
					579	582	0.5%	16.58	18.15	6.2%
					579	575		16.58	17.41	
	Nitrogen ---> 24 hours at 302°F(150°C)									
A2	25.519	25.4979	-0.083%	N/C	576	570		15.80	15.34	
					576	540	-3.0%	15.80	10.06	-14.2%
					576	566		15.80	15.29	
B2	22.5205	22.5086	-0.053%	N/C	736	733		11.62	11.81	
					736	734	-0.4%	11.62	12.56	5.5%
					736	733		11.62	12.39	
C2	24.5618	24.5611	-0.003%	N/C	547	450		16.58	12.27	
					591	337	-29.8%	16.58	17.69	-5.1%
					581	457		16.58	17.25	

500 HOURS IN Nitrogen @ 194 F												
	VARN	TWISTED PAIR WT	Exp Pair weight	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	22.6684	22.6703	0.008%	N/C	16.24	20.00		430	333	
						16.24	17.78	11.12%	430	310	-24.73%
						16.24	16.36		430	328	
	Y-390 B1	22.8231	22.8185	-0.020%	N/C	18.77	20.00		510	500	
						18.77	15.64	-1.19%	510	510	-0.52%
						18.77	20.00		510	512	
	ER-610 C1	21.7013	21.7000	-0.006%	N/C	15.57	17.00		442	429	
						15.57	15.67	2.76%	442	416	-5.58%
						15.57	15.33		442	407	
	Y-833 D1	23.0665	23.0643	-0.010%	N/C	12.04	10.33		578	567	
						12.04	12.27	-7.23%	578	533	-5.42%
						12.04	10.91		578	540	
	923 E1	23.0186	23.0192	0.003%	N/C	16.76	5.94		606	465	
						16.76	broke	-22.61%	606	544	-17.60%
						16.76	20.00		606	489	
	ISO-800 F1	21.6766	21.6741	-0.012%	N/C	19.08	20.00		580	508	
						19.08	8.89	-26.73%	580	480	-10.40%
						19.08	13.05		580	571	
		24 HOURS AT 302 F									
	U-475 A2	22.4152	22.4114	-0.017%	N/C	16.24	16.32		430	379	
						16.24	16.54	8.50%	430	370	-12.64%
						16.24	20.00		430	378	
	Y-390 B2	22.8138	22.8077	-0.027%	N/C	18.77	20.00		510	545	
						18.77	18.50	-11.15%	510	488	9.15%
						18.77	11.53		510	637	
	ER-610 C2	21.6518	21.6522	0.002%	N/C	15.57	17.14		442	380	
						15.57	16.89	10.17%	442	392	-12.22%
						15.57	17.43		442	392	
	Y-833 D2	23.2459	23.2422	-0.016%	N/C	12.04	11.33		578	466	
						12.04	11.57	-5.73%	578	569	-9.69%
						12.04	11.15		578	531	
	923 E2	22.7316	22.7253	-0.028%	N/C	16.76	16.95		606	496	
						16.76	13.71	-15.41%	606	406	-24.15%
						16.76	11.87		606	477	
	ISO-800 F2	21.7101	21.7050	-0.023%	N/C	19.08	20.00		580	609	
						19.08	14.02	-7.56%	580	559	-0.11%
						19.08	18.89		580	570	

500 HOURS IN Nitrogen @ 194°F											
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	27.0452	27.0473	0.01%	N/C	13.32	12.92		746	730	
						13.32	13.27	-0.85%	746	731	-2.01%
						13.32	13.43		746	732	
	Y-390 B1	23.3779	23.3763	-0.01%	N/C	12.28	12.40		755	742	
						12.28	10.31	-6.51%	755	747	-1.81%
						12.28	11.73		755	735	
	ER-610 C1	20.2273	20.2199	-0.04%	N/C	12.73	11.96		734	732	
						12.73	11.71	-7.03%	734	732	-0.27%
						12.73	broke		734	732	
	Y-833 D1	21.3295	21.3282	-0.01%	N/C	12.49	12.12		734	713	
						12.49	10.77	-6.06%	734	725	-1.73%
						12.49	12.31		734	726	
	923 E1	26.2462	26.2433	-0.01%	N/C	14.38	11.74		742	733	
						14.38	11.57	-19.52%	742	747	-0.72%
						14.38	11.41		742	730	
	ISO-800 F1	29.1508	29.1528	0.01%	N/C	12.29	10.26		747	747	
						12.29	12.87	-3.91%	747	741	-0.71%
						12.29	12.30		747	737	
		Nitrogen --> 24 hours @ 302 F									
	U-475 A2	27.0249	27.0230	-0.01%	N/C	13.32	12.79		746	728	
						13.32	9.76	-7.38%	746	730	-2.32%
						13.32	14.46		746	728	
	Y-390 B2	23.2621	23.2573	-0.02%	N/C	12.28	10.82		755	736	
						12.28	13.09	-0.65%	755	731	-2.85%
						12.28	12.69		755	736	
	ER-610 C2	23.5619	23.5703	0.04%	N/C	12.73	10.96		734	652	
						12.73	11.51	1.86%	734	729	-5.93%
						12.73	16.43		734	lost	
	Y-833 D2	21.4654	21.4615	-0.02%	N/C	12.49	11.11		734	698	
						12.49	11.41	-6.62%	734	728	-2.72%
						12.49	12.47		734	716	
	923 E2	26.7630	26.7555	-0.03%	N/C	14.38	20.00		742	736	
						14.38	20.00	34.33%	742	741	-0.81%
						14.38	17.95		742	727	
	ISO-800 F2	28.1556	28.1523	-0.01%		12.29	12.85		747	737	
					N/C	12.29	10.52	-1.93%	747	742	-1.00%
						12.29	12.79		747	730	

500 HOURS IN Nitrogen @ 194 F											
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE	U-475 A1	23.0730	23.0658	-0.031%	N/C	15.10	12.40		469	539	
						15.10	10.11	-19.82%	469	540	18.69%
						15.10	13.81		469	591	
	Y-390 B1	21.8142	21.8014	-0.059%	N/C	18.24	broke		473	509	
						18.24	12.41	-23.27%	473	427	-2.33%
						18.24	15.58		473	450	
	ER-610 C1	22.1527	22.1880	0.159%	N/C	14.53	15.46		494	401	
						14.53	14.33	3.10%	494	449	-11.40%
						14.53	15.15		494	463	
	Y-833 D1	25.3475	25.3368	-0.042%	N/C	11.38	14.46		557	308	
						11.38	16.30	44.02%	557	346	-42.01%
						11.38	18.41		557	315	
	923 E1	25.0774	25.0643	-0.052%	N/C	15.85	20.00		503	443	
						15.85	20.00	20.74%	503	420	-13.65%
						15.85	17.41		503	440	
	ISO-800 F1	22.0673	22.0612	-0.028%	N/C	14.75	15.80		632	576	
						14.75	14.62	-10.96%	632	593	-9.07%
						14.75	8.98		632	555	
		Nitrogen --> 24 hours @ 302 F									
POLYAMIDE IMIDE	U-475 A2	24.0089	24.0039	-0.021%	N/C	15.10	10.72		469	516	
						15.10	10.72	-28.57%	469	579	10.23%
						15.10	10.92		469	456	
	Y-390 B2	21.9070	21.8924	-0.067%	N/C	18.24	8.21		473	620	
						18.24	19.84	-5.40%	473	426	9.30%
						18.24	14.67		473	505	
	ER-610 C2	22.0712	22.0632	-0.036%	N/C	14.53	15.61		494	379	
						14.53	16.45	5.12%	494	409	-20.58%
						14.53	13.76		494	389	
	Y-833 D2	25.0422	24.9320	-0.440%	N/C	11.38	16.39		557	369	
						11.38	17.45	36.58%	557	332	-35.85%
						11.38	12.79		557	371	
	923 E2	25.7509	25.7329	-0.070%	N/C	15.85	16.95		503	551	
						15.85	13.71	-10.68%	503	441	-4.84%
						15.85	11.81		503	444	
	ISO-800 F2	22.0732	22.0619	-0.051%	N/C	14.75	broke		632	594	
						14.75	13.27	-4.41%	632	574	-8.18%
						14.75	14.93		632	573	

		500 HRS IN Nitrogen @ 194°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	40.1089	40.1165	0.019%	N/C	73.73	73.57	
						73.73	58.95	-11.04%
						73.73	64.25	
	Y-390 B1	39.0368	39.0439	0.018%	N/C	43.78	48.47	
						43.78	51.20	6.78%
						43.78	40.57	
	ER-610 C1	40.2526	40.3003	0.119%	N/C	51.81	66.32	
						51.81	54.35	10.45%
						51.81	51.00	
	Y-833 D1	38.4237	38.4234	-0.001%	N/C	9.85	17.50	
						9.85	19.92	188.22%
						9.85	47.75	
	923 E1	38.9578	38.9568	-0.003%	N/C	41.28	36.97	
						41.28	33.32	0.16%
						41.28	53.75	
	ISO-800 F1	38.4408	38.4489	0.021%	N/C	45.01	52.27	
						45.01	46.92	10.19%
						45.01	36.52	
		Nitrogen -> 24 HRS 302°F						
	U-475 A2	40.3451	40.3410	-0.010%	N/C	73.73	58.85	
						73.73	60.50	-15.88%
						73.73	63.55	
	Y-390 B2	38.9613	38.9589	-0.006%	N/C	43.78	54.20	
						43.78	53.70	27.99%
						43.78	60.20	
	ER-610 C2	38.7011	38.6978	-0.009%	N/C	51.81	63.45	
						51.81	75.05	37.75%
						51.81	75.60	
	Y-833 D2	38.5377	38.5355	-0.006%	N/C	9.85	64.85	
						9.85	7.90	353.47%
						9.85	61.25	
	923 E2	39.8244	39.8249	0.001%	N/C	41.28	37.77	
						41.28	41.12	7.93%
						41.28	54.77	
	ISO-800 F2	37.2253	37.2218	-0.009%	N/C	45.01	56.62	
						45.01	29.17	-1.44%
						45.01	47.30	

		500 HRS IN Nitrogen @ 194°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE EPOXY GLASS	U-475 A1	37.6309	37.6430	0.032%	N/C	40.14	34.92	
						40.14	34.60	-13.70%
						40.14	34.40	
	Y-390 B1	38.5257	38.5365	0.028%	N/C	36.12	30.82	
						36.12	39.25	-0.76%
						36.12	37.47	
	ER-610 C1	37.4404	37.4485	0.022%	N/C	35.96	29.80	
						35.96	30.45	-17.58%
						35.96	28.67	
	Y-833 D1	37.7714	37.7799	0.023%	N/C	33.14	12.20	
						33.14	29.87	-39.08%
						33.14	18.50	
	923 E1	38.3050	38.3152	0.027%	N/C	40.52	29.15	
						40.52	31.50	-20.08%
						40.52	36.50	
	ISO-800 F1	37.1400	37.1404	0.001%	N/C	20.20	23.57	
						20.20	22.50	16.57%
						20.20	24.57	
		Nitrogen -> 24 HRS 302°F						
	U-475 A2	36.7209	36.7184	-0.007%	N/C	40.14	33.22	
						40.14	31.15	-22.36%
						40.14	29.12	
	Y-390 B2	38.5696	38.5832	0.035%	N/C	36.12	36.27	
						36.12	35.85	-1.84%
						36.12	34.25	
	ER-610 C2	37.6121	37.6106	-0.004%	N/C	35.96	35.37	
						35.96	29.45	-7.64%
						35.96	34.82	
	Y-833 D2	36.0136	36.0118	-0.005%	N/C	33.14	30.77	
						33.14	9.00	-40.06%
						33.14	19.82	
	923 E2	38.1740	38.1714	-0.007%	N/C	40.52	32.80	
						40.52	28.10	-27.67%
						40.52	27.02	
	ISO-800 F2	36.5539	36.5885	0.095%	N/C	20.20	14.65	
						20.20	19.60	-10.45%
						20.20	20.02	

		500 HRS IN Nitrogen @ 194°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE	U-475 A1	38.2772	38.2867	0.025%	N/C	51.21	58.77	18.77%
						51.21	53.67	
						51.21	70.02	
	Y-390 B1	39.9571	39.9617	0.012%	N/C	50.72	49.42	-4.12%
						50.72	44.52	
						50.72	51.95	
	ER-610 C1	37.4257	37.4289	0.009%	N/C	58.33	50.30	-10.35%
						58.33	55.97	
						58.33	50.60	
	Y-833 D1	38.2462	38.2545	0.022%	N/C	5.84	12.70	223.86%
						5.84	21.87	
						5.84	22.17	
	923 E1	39.0523	39.0591	0.017%	N/C	49.26	42.20	-14.05%
						49.26	43.90	
						49.26	40.92	
	ISO-800 F1	39.7716	39.7806	0.023%	N/C	36.08	43.15	38.17%
						36.08	56.30	
						36.08	50.10	
POLYAMIDE IMIDE		Nitrogen-> 24 HRS 302°F						
	U-475 A2	38.3013	38.3000	-0.003%	N/C	51.21	63.55	29.81%
						51.21	73.40	
						51.21	62.47	
	Y-390 B2	40.6512	40.6450	-0.015%	N/C	50.72	53.87	-5.99%
						50.72	40.62	
						50.72	48.55	
	ER-610 C2	37.2531	37.2870	0.091%	N/C	58.33	58.22	4.49%
						58.33	56.45	
						58.33	68.17	
	Y-833 D2	38.2080	38.2033	-0.012%	N/C	5.84	27.30	194.63%
						5.84	2.00	
						5.84	22.32	
	923 E2	38.9176	38.9112	-0.016%	N/C	49.26	43.72	-11.80%
						49.26	43.87	
						49.26	42.75	
	ISO-800 F2	39.7213	39.7158	-0.014%	N/C	36.08	60.45	46.61%
						36.08	32.57	
						36.08	65.67	

	500 HRS IN Nitrogen @ 194°F				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	4.3772	4.3778	0.014%	N/C	YES
B1	4.5737	4.5689	-0.105%	N/C	YES
C1	4.5382	4.5381	-0.002%	N/C	YES
	Nitrogen -> 302°F for 24 HRS				
A2	4.3384	4.3374	-0.023%	N/C	YES
B2	4.4635	4.4621	-0.031%	N/C	YES
C2	4.6678	4.6687	0.019%	N/C	YES

	500 hrs in Nitrogen at 194° F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE	U-475 A1	5.0660	5.0641	-0.038%	N/C	NO
	Y-390 B1	5.5300	5.4253	-1.893%	N/C	NO
	ER-610 C1	5.0079	5.0055	-0.048%	N/C	YES
	Y-833 D1	5.6305	5.6243	-0.110%	N/C	YES
	923 E1	5.2677	5.2621	-0.106%	N/C	NO
	ISO-800 F1	5.1072	5.1055	-0.033%	N/C	NO
		Nitrogen -> 24 HRS @ 302°F				
	U-475 A2	5.0720	5.0690	-0.059%	N/C	YES
	Y-390 B2	5.3689	5.3855	0.309%	N/C	NO
	ER-610 C2	5.0492	5.0484	-0.016%	N/C	YES
	Y-833 D2	5.5759	5.5730	-0.052%	N/C	YES
	923 E2	5.3670	5.3631	-0.073%	N/C	NO
	ISO-800 F2	5.1472	5.1450	-0.043%	N/C	NO

	Nitrogen at 194 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE	U-475 A1	5.5438	5.5422	-0.029%	N/C	NO
	Y-390 B1	5.5548	5.5899	0.632%	N/C	NO
	ER-610 C1	4.9519	4.9487	-0.065%	N/C	YES
	Y-833 D1	4.5588	4.5559	-0.064%	N/C	YES
	923 E1	4.5577	5.2928	16.129%	N/C	NO
	ISO-800 F1	5.4781	5.4760	-0.038%	N/C	NO
		Nitrogen -> 24 HRS @ 302F				
IMIDE EPOXY GLASS	U-475 A2	5.5460	5.5450	-0.018%	N/C	NO
	Y-390 B2	5.6724	5.6688	-0.063%	N/C	NO
	ER-610 C2	4.9674	4.9645	-0.058%	N/C	YES
	Y-833 D2	5.2594	5.2423	-0.325%	N/C	YES
	923 E2	5.3007	5.2965	-0.079%	N/C	NO
	ISO-800 F2	5.4540	5.4906	0.671%	N/C	NO

	Nitrogen at 194 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER IMIDE	U-475 A1	5.3162	5.3144	-0.034%	N/C	NO
	Y-390 B1	5.5719	5.5672	-0.084%	N/C	NO
	ER-610 C1	5.5502	5.5493	-0.016%	N/C	YES
	Y-833 D1	5.2695	5.2877	0.345%	N/C	YES
	923 E1	5.6581	5.6539	-0.074%	N/C	NO
	ISO-800 F1	5.5788	5.5772	-0.029%	N/C	NO
POLYAMIDE IMIDE		Nitrogen -> 24 HRS @ 302F				
	U-475 A2	5.3712	5.3686	-0.048%	N/C	NO
	Y-390 B2	5.7256	5.7209	-0.082%	N/C	NO
	ER-610 C2	5.5384	5.5362	-0.040%	N/C	YES
	Y-833 D2	5.3576	5.3558	-0.034%	N/C	YES
	923 E2	5.7306	5.7243	-0.110%	N/C	NO
	ISO-800 F2	5.5759	5.5722	-0.066%	N/C	NO

500 HRS IN Nitrogen @ 194 F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	2.4523	2.4523	0.00%	N/C	N/C
Y-390 B1	2.1089	2.1019	0.33%	slightly warped	N/C
ER-610 C1	2.3522	2.3597	0.32%	N/C	N/C
Y-833 D1	2.2590	2.2599	0.04%	N/C	N/C
923 E1	1.7369	1.7356	-0.07%	N/C	N/C
ISO-800 F1	1.9567	1.9510	-0.29%	slightly warped	N/C
	Nitrogen at --->24 hour at 302°F.				
U-475 A2	2.3780	2.3613	-0.70%	N/C	N/C
Y-390 B2	2.2201	2.1908	-1.32%	slightly warped	N/C
ER-610 C2	2.7084	2.6998	-0.32%	darkened	N/C
Y-833 D2	2.4352	2.4360	0.03%	N/C	N/C
923 E2	1.7797	1.7739	-0.33%	N/C	N/C
ISO-800 F2	2.0535	1.9782	-3.67%	warped	N/C

500 HR IN Nitrogen @ 194°F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS Mils	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	4.6148	4.6174	0.06%	0.370	128.70	21	17.4	16.56	
				0.425	146.80	21	17.4	16.45	-8.47%
				0.507	157.20	21	17.4	14.76	
DA/MY/DA B1	4.3227	4.3277	0.12%	0.369	97.20	21	13.7	12.54	
				0.435	119.80	21	13.7	13.11	-6.47%
				0.450	120.80	21	13.7	12.78	
MYLAR MO C1	2.2027	2.2077	0.23%	0.499	101.60	10	21.7	20.36	
				0.489	97.05	10	21.7	19.85	-6.84%
				0.502	102.60	10	21.7	20.44	
NO 410 D1	2.0630	2.0669	0.19%	0.484	91.50	10	18.7	18.90	
				0.522	96.35	10	18.7	18.46	1.14%
				0.466	90.30	10	18.7	19.38	
NO MI 418 E1	2.1118	2.1165	0.22%	0.502	27.75	9	7.5	6.14	
				0.490	27.25	9	7.5	6.18	-18.72%
				0.528	28.35	9	7.5	5.97	
MEL 228 F1	2.5339	2.5397	0.23%	0.540	107.10	10	21.7	19.83	
				0.470	92.50	10	21.7	19.68	-10.17%
				0.507	96.15	10	21.7	18.96	
	500 HRS IN Nitrogen @ 194°F ->24 HRS @ 302°F								
NO/MY/NO A2	4.1604	4.1435	-0.41%	0.407	140.00	21	17.4	16.38	
				0.414	151.10	21	17.4	17.38	-2.29%
				0.475	172.00	21	17.4	17.24	
DA/MY/DA B2	4.1479	4.1382	-0.23%	0.380	107.10	21	13.7	13.42	
				0.476	135.30	21	13.7	13.54	-1.30%
				0.380	108.60	21	13.7	13.61	
MYLAR MO C2	2.2383	2.2379	-0.02%	0.389	77.20	10	21.7	19.85	
				0.415	79.95	10	21.7	19.27	-9.42%
				0.390	77.45	10	21.7	19.86	
NOMEX 410 D2	2.2687	2.2720	0.15%	0.516	104.20	10	18.7	20.19	
				0.483	101.90	10	18.7	21.10	9.15%
				0.508	101.30	10	18.7	19.94	
NO/MI 418 E2	2.1342	2.1213	-0.60%	0.510	28.55	9	7.5	6.22	
				0.517	28.70	9	7.5	6.17	-19.20%
				0.470	24.50	9	7.5	5.79	
MEL 228 F2	2.2689	2.2686	-0.01%	0.478	94.70	10	21.7	19.81	
				0.515	99.30	10	21.7	19.28	-9.92%
				0.500	97.75	10	21.7	19.55	

After 500 hour exposure to Nitrogen @ 194°F(90°C)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO A1	0.73	18.3%	20.0%		>18.97	>16.0		N/C
	0.84	21.0%	20.0%	-1.9%	>18.97	>15.49	flash	
	*.25	#####	20.0%		>18.97	>15.05		
DA/MY/DA B1	0.51	25.5%	46.0%		>15.27	>14.8		N/C
	0.54	27.0%	46.0%	-43.1%	>15.27	>13.91	flash	
	0.52	26.0%	46.0%		>15.27	>13.11		
MYLAR MO C1	3.09	154.5%	131.0%		>14.91	>13.68		N/C
	2.99	149.5%	131.0%	15.8%	>14.91	>13.12	flash	
	3.02	151.0%	131.0%		>14.91	>13.41		
NO 410 D1	0.54	13.5%	17.0%		10.67	10.46		N/C
	0.40	10.0%	17.0%	-24.0%	10.67	9.36	-9.2%	
	0.61	15.3%	17.0%		10.67	9.26		
NO MI 418 E1	0.07	1.8%	4.0%		10.23	9.11		N/C
	0.06	1.5%	4.0%	-60.4%	10.23	9.85	-7.3%	
	0.06	1.5%	4.0%		10.23	9.50		
MEL 228 F1	3.76	188.0%	160.0%		>14.22	>14.01		N/C
	3.51	175.5%	160.0%	9.8%	>14.22	>14.13	flash	
	3.27	163.5%	160.0%		>14.22	>13.43		
	After 500 hour Exposure plus a 24 hour airbake @302°F(150°C)							
NO/MY/NO A2	0.68	17.0%	20.0%		>18.97	>15.90		N/C
	0.86	21.5%	20.0%	-6.7%	>18.97	>15.55	flash	
	0.70	17.5%	20.0%		>18.97	>16.40		
DA/MY/DA B2	0.57	28.5%	46.0%		>15.27	>14.11		slighlty warped
	0.56	28.0%	46.0%	-38.8%	>15.27	>13.27	flash	
	0.56	28.0%	46.0%		>15.27	>12.5		
MYLAR MO C2	3.19	159.5%	131.0%		>14.91	>13.61		N/C
	2.94	147.0%	131.0%	17.8%	>14.91	>13.26	flash	
	3.13	156.5%	131.0%		>14.91	>12.94		
NOMEX 410 D2	0.56	14.0%	17.0%		10.67	10.50		N/C
	0.58	14.5%	17.0%	-21.1%	10.67	10.70	3.7%	
	0.47	11.8%	17.0%		10.67	12.00		
NO/MI 418 E2	0.07	1.8%	4.0%		10.23	9.12		N/C
	0.07	1.8%	4.0%	-56.3%	10.23	8.76	-12.1%	
	0.07	1.8%	4.0%		10.23	9.10		
MEL 228 F2	3.57	178.5%	160.0%		>14.22	>13.12		N/C
	3.44	172.0%	160.0%	9.4%	>14.22	>13.7	flash	
	3.49	174.5%	160.0%		>14.22	>14.41		

	500 HRS IN Nitrogen @ 194°F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5660	0.5650	-0.18%	N/C
B1 MYLAR	0.4429	0.4467	0.86%	N/C
C1 NO/MY	0.4056	0.4065	0.22%	N/C
	Nitrogen @ 194°F---->24 hrs @ 302°F			
A2 NOMEX	0.5615	0.5632	0.30%	N/C
B2 MYLAR	0.5047	0.5042	-0.10%	N/C
C2 NO/MY	0.3935	0.3934	-0.03%	N/C

	500 HRS IN Nitrogen @ 194 F								
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS
A1 Glass	1.5187	1.5217	0.20%	39.02	35.60		0.05	2.50%	N/C
				39.02	30.85	5.52%	0.06	3.00%	
				39.02	44.15		0.05	2.50%	
B1 Polyester	0.6247	0.6276	0.46%	56.12	48.20		0.41	20.50%	N/C
				56.12	58.40	1.61%	0.65	32.50%	
				56.12	59.05		0.63	31.50%	
C1 Permacel	1.4638	1.4569	-0.47%	88.50	121.20		0.15	7.50%	N/C
				88.50	79.95	-6.89%	0.11	5.50%	
				88.50	46.05		0.11	5.50%	
	500 HRS in Nitrogen -> 302°F 24 HRS								
A2 Glass	1.5927	1.5968	0.26%	39.02	40.20		0.05	2.50%	N/C
				39.02	39.75	-0.01%	0.06	3.00%	
				39.02	37.10		0.06	3.00%	
B2 Polyester	0.5795	0.5812	0.29%	56.12	63.60		0.95	47.50%	N/C
				56.12	58.75	8.46%	0.70	35.00%	
				56.12	60.25		0.69	34.50%	
C2 Permacel	1.4067	1.3776	-2.07%	88.50	53.85		0.20	10.00%	slightly
				88.50	142.40	4.12%	0.12	6.00%	Darkened
				88.50	80.20		0.14	7.00%	

	500 HRS IN Nitrogen @ 194° F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1	0.2540	0.2539	-0.04%	N/C	28.36	31.40		0.24	12.0%
					28.36	36.75	23.47%	0.27	13.5%
					28.36	36.90		0.26	13.0%
	500 HRS IN Nitrogen -> 24 HRS @ 302°F								
A2	0.2667	0.2663	-0.150%	N/C	28.36	32.25		0.40	20.0%
					28.36	32.15	16.01%	0.49	24.5%
					28.36	34.30		0.26	13.0%

	500 HRS IN Nitrogen @ 194°F						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	4.0428	4.0446	0.04%	N/C	9.61	7.45	
A1					9.61	10.23	-5.45%
					9.61	9.58	
DTMD	4.3351	4.3370	0.04%	N/C	9.95	11.03	
B1					9.95	9.00	8.34%
					9.95	12.31	
	Nitrogen @ 194°F -> 24 HRS @ 302°F						
DMD	4.0622	4.0642	0.05%	N/C	9.61	8.18	
A2					9.61	9.46	-5.86%
					9.61	9.50	
DTMD	4.3780	4.3754	-0.06%	N/C	9.95	10.75	
B2					9.95	9.65	-0.07%
					9.95	9.43	

Appendix C

Experimental Data for HCFC-22 Exposure at 90°C(194°F)

	500 HRS IN R-22 @ 194 F									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	24.8806	24.9525	0.289%	N/C	576	419		15.80	13.86	
					576	404	-27.7%	15.80	17.57	-8.0%
					576	426		15.80	12.19	
B1	25.9271	26.0849	0.609%	N/C	736	735		11.62	12.41	
					736	731	-0.3%	11.62	12.45	-0.1%
					736	735		11.62	9.96	
C1	23.9446	24.0052	0.253%	N/C	579	269		16.58	16.10	
					579	254	-55.3%	16.58	18.23	4.2%
					579	254		16.58	17.50	
	R-22-->24 HRS @ 302 F									
A2	24.3522	24.3556	0.014%	N/C	576	511		15.80	15.05	
					576	557	-8.9%	15.80	18.40	8.8%
					576	507		15.80	18.10	
B2	25.5469	25.5640	0.067%	N/C	736	721		11.62	12.16	
					736	731	-3.6%	11.62	12.33	4.0%
					736	677		11.62	11.77	
C2	23.9727	23.9799	0.030%	N/C	579	542		16.58	14.01	
					579	566	-5.9%	16.58	17.91	-5.0%
					579	526		16.58	15.34	

	500 HOURS IN R-22 @ 194 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE	U-475 A1	22.1911	22.3480	0.707%	N/C	16.24	18.89		430	363	
						16.24	18.90	5.91%	430	367	-16.67%
						16.24	13.81		430	345	
	Y-390 B1	24.7175	24.9438	0.916%	N/C	18.77	20.00		510	382	
						18.77	BROKE	6.55%	510	388	-22.88%
						18.77	20.00		510	410	
	ER-610 C1	22.1279	22.2293	0.458%	N/C	15.57	16.20		442	376	
						15.57	14.13	-4.99%	442	293	-22.70%
						15.57	14.05		442	356	
	Y-833 D1	23.4041	23.4686	0.276%	N/C	12.04	11.96		578	380	
						12.04	11.69	3.74%	578	522	-13.96%
						12.04	13.82		578	590	
	923 E1	24.8893	25.1364	0.993%	N/C	16.76	20.00		606	490	
						16.76	BROKE	10.95%	606	559	-12.60%
						16.76	17.19		606	540	
	ISO-800 F1	24.1302	24.2629	0.550%	N/C	19.08	16.31		580	341	
						19.08	20.00	-3.95%	580	385	-33.56%
						19.08	18.67		580	430	
		24 HOURS AT 302 F									
	U-475 A2	22.2178	22.2323	0.065%	N/C	16.24	12.46		430	350	
						16.24	14.81	-18.37%	430	350	-24.03%
						16.24	12.50		430	280	
	Y-390 B2	24.2523	24.2644	0.050%	N/C	18.77	11.30		510	421	
						18.77	9.89	-44.81%	510	426	-16.21%
						18.77	9.89		510	435	
	ER-610 C2	21.4449	21.4449	0.000%	N/C	15.57	7.98		442	297	
						15.57	9.65	-41.96%	442	320	-29.71%
						15.57	9.48		442	315	
	Y-833 D2	23.3812	23.3760	-0.022%	N/C	12.04	10.77		578	421	
						12.04	11.36	-2.85%	578	565	-15.05%
						12.04	12.96		578	487	
	923 E2	24.5813	24.5860	0.019%	N/C	16.76	16.36		606	390	
						16.76	11.64	-16.07%	606	401	-35.26%
						16.76	14.20		606	386	
	ISO-800 F2	23.6323	23.6482	0.067%	N/C	19.08	3.93		580	293	
						19.08	5.90	-69.92%	580	382	-43.62%
						19.08	7.39		580	306	

	500 HOURS IN R-22 @ 194 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	22.4376	22.6602	0.99%	N/C	13.32	11.98		746	729	
						13.32	15.70	-4.18%	746	727	-2.06%
						13.32	10.61		746	736	
	Y-390 B1	22.6987	23.0029	1.34%	N/C	12.28	16.96		755	743	
						12.28	16.91	35.15%	755	743	-1.94%
						12.28	15.92		755	735	
	ER-610 C1	23.0132	23.1751	0.70%	N/C	12.73	9.86		734	725	
						12.73	14.39	1.05%	734	695	-2.54%
						12.73	14.34		734	726	
	Y-833 D1	22.7016	22.8256	0.55%	N/C	12.49	13.09		734	729	
						12.49	11.90	1.57%	734	729	-0.64%
						12.49	13.07		734	730	
	923 E1	27.0185	27.3803	1.34%	N/C	14.38	20.00		742	733	
						14.38	20.00	39.08%	742	740	-0.99%
						14.38	20.00		742	731	
	ISO-800 F1	26.0576	26.2622	0.79%	N/C	12.29	14.39		747	729	
						12.29	13.76	30.59%	747	726	-2.63%
						12.29	20.00		747	727	
		R-22 --> 24 hours @ 302 F									
	U-475 A2	22.2866	22.2978	0.05%	N/C	13.32	12.40		746	741	
						13.32	11.94	-8.38%	746	726	-2.10%
						13.32	12.27		746	724	
	Y-390 B2	23.9817	24.4953	2.14%	N/C	12.28	10.32		755	735	
						12.28	11.42	-11.86%	755	749	-1.72%
						12.28	10.73		755	748	
	ER-610 C2	22.4996	22.5045	0.02%	N/C	12.73	13.62		734	649	
						12.73	11.29	-5.63%	734	728	-4.63%
						12.73	11.13		734	723	
	Y-833 D2	24.5061	24.3392	-0.68%	N/C	12.49	13.32		734	726	
						12.49	13.39	5.58%	734	725	-1.23%
						12.49	12.85		734	724	
	923 E2	27.2127	27.2005	-0.04%	N/C	14.38	10.86		742	749	
						14.38	11.85	-19.43%	742	753	0.94%
						14.38	12.05		742	746	
	ISO-800 F2	26.3685	26.3783	0.04%		12.29	12.69		747	728	
					N/C	12.29	13.90	6.86%	747	726	-2.68%
						12.29	12.81		747	734	

	500 HOURS IN R-22 @ 194 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE	U-475 A1	22.3059	22.4643	0.710%	N/C	15.10	14.93		469	402	
						15.10	15.61	11.15%	469	402	-12.72%
						15.10	19.81		469	424	
	Y-390 B1	22.4999	22.6759	0.782%	N/C	18.24	19.89		473	403	
						18.24	18.43	6.58%	473	470	-2.26%
						18.24	20.00		473	514	
	ER-610 C1	21.9568	22.0661	0.498%	N/C	14.53	14.67		494	284	
						14.53	10.44	-7.80%	494	233	-47.57%
						14.53	15.08		494	260	
	Y-833 D1	22.0711	22.1192	0.218%	N/C	11.38	13.97		557	301	
						11.38	14.16	20.88%	557	285	-48.06%
						11.38	13.14		557	282	
	923 E1	23.1146	23.3376	0.965%	N/C	15.85	20.00		503	538	
						15.85	18.58	23.20%	503	554	3.38%
						15.85	20.00		503	468	
	ISO-800 F1	21.6938	21.6647	-0.134%	N/C	14.75	15.54		632	425	
						14.75	20.00	25.51%	632	482	-36.34%
						14.75	20.00		632	300	
		R-22 --> 24 hours @ 302 F									
POLYAMIDE IMIDE	U-475 A2	22.0317	22.0418	0.046%	N/C	15.10	11.45		469	284	
						15.10	13.13	-15.30%	469	289	-37.95%
						15.10	13.79		469	300	
	Y-390 B2	22.4207	22.4276	0.031%	N/C	18.24	12.00		473	408	
						18.24	10.02	-44.90%	473	419	-12.68%
						18.24	10.08		473	412	
	ER-610 C2	22.1688	22.1723	0.016%	N/C	14.53	7.05		494	364	
						14.53	6.46	-42.30%	494	403	-25.03%
						14.53	11.64		494	344	
	Y-833 D2	22.0441	22.0386	-0.025%	N/C	11.38	13.08		557	430	
						11.38	12.40	7.00%	557	513	-21.48%
						11.38	11.05		557	369	
	923 E2	23.1079	23.0933	-0.063%	N/C	15.85	4.89		503	393	
						15.85	9.36	-61.41%	503	371	-23.19%
						15.85	4.10		503	395	
	ISO-800 F2	22.0363	22.0447	0.038%	N/C	14.75	15.16		632	283	
						14.75	11.66	-14.53%	632	258	-53.74%
						14.75	11.00		632	336	

		500 HRS IN R-22 @ 194F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	39.0969	39.4568	0.921%	N/C	73.73	40.47	
						73.73	40.05	-49.20%
						73.73	31.85	
	Y-390 B1	38.0287	38.3389	0.816%	N/C	43.78	35.07	
						43.78	41.02	-20.24%
						43.78	28.67	
	ER-610 C1	37.8009	38.1705	0.978%	N/C	51.81	46.57	
						51.81	25.25	-35.42%
						51.81	28.55	
	Y-833 D1	37.3495	37.4632	0.304%	N/C	9.85	14.40	
						9.85	17.05	54.31%
						9.85	14.15	
	923 E1	37.8567	38.1712	0.831%	N/C	41.28	25.47	
						41.28	34.72	-23.76%
						41.28	34.22	
	ISO-800 F1	36.9868	37.1845	0.535%	N/C	45.01	31.00	
						45.01	27.17	-35.38%
						45.01	41.95	
		R-22 -> 24 HRS 302 F						
	U-475 A2	39.6110	39.6344	0.059%	N/C	73.73	6.00	
						73.73	4.00	-94.57%
						73.73	4.00	
	Y-390 B2	37.4431	37.4522	0.024%	N/C	43.78	7.00	
						43.78	11.35	-79.56%
						43.78	8.50	
	ER-610 C2	38.4798	38.4877	0.021%	N/C	51.81	6.00	
						51.81	5.00	-90.35%
						51.81	4.00	
	Y-833 D2	36.4649	36.4376	-0.075%	N/C	9.85	12.20	
						9.85	13.70	14.72%
						9.85	8.00	
	923 E2	37.3128	37.3294	0.044%	N/C	41.28	8.00	
						41.28	6.00	-83.85%
						41.28	6.00	
	ISO-800 F2	37.5524	37.5730	0.055%	N/C	45.01	17.67	
						45.01	41.37	-37.56%
						45.01	25.27	

		500 HRS IN R-22 @ 194F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	37.1905	37.6554	1.250%	N/C	40.14	65.22	
						40.14	64.75	59.52%
						40.14	62.12	
	Y-390 B1	36.8661	37.3769	1.386%	N/C	36.12	55.95	
						36.12	53.22	60.50%
						36.12	64.75	
	ER-610 C1	37.4839	37.9241	1.174%	N/C	35.96	49.22	
						35.96	44.17	28.74%
						35.96	45.50	
	Y-833 D1	36.6558	37.0888	1.181%	N/C	33.14	19.10	
						33.14	14.85	-51.05%
						33.14	14.72	
	923 E1	36.1828	36.7126	1.464%	N/C	40.52	47.77	
						40.52	62.10	31.20%
						40.52	49.62	
	ISO-800 F1	35.3699	35.6681	0.843%	N/C	20.20	23.02	
						20.20	26.67	29.27%
						20.20	28.65	
		R-22 -> 24 HRS 302 F						
	U-475 A2	36.9206	36.9429	0.060%	N/C	40.14	31.35	
						40.14	11.00	-51.71%
						40.14	15.80	
	Y-390 B2	36.0476	36.0726	0.069%	Varnish	36.12	18.52	
					Pockets	36.12	10.92	-58.71%
						36.12	15.30	
	ER-610 C2	37.3783	37.3906	0.033%	N/C	35.96	27.80	
						35.96	29.32	-19.92%
						35.96	29.27	
	Y-833 D2	36.7545	36.7548	0.001%	N/C	33.14	4.00	
						33.14	14.87	-77.00%
						33.14	4.00	
	923 E2	36.5749	36.6066	0.087%	N/C	40.52	20.85	
						40.52	18.00	-51.71%
						40.52	19.85	
	ISO-800 F2	35.4294	35.4367	0.021%	N/C	20.20	9.00	
						20.20	8.00	-58.75%
						20.20	8.00	

		500 HRS IN R-22 @ 194F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE	U-475 A1	39.0853	39.4390	0.905%	N/C	51.21	53.60	
						51.21	54.90	-1.70%
						51.21	42.52	
	Y-390 B1	38.0370	38.3554	0.837%	N/C	50.72	44.87	
						50.72	37.90	-23.80%
						50.72	33.17	
	ER-610 C1	36.2883	36.5950	0.845%	N/C	58.33	40.12	
						58.33	32.22	-35.32%
						58.33	40.85	
	Y-833 D1	37.1504	37.2516	0.272%	N/C	5.84	18.65	
						5.84	21.75	304.11%
						5.84	30.40	
	923 E1	38.4631	38.8032	0.884%	N/C	49.26	40.55	
						49.26	34.95	-29.95%
						49.26	28.02	
	ISO-800 F1	37.6649	37.8684	0.540%	N/C	36.08	34.77	
						36.08	38.72	0.42%
						36.08	35.20	
		R-22-> 24 HRS 302 F						
POLYAMIDE IMIDE	U-475 A2	38.2909	38.3013	0.027%	N/C	51.21	34.77	
						51.21	28.30	-45.41%
						51.21	20.80	
	Y-390 B2	37.5353	37.5426	0.019%	N/C	50.72	9.00	
						50.72	10.67	-82.47%
						50.72	7.00	
	ER-610 C2	36.3724	36.3734	0.003%	N/C	58.33	26.87	
						58.33	21.75	-58.59%
						58.33	23.85	
	Y-833 D2	36.5824	36.5394	-0.118%	N/C	5.84	38.30	
						5.84	33.02	445.49%
						5.84	24.25	
	923 E2	38.2914	38.3061	0.038%	N/C	49.26	9.00	
						49.26	7.00	-83.76%
						49.26	8.00	
	ISO-800 F2	37.8427	37.8585	0.042%	N/C	36.08	6.00	
						36.08	10.57	-71.18%
						36.08	14.62	

	500 HRS IN R-22 @ 194F				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	5.4558	5.4656	0.180%	N/C	
					YES
B1	5.5924	5.6285	0.646%	N/C	
					YES
C1	5.3986	5.4115	0.239%	N/C	
					YES
	R-22 -> 302F 24 HRS				
A2	5.424	5.4224	-0.029%	N/C	
					YES
B2	5.7027	5.703	0.005%	N/C	
					YES
C2	5.4548	5.4526	-0.040%	N/C	
					YES

	500 hrs in R-22 at 194 F						
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX	
POLYESTER POLYAMIDE IMIDE	U-475 A1	5.8297	5.8716	0.719%	N/C	YES	
	Y-390 B1	5.6398	5.6935	0.952%	N/C	NO	
	ER-610 C1	5.5083	5.5280	0.358%	N/C	YES	
	Y-833 D1	5.1387	5.1498	0.216%	N/C	YES	
	923 E1	5.5316	5.5861	0.985%	N/C	NO	
	ISO-800 F1	5.3132	5.3357	0.423%	N/C	YES	
		R-22 -> 24 HRS @ 302F					
	U-475 A2	5.8513	5.8517	0.007%	N/C	YES	
	Y-390 B2	5.6358	5.6362	0.007%	N/C	NO	
	ER-610 C2	5.4694	5.4665	-0.053%	N/C	YES	
	Y-833 D2	5.2263	5.2222	-0.078%	N/C	YES	
	923 E2	5.5218	5.5209	-0.016%	N/C	NO	
	ISO-800 F2	5.5439	5.5409	-0.054%	N/C	YES	

	R-22 at 194 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE	U-475 A1	5.9016	5.9673	1.113%	N/C	YES
	Y-390 B1	6.1572	6.2450	1.426%	N/C	NO
	ER-610 C1	5.6066	5.6455	0.694%	N/C	YES
	Y-833 D1	5.9590	5.9920	0.554%	N/C	YES
	923 E1	6.0517	6.1359	1.391%	N/C	NO
	ISO-800 F1	5.9355	5.9813	0.772%	N/C	YES
		R-22 -> 24 HRS @ 302F				
IMIDE EPOXY GLASS	U-475 A2	5.9503	5.9501	-0.003%	N/C	YES
	Y-390 B2	6.1432	6.1404	-0.046%	N/C	NO
	ER-610 C2	5.6692	5.6626	-0.116%	N/C	YES
	Y-833 D2	5.8281	5.8216	-0.112%	N/C	YES
	923 E2	6.1427	6.1395	-0.052%	N/C	NO
	ISO-800 F2	5.8876	5.8828	-0.082%	N/C	NO

	R-22 at 194 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER IMIDE	U-475 A1	5.3509	5.3913	0.755%	N/C	YES
	Y-390 B1	6.0023	6.0676	1.088%	N/C	NO
	ER-610 C1	5.6873	5.7103	0.404%	N/C	YES
	Y-833 D1	5.6649	5.6790	0.249%	N/C	YES
	923 E1	5.8157	5.8774	1.061%	N/C	NO
	ISO-800 F1	5.7820	5.8090	0.467%	N/C	YES
POLYAMIDE IMIDE		R-22 -> 24 HRS @ 302F				
	U-475 A2	5.2919	5.2933	0.026%	N/C	NO
	Y-390 B2	6.0783	6.0796	0.021%	N/C	NO
	ER-610 C2	5.6561	5.6559	-0.004%	N/C	YES
	Y-833 D2	5.6405	5.6366	-0.069%	N/C	YES
	923 E2	5.9076	5.9190	0.193%	N/C	NO
	ISO-800 F2	5.8217	5.8199	-0.031%	N/C	NO

500 HRS IN R-22 @ 194 F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	2.5160	2.9403	16.86%	N/C	N/C
Y-390 B1	2.0593	2.3172	12.52%	Slightly Warped	Slightly more flexible
ER-610 C1	2.4885	2.9539	18.70%	N/C	Slightly more flexible
Y-833 D1	2.6715	3.0831	15.41%	one disk crazed	more Flexible almost limp
923 E1	1.6008	1.8310	14.38%	N/C	Slightly more flexible
ISO-800 F1	1.4825	1.5928	7.44%	Slightly Warped	N/C
	R-22 at ->302F 24 HRS				
U-475 A2	3.0581	3.0090	-1.61%	Darkened	Brittle Bubble Pockets see Photos
Y-390 B2	2.8720	2.8098	-2.17%	N/C Slightly warped	Brittle Bubble Pockets see Photos
ER-610 C2	3.1318	3.1297	-0.07%	Darkened	Crazed Brittle See Photo
Y-833 D2	2.4239	2.3222	-4.20%	N/C	Brittle Bubble Pockets see Photos
923 E2	2.3665	2.3014	-2.75%	N/C	Brittle Bubble Pockets see Photos
ISO-800 F2	1.9362	1.8493	-4.49%	N/C Slightly warped	Brittle Bubble Pockets see Photos

500 HR IN R-22 @ 194F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS Mils	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	5.2242	5.5758	6.73%	0.442	137.80	22	17.4	14.17	
				0.442	137.20	22	17.4	14.11	-17.95%
				0.422	135.10	22	17.4	14.55	
DA/MY/DA B1	4.9109	5.2170	6.23%	0.447	115.50	22	13.7	11.74	
				0.435	89.90	22	13.7	9.39	-23.05%
				0.481	111.00	22	13.7	10.49	
MYLAR MO C1	2.7834	2.9524	6.07%	0.498	84.45	10	21.7	16.96	
				0.474	91.40	10	21.7	19.28	-15.09%
				0.502	95.55	10	21.7	19.03	
NO 410 D1	2.8119	2.9835	6.10%	0.476	85.15	11	18.7	16.26	
				0.497	97.45	11	18.7	17.83	-9.60%
				0.499	91.25	11	18.7	16.62	
NO MI 418 E1	2.8244	2.9051	2.86%	0.476	25.10	9	7.5	5.86	
				0.498	26.45	9	7.5	5.90	-21.31%
				0.500	26.75	9	7.5	5.94	
MEL 228 F1	2.7182	2.8929	6.43%	0.484	85.30	11	21.7	16.02	
				0.522	85.85	11	21.7	14.95	-28.92%
				0.440	74.05	11	21.7	15.30	
	500 HRS IN R-22 @ 194 F ->24 HRS @ 302 F								R-22 --> 3
NO/MY/NO A2	5.0578	5.0538	-0.08%	0.443	160.00	22	17.4	16.42	
				0.413	148.10	22	17.4	16.30	-4.67%
				0.428	160.50	22	17.4	17.05	
DA/MY/DA B2	5.3272	5.2660	-1.15%	0.370	105.90	22	13.7	13.01	
				0.380	108.50	22	13.7	12.98	-6.85%
				0.343	92.80	22	13.7	12.30	
MYLAR MO C2	2.6565	2.6395	-0.64%	0.425	74.10	9	21.7	19.37	
				0.478	95.15	9	21.7	22.12	-1.71%
				0.471	95.35	9	21.7	22.49	
NOMEX 410 D2	2.8327	2.8511	0.65%	0.518	99.80	11	18.7	17.51	
				0.528	111.60	11	18.7	19.21	-1.85%
				0.483	97.40	11	18.7	18.33	
NO/MI 418 E2	2.7239	2.7331	0.34%	0.490	27.20	10	7.5	5.55	
				0.516	27.40	10	7.5	5.31	-27.30%
				0.493	27.10	10	7.5	5.50	
MEL 228 F2	2.9914	2.9870	-0.15%	0.424	80.80	11	21.7	17.32	
				0.483	88.55	11	21.7	16.67	-20.68%
				0.510	99.00	11	21.7	17.65	

After 500 hour exposure @ 194°F(90°C)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO A1	0.98	24.5%	20.0%		>18.97	>16.72		bubbles
	0.89	22.3%	20.0%	20.8%	>18.97	>16.80	flash	pulling
	1.03	25.8%	20.0%		>18.97	>16.53		away
DA/MY/DA B1	0.71	35.5%	46.0%		>15.27	>13.03		slighlty
	0.68	34.0%	46.0%	-28.6%	>15.27	>13.87	flash	warped
	0.58	29.0%	46.0%		>15.27	>12.64		
MYLAR MO C1	2.16	108.0%	131.0%		>14.91	>12.81		N/C
	2.94	147.0%	131.0%	0.8%	>14.91	>12.63	flash	
	2.82	141.0%	131.0%		>14.91	>12.08		
NO 410 D1	0.51	12.8%	17.0%		10.67	11.26		N/C
	0.61	15.3%	17.0%	-19.1%	10.67	9.85	-1.6%	
	0.53	13.3%	17.0%		10.67	10.40		
NO MI 418 E1	0.08	2.0%	4.0%		10.23	9.65		N/C
	0.08	2.0%	4.0%	-50.0%	10.23	10.61	-4.0%	
	0.08	2.0%	4.0%		10.23	9.20		
MEL 228 F1	3.11	155.5%	160.0%		>14.22	>12.85		N/C
	2.46	123.0%	160.0%	-16.4%	>14.22	>12.60	flash	
	2.46	123.0%	160.0%		>14.22	>13.10		
	After 500 hour exposure plus a 24 hour airbake @ 302°F(150°C).							
NO/MY/NO A2	0.82	20.5%	20.0%		>18.97	>17.10		bubbles
	0.73	18.3%	20.0%	9.6%	>18.97	>15.83	flash	pulling
	1.08	27.0%	20.0%		>18.97	>16.17		away
DA/MY/DA B2	0.58	29.0%	46.0%		>15.27	>13.76		slighlty
	1.24	62.0%	46.0%	-17.4%	>15.27	>13.79	flash	warped
	0.46	23.0%	46.0%		>15.27	>14.21		
MYLAR MO C2	1.84	92.0%	131.0%		>14.91	>13.47		N/C
	2.96	148.0%	131.0%	-0.6%	>14.91	>13.42	flash	
	3.01	150.5%	131.0%		>14.91	>13.82		
NOMEX 410 D2	0.53	13.3%	17.0%		10.67	10.77		N/C
	0.76	19.0%	17.0%	-4.4%	10.67	11.70	-0.1%	
	0.66	16.5%	17.0%		10.67	9.52		
NO/MI 418 E2	0.10	2.5%	4.0%		10.23	8.32		N/C
	0.08	2.0%	4.0%	-43.8%	10.23	8.60	-16.8%	
	0.09	2.3%	4.0%		10.23	8.60		
MEL 228 F2	3.11	155.5%	160.0%		>14.22	>14.64		N/C
	2.92	146.0%	160.0%	-5.6%	>14.22	>14.24	flash	
	3.03	151.5%	160.0%		>14.22	>14.12		

	500 HRS IN R-22 @ 194F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5558	0.6409	15.31%	N/C
B1 MYLAR	0.4789	0.5195	8.48%	Bubbles
C1 NO/MY	0.3944	0.4228	7.20%	N/C
	R-22 @ 194F----->24 hrs @ 302F			
A2 NOMEX	0.5569	0.5619	0.90%	N/C
B2 MYLAR	0.4564	0.4524	-0.88%	Bubbles pulled away
C2 NO/MY	0.3920	0.3871	-1.25%	Pockets where mylar pulled away

	500 HRS IN R-22 @ 194 F								
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS
A1 Glass	1.6516	1.6425	-0.55%	39.02	46.45		0.03	1.50%	N/C
				39.02	60.10	35.32%	0.05	2.50%	
				39.02	51.85		0.04	2.00%	
B1 Polyester	0.6986	0.7449	6.63%	56.12	59.60		0.73	36.50%	N/C
				56.12	64.25	6.20%	0.82	41.00%	
				56.12	54.95		0.54	27.00%	
C1 Permacel	1.6012	1.6280	1.67%	88.50	98.70		0.10	5.00%	Rolled up
				88.50	97.55	15.12%	0.08	4.00%	but unrolled
				88.50	109.40		0.09	4.50%	in minutes
	500 HRS in R-22 -> 302 F 24 HRS								
A2 Glass	1.5674	1.5812	0.88%	39.02	60.15		0.05	2.50%	N/C
				39.02	44.80	42.15%	0.04	2.00%	
				39.02	61.45		0.06	3.00%	
B2 Polyester	0.6622	0.6598	-0.36%	56.12	60.75		0.72	36.00%	N/C
				56.12	50.70	1.48%	0.51	25.50%	
				56.12	59.40		0.66	33.00%	
C2 Permacel	1.5453	1.4775	-4.39%	88.50	96.55		0.08	4.00%	N/C
				88.50	124.90	25.29%	0.10	5.00%	
				88.50	111.20		0.09	4.50%	

	500 HRS IN R-22 @ 194 F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1	0.3021	0.3225	6.75%	N/C	28.36	29.90		0.43	21.5%
					28.36	31.70	14.77%	0.45	22.5%
					28.36	36.05		0.49	24.5%
	500 HRS IN R-22 -> 24 HRS @ 302F								
A2	0.2948	0.2939	-0.305%	N/C	28.36	24.35		0.53	26.5%
					28.36	28.40	-1.80%	0.4	20.0%
					28.36	30.80		0.45	22.5%

	500 HRS IN R-22 @ 194 F						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	4.4054	4.4423	0.84%	N/C	9.61	9.81	
A1					9.61	8.41	-4.51%
					9.61	9.31	
DTMD	4.1084	4.1436	0.86%	N/C	9.95	7.63	
B1					9.95	8.91	-16.18%
					9.95	8.48	
	R-22 @ 194 F -> 24 HRS @ 302F						
DMD	4.4279	4.4188	-0.21%	N/C	9.61	8.32	
A2					9.61	10.28	1.77%
					9.61	10.74	
DTMD	4.1332	4.1239	-0.23%	N/C	9.95	8.83	
B2					9.95	7.94	-15.28%
					9.95	8.52	

Appendix D

Experimental Data for HCFC-123 Exposure at 90°C(194°F)

	500 HRS IN R-123 @ 194 F									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	23.7354	23.7655	0.127%	N/C	576	404		15.80	12.60	
					576	397	-28.9%	15.80	14.19	-17.7%
					576	427		15.80	12.23	
B1	22.5491	22.6785	0.574%	N/C	736	723		11.62	11.98	
					736	724	-1.6%	11.62	12.99	7.4%
					736	726		11.62	12.48	
C1	22.1161	22.1216	0.025%	N/C	579	417		16.58	12.76	
					579	406	-29.5%	16.58	13.57	-17.0%
					579	402		16.58	14.96	
	R-123-->24 HRS @ 302 F									
A2	23.4865	23.4900	0.015%	N/C	576	415		15.80	13.83	
					576	413	-28.2%	15.80	14.40	-15.0%
					576	413		15.80	12.07	
B2	22.6786	22.6687	-0.044%	N/C	736	731		11.62	11.90	
					736	724	-0.9%	11.62	12.62	4.6%
					736	734		11.62	11.95	
C2	21.8389	21.8421	0.015%	N/C	579	501		16.58	13.92	
					579	421	-22.7%	16.58	11.42	-28.3%
					579	421		16.58	10.33	

500 HOURS IN R-123 @ 194 F

	VARN	TWISTED PAIR WT	VARN WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	22.7137		22.8386	0.550%	N/C	16.24	15.19		430	249	
							16.24	15.95	-1.15%	430	249	-41.40%
							16.24	17.02		430	258	
	Y-390 B1	22.6176		22.8601	1.072%	N/C	18.77	13.29		510	306	
							18.77	14.60	-14.95%	510	339	-36.99%
							18.77	20.00		510	319	
	ER-610 C1	22.2736		22.3135	0.179%	N/C	15.57	15.18		442	399	
							15.57	14.99	-8.95%	442	403	-10.11%
							15.57	12.36		442	390	
	Y-833 D1	22.6802		22.6763	-0.017%	N/C	12.04	10.54		578	453	
							12.04	15.44	13.18%	578	412	-24.91%
							12.04	14.90		578	437	
	923 E1	23.7597		24.0263	1.122%	N/C	16.76	6.22		606	289	
							16.76	11.01	-44.33%	606	262	-54.29%
							16.76	10.76		606	280	
	ISO-800 F1	22.3989		22.4717	0.325%	N/C	19.08	19.77		580	277	
							19.08	15.92	-18.41%	580	250	-56.55%
							19.08	11.01		580	229	
		R-123 --> 24 hours @ 302 F										
	U-475 A2	22.8372		22.8086	-0.125%	N/C	16.24	13.87		430	273	
							16.24	20.00	-3.04%	430	291	-35.12%
							16.24	13.37		430	273	
	Y-390 B2	22.9613		22.9870	0.112%	N/C	18.77	16.85		510	395	
							18.77	12.91	-19.91%	510	281	-35.56%
							18.77	15.34		510	310	
	ER-610 C2	22.0776		22.0751	-0.011%	N/C	15.57	15.95		442	394	
							15.57	16.43	-2.06%	442	405	-9.65%
							15.57	13.37		442	399	
	Y-833 D2	22.6822		22.6676	-0.064%	N/C	12.04	14.27		578	470	
							12.04	12.70	9.14%	578	440	-24.11%
							12.04	12.45		578	406	
	923 E2	23.8838		23.9120	0.118%	N/C	16.76	17.63		606	273	
							16.76	14.35	-2.96%	606	269	-55.01%
							16.76	16.81		606	276	
	ISO-800 F2	22.2352		22.2337	-0.007%	N/C	19.08	13.82		580	258	
							19.08	13.47	-26.92%	580	294	-47.70%
							19.08	14.54		580	358	

500 HOURS IN R-123 @ 194 F

	VARN	TWISTED PAIR WT	VARN WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	24.3540		24.6768	1.33%	N/C	13.32	11.60		746	728	
							13.32	15.90	6.48%	746	509	-11.93%
							13.32	15.05		746	734	
	Y-390 B1	24.8617		25.3150	1.82%	N/C	12.28	18.72		755	740	
							12.28	20.00	59.39%	755	739	-2.12%
							12.28	20.00		755	738	
	ER-610 C1	23.6181		23.7930	0.74%	N/C	12.73	12.44		734	728	
							12.73	10.85	-0.08%	734	733	-0.50%
							12.73	14.87		734	730	
	Y-833 D1	23.2625		23.3658	0.44%	N/C	12.49	12.74		734	728	
							12.49	13.45	3.58%	734	728	-0.82%
							12.49	12.62		734	728	
	923 E1	24.6336		25.0551	1.71%	N/C	14.38	12.82		742	733	
							14.38	20.00	22.44%	742	733	-0.94%
							14.38	20.00		742	739	
	ISO-800 F1	23.3542		23.5801	0.97%	N/C	12.29	12.10		747	728	
							12.29	14.73	5.72%	747	727	-2.45%
							12.29	12.15		747	731	
		R-123 --> 24 hours @ 302 F										
	U-475 A2	22.8147		23.8058	4.34%	N/C	13.32	11.52		746	733	
							13.32	14.94	-1.95%	746	727	-2.46%
							13.32	12.72		746	723	
	Y-390 B2	24.9129		24.9500	0.15%	N/C	12.28	13.04		755	723	
							12.28	13.29	6.57%	755	723	-3.71%
							12.28	12.93		755	735	
	ER-610 C2	23.7668		23.7708	0.02%	N/C	12.73	8.74		734	731	
							12.73	12.80	-7.36%	734	730	-0.59%
							12.73	13.84		734	728	
	Y-833 D2	23.2978		23.2515	-0.20%	N/C	12.49	12.36		734	723	
							12.49	12.49	-0.56%	734	723	-1.54%
							12.49	12.41		734	722	
	923 E2	24.3286		24.3314	0.01%	N/C	14.38	13.37		742	731	
							14.38	14.18	-10.71%	742	746	-1.17%
							14.38	10.97		742	723	
	ISO-800 F2	23.1511		23.1541	0.01%		12.29	11.41		747	723	
						N/C	12.29	12.79	-2.33%	747	735	-2.68%
							12.29	11.81		747	723	

	500 HOURS IN R-123 @ 194 F											
	VARN	TWISTED PAIR WT	VARN WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE	U-475 A1	22.7842		22.9248	0.617%	N/C	15.10	11.77		469	262	
							15.10	12.13	-16.98%	469	253	-36.82%
							15.10	13.71		469	374	
	Y-390 B1	22.7891		22.9828	0.850%	N/C	18.24	15.02		473	308	
							18.24	16.34	-7.86%	473	315	-34.46%
							18.24	19.06		473	307	
	ER-610 C1	22.3521		22.4083	0.251%	N/C	14.53	13.86		494	411	
							14.53	14.01	-7.78%	494	390	-19.43%
							14.53	12.33		494	393	
	Y-833 D1	22.1395		22.1360	-0.016%	N/C	11.38	11.67		557	377	
							11.38	11.36	7.47%	557	512	-19.21%
							11.38	13.66		557	461	
	923 E1	22.8804		23.1600	1.222%	N/C	15.85	19.89		503	296	
							15.85	18.88	23.60%	503	293	-38.57%
							15.85	20.00		503	338	
	ISO-800 F1	22.3509		22.4165	0.294%	N/C	14.75	16.03		632	252	
							14.75	17.04	19.25%	632	250	-61.23%
							14.75	19.70		632	233	
		R-123 --> 24 hours @ 302 F										
POLYAMIDE IMIDE	U-475 A2	22.6342		22.5750	-0.262%	N/C	15.10	12.51		469	264	
							15.10	13.15	-15.28%	469	263	-41.86%
							15.10	12.72		469	291	
	Y-390 B2	22.6700		22.6879	0.079%	N/C	18.24	15.94		473	278	
							18.24	*7.23	-26.81%	473	311	-37.91%
							18.24	13.35		473	292	
	ER-610 C2	22.3806		22.3832	0.012%	N/C	14.53	12.79		494	391	
							14.53	14.03	-5.21%	494	480	-13.50%
							14.53	14.50		494	411	
	Y-833 D2	22.0648		22.0464	-0.083%	N/C	11.38	11.75		557	406	
							11.38	10.37	0.38%	557	400	-16.52%
							11.38	12.15		557	589	
	923 E2	23.0090		23.0385	0.128%	N/C	15.85	20.00		503	253	
							15.85	20.00	16.11%	503	255	-40.42%
							15.85	15.21		503	391	
	ISO-800 F2	22.3208		22.3206	-0.001%	N/C	14.75	13.37		632	298	
							14.75	12.77	-2.37%	632	278	-50.42%
							14.75	17.06		632	364	

*Crack in varnish. Did not use data.

		500 HRS IN R-123 @ 194F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	38.7694	39.0691	0.77%	N/C	73.73	71.20	
						73.73	65.37	-4.66%
						73.73	74.32	
	Y-390 B1	37.8007	38.0391	0.63%	N/C	43.78	44.02	
						43.78	46.25	0.69%
						43.78	41.97	
	ER-610 C1	38.3281	38.6662	0.88%	N/C	51.81	32.90	
						51.81	35.60	-29.38%
						51.81	41.27	
	Y-833 D1	36.8388	36.8306	-0.02%	N/C	9.85	14.45	
						9.85	7.50	39.66%
						9.85	19.32	
	923 E1	37.7075	37.8364	0.34%	N/C	41.28	32.87	
						41.28	31.50	-18.02%
						41.28	37.15	
	ISO-800 F1	36.5845	36.6858	0.28%	N/C	45.01	38.70	
						45.01	32.17	-15.00%
						45.01	43.90	
		R-123 -> 24 HRS 302 F						
	U-475 A2	38.6644	38.6750	0.03%	N/C	73.73	*8.2	
						73.73	64.90	-1.02%
						73.73	81.05	
	Y-390 B2	37.3530	37.3778	0.07%	N/C	43.78	47.65	
						43.78	49.50	12.84%
						43.78	51.05	
	ER-610 C2	38.3293	38.3386	0.02%	N/C	51.81	15.10	
						51.81	29.50	-59.87%
						51.81	17.77	
	Y-833 D2	36.9289	36.8758	-0.14%	N/C	9.85	20.55	
						9.85	7.63	49.68%
						9.85	16.05	
	923 E2	37.2863	37.3085	0.06%	N/C	41.28	42.57	
						41.28	49.17	5.99%
						41.28	39.52	
	ISO-800 F2	36.5821	36.5879	0.02%	N/C	45.01	60.37	
						45.01	48.77	18.06%
						45.01	50.27	

*This number was not included in the average

		500 HRS IN R-123 @ 194F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	36.4002	36.8578	1.26%	N/C	40.14	52.77	
						40.14	60.22	34.85%
						40.14	49.40	
	Y-390 B1	35.6135	36.1703	1.56%	N/C	36.12	48.00	
						36.12	44.35	25.51%
						36.12	43.65	
	ER-610 C1	36.6823	36.9602	0.76%	N/C	35.96	37.85	
						35.96	32.07	-4.64%
						35.96	32.95	
	Y-833 D1	36.3794	36.9719	1.63%	N/C	33.14	6.58	
						33.14	9.36	-75.50%
						33.14	8.42	
	923 E1	35.8908	36.5263	1.77%	N/C	40.52	43.92	
						40.52	42.20	5.45%
						40.52	42.07	
	ISO-800 F1	34.8244	34.9667	0.41%	N/C	20.20	24.75	
						20.20	23.35	5.15%
						20.20	15.62	
		R-123 -> 24 HRS 302 F						
	U-475 A2	36.4661	36.4817	0.04%	N/C	40.14	15.25	
						40.14	22.32	-53.02%
						40.14	19.00	
	Y-390 B2	36.1981	36.2055	0.02%	N/C	36.12	9.78	
						36.12	6.50	-78.84%
						36.12	6.65	
	ER-610 C2	36.0871	36.1171	0.08%	N/C	35.96	31.17	
						35.96	25.27	-16.98%
						35.96	33.12	
	Y-833 D2	36.4580	36.4588	0.00%	N/C	33.14	15.57	
						33.14	5.60	-69.75%
						33.14	8.90	
	923 E2	36.4986	36.5091	0.03%	N/C	40.52	9.00	
						40.52	10.00	-80.42%
						40.52	4.80	
	ISO-800 F2	34.9478	34.9635	0.04%	N/C	20.20	21.60	
						20.20	18.57	1.22%
						20.20	21.17	

		500 HRS IN R-123 @ 194F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE	U-475 A1	37.1512	37.4685	0.854%	N/C	51.21	55.67	
						51.21	51.32	5.16%
						51.21	54.57	
	Y-390 B1	37.3299	37.5072	0.475%	N/C	50.72	42.42	
						50.72	54.62	-11.19%
						50.72	38.10	
	ER-610 C1	37.4909	37.7730	0.752%	N/C	58.33	30.75	
						58.33	30.07	-51.27%
						58.33	24.45	
	Y-833 D1	37.0248	37.0382	0.036%	N/C	5.84	19.42	
						5.84	14.45	193.49%
						5.84	17.55	
	923 E1	38.4795	38.5987	0.310%	N/C	49.26	59.05	
						49.26	60.72	14.79%
						49.26	49.87	
	ISO-800 F1	37.4754	37.5481	0.194%	N/C	36.08	39.62	
						36.08	15.65	-24.87%
						36.08	26.05	
POLYAMIDE IMIDE		R-123 -> 24 HRS 302 F						
	U-475 A2	37.2222	37.2454	0.062%	N/C	51.21	47.32	
						51.21	59.00	5.40%
						51.21	55.60	
	Y-390 B2	37.9180	37.9517	0.089%	N/C	50.72	53.92	
						50.72	68.02	11.26%
						50.72	47.35	
	ER-610 C2	37.0042	37.0063	0.006%	N/C	58.33	23.92	
						58.33	19.47	-64.15%
						58.33	19.35	
	Y-833 D2	37.2232	37.1877	-0.095%	N/C	5.84	17.57	
						5.84	20.97	214.16%
						5.84	16.50	
	923 E2	38.1592	38.1753	0.042%	N/C	49.26	62.05	
						49.26	43.32	0.68%
						49.26	43.42	
	ISO-800 F2	37.4904	37.4955	0.014%	N/C	36.08	49.52	
						36.08	31.57	14.92%
						36.08	43.30	

	500 HRS IN R-123 @ 194F				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	5.6564	5.6574	0.018%	N/C	
					YES
B1	5.4009	5.4356	0.642%	N/C	
					YES
C1	5.5316	5.5351	0.063%	N/C	
					YES
	R-123 -> 302F 24 HRS				
A2	5.6678	5.6659	-0.034%	N/C	
					YES
B2	5.4456	5.4407	-0.090%	N/C	
					YES
C2	5.4676	5.4679	0.005%	N/C	
					YES

		500 HRS IN R-123 @ 194 F					
	VARN	WIRE WT	VARN WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE	U-475 A1	5.8590		5.9103	0.876%	N/C	YES
	Y-390 B1	5.9629		6.0131	0.842%	N/C	NO
	ER-610 C1	5.7751		5.7845	0.163%	N/C	YES
	Y-833 D1	5.6990		5.7065	0.132%	N/C	YES
	923 E1	6.0113		6.0755	1.068%	N/C	NO
	ISO-800 F1	5.7057		5.7242	0.324%	N/C	YES
		R-123 -> 24 HRS @ 302F					
	U-475 A2	5.7712		5.7626	-0.149%	N/C	NO
	Y-390 B2	5.9251		5.9361	0.186%	N/C	NO
	ER-610 C2	5.8035		5.8011	-0.041%	N/C	YES
	Y-833 D2	5.6618		5.6586	-0.057%	N/C	NO
	923 E2	5.9486		5.9600	0.192%	N/C	NO
	ISO-800 F2	5.7947		5.7930	-0.029%	N/C	YES

		500 HRS IN R-123 @ 194 F					
	VARN	WIRE WT	VARN WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE	U-475 A1	5.7099		5.8056	1.676%	N/C	YES
	Y-390 B1	5.9136		6.0223	1.837%	N/C	NO
	ER-610 C1	5.5336		5.5781	0.804%	N/C	YES
	Y-833 D1	5.5418		5.5840	0.761%	N/C	YES
	923 E1	5.9358		6.0555	2.017%	N/C	NO
	ISO-800 F1	5.6518		5.7057	0.954%	N/C	YES
		R-123 -> 24 HRS @ 302F					
IMIDE EPOXY GLASS	U-475 A2	5.6653		5.6563	-0.159%	N/C	NO
	Y-390 B2	5.7697		5.7865	0.291%	N/C	NO
	ER-610 C2	5.6574		5.6540	-0.060%	N/C	YES
	Y-833 D2	5.6218		5.6215	-0.005%	N/C	YES
	923 E2	5.8970		5.9089	0.202%	N/C	NO
	ISO-800 F2	5.5673		5.5686	0.023%	N/C	NO

		500 HRS IN R-123 @ 194 F					
	VARN	WIRE WT	VARN WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER IMIDE	U-475 A1	5.6813		5.7321	0.894%	N/C	YES
	Y-390 B1	5.8165		5.8778	1.054%	N/C	YES
	ER-610 C1	5.5091		5.5147	0.102%	N/C	YES
	Y-833 D1	5.5816		5.5900	0.150%	N/C	NO
	923 E1	5.7696		5.8405	1.229%	N/C	NO
	ISO-800 F1	5.5894		5.6052	0.283%	N/C	NO
		R-123 -> 24 HRS @ 302F					
POLYAMIDE IMIDE	U-475 A2	5.6784		5.6746	-0.067%	N/C	NO
	Y-390 B2	5.6971		5.7057	0.151%	N/C	NO
	ER-610 C2	5.5242		5.5213	-0.052%	N/C	YES
	Y-833 D2	5.5245		5.5244	-0.002%	N/C	NO
	923 E2	5.7992		5.8093	0.174%	N/C	NO
	ISO-800 F2	5.5757		5.5760	0.005%	N/C	NO

500 HRS IN R-123 @ 194 F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	2.6205	3.3444	27.62%	N/C	Slightly more Flexible
Y-390 B1	2.6300	3.2776	24.62%	N/C	N/C
ER-610 C1	2.4987	3.1346	25.45%	N/C	Slightly more flexible
Y-833 D1	2.3860	3.4352	43.97%	N/C	Limp
923 E1	1.7138	2.1628	26.20%	N/C	N/C
ISO-800 F1	1.8397	2.0956	13.91%	N/C	N/C
	R-123 at ->302F 24 HRS				
U-475 A2	2.4020	2.4133	0.47%	Darkened	Less Flexible
Y-390 B2	2.5880	2.6325	1.72%	Darkened	N/C
ER-610 C2	2.7753	2.7439	-1.13%	Darkened Crazed	Brittle
Y-833 D2	2.9804	3.0024	0.74%	Darkened Crazed	Brittle
923 E2	1.9790	2.0486	3.52%	Darkened	N/C
ISO-800 F2	2.1433	2.0970	-2.16%	Darkened Slightly warped	N/C

500 HR IN R-123 @ 194F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS Mils	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	4.9226	5.9564	21.00%	0.394	123.00	22	17.4	14.19	
				0.425	130.60	22	17.4	13.96	-18.98%
				0.470	146.20	22	17.4	14.14	
DA/MY/DA B1	4.4844	4.8280	7.66%	0.374	85.95	23	13.7	9.99	
				0.460	108.70	23	13.7	10.27	-25.07%
				0.460	111.40	23	13.7	10.53	
MYLAR MO C1	2.3394	2.5315	8.21%	0.410	91.75	10	21.7	22.38	
				0.494	89.10	10	21.7	18.04	-7.66%
				0.486	95.75	10	21.7	19.70	
NO 410 D1	2.3193	2.6688	15.07%	0.484	86.25	11	18.7	16.20	
				0.529	97.20	11	18.7	16.70	-12.50%
				0.507	90.25	11	18.7	16.18	
NO MI 418 E1	2.3454	2.3625	0.73%	0.488	27.40	10	7.5	5.61	
				0.512	29.80	10	7.5	5.82	-23.85%
				0.473	26.95	10	7.5	5.70	
MEL 228 F1	2.2604	2.4439	8.12%	0.394	75.25	11	21.7	17.36	
				0.486	95.25	11	21.7	17.82	-20.15%
				0.487	90.00	11	21.7	16.80	
	500 HRS IN R-123 @ 194 F ->24 HRS @ 302 F								
NO/MY/NO A2	5.0617	5.0416	-0.40%	0.376	135.50	22	17.4	16.38	
				0.465	170.00	22	17.4	16.62	-7.08%
				0.501	170.90	22	17.4	15.51	
DA/MY/DA B2	4.5162	4.4576	-1.30%	0.370	102.70	22	13.7	12.62	
				0.411	113.10	22	13.7	12.51	-7.23%
				0.446	127.60	22	13.7	13.00	
MYLAR MO C2	2.2684	2.2583	-0.45%	0.418	78.30	10	21.7	18.73	
				0.515	100.50	10	21.7	19.51	-11.52%
				0.497	96.20	10	21.7	19.36	
NOMEX 410 D2	2.4916	2.4942	0.10%	0.500	97.45	10	18.7	19.49	
				0.510	103.10	10	18.7	20.22	4.18%
				0.480	89.95	10	18.7	18.74	
NO/MI 418 E2	2.3845	2.3851	0.03%	0.485	28.45	10	7.5	5.87	
				0.521	28.80	10	7.5	5.53	-22.67%
				0.492	29.55	10	7.5	6.01	
MEL 228 F2	2.4424	2.4380	-0.18%	0.482	93.00	10	21.7	19.29	
				0.485	92.15	10	21.7	19.00	-15.36%
				0.481	80.85	10	21.7	16.81	

After 500 hour exposure to HCFC-123 @ 194°F(90°C)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO A1	0.56	14.0%	20.0%		>18.97	>18.21		N/C
	0.79	19.8%	20.0%	-12.9%	>18.97	>18.69	flash	
	0.74	18.5%	20.0%		>18.97	>18.94		
DA/MY/DA B1	0.50	25.0%	46.0%		>15.27	>15.14		N/C
	0.53	26.5%	46.0%	-40.6%	>15.27	>15.64	flash	
	0.61	30.5%	46.0%		>15.27	>14.97		
MYLAR MO C1	2.19	109.5%	131.0%		>14.91	>14.19		N/C
	2.22	111.0%	131.0%	-8.5%	>14.91	>14.3	flash	
	2.78	139.0%	131.0%		>14.91	>14.97		
NO 410 D1	0.47	11.8%	17.0%		10.67	12.30		N/C
	0.52	13.0%	17.0%	-30.9%	10.67	11.27	7.8%	
	0.42	10.5%	17.0%		10.67	10.94		
NO MI 418 E1	0.05	1.3%	4.0%		10.23	10.79		N/C
	0.06	1.5%	4.0%	-60.4%	10.23	9.65	2.9%	
	0.08	2.0%	4.0%		10.23	11.15		
MEL 228 F1	3.24	162.0%	160.0%		>14.22	>13.94		N/C
	3.54	177.0%	160.0%	3.9%	>14.22	>13.36	flash	
	3.19	159.5%	160.0%		>14.22	>13.64		
	After 500 hour exposure plus 24 hour airbake @ 194°F(90°C)							
NO/MY/NO A2	0.64	16.0%	20.0%		>18.97	>17.93		Bubbles
	0.78	19.5%	20.0%	-20.4%	>18.97	>17.24	flash	pulled a
	0.49	12.3%	20.0%		>18.97	>16.51		away *
DA/MY/DA B2	0.49	24.5%	46.0%		>15.27	>13.70		warped
	0.49	24.5%	46.0%	-43.1%	>15.27	>13.94	flash	darkened
	0.59	29.5%	46.0%		>15.27	>14.94		
MYLAR MO C2	2.79	139.5%	131.0%		>14.91	>14.74		N/C
	3.09	154.5%	131.0%	13.5%	>14.91	>14.14	flash	
	3.04	152.0%	131.0%		>14.91	>14.94		
NOMEX 410 D2	0.49	12.3%	17.0%		10.67	10.10		N/C
	0.49	12.3%	17.0%	-32.4%	10.67	11.31	1.0%	
	0.40	10.0%	17.0%		10.67	10.91		
NO/MI 418 E2	0.06	1.5%	4.0%		10.23	10.19		N/C
	0.04	1.0%	4.0%	-66.7%	10.23	9.80	-4.9%	
	0.06	1.5%	4.0%		10.23	9.19		
MEL 228 F2	3.42	171.0%	160.0%		>14.22	>13.94		N/C
	3.37	168.5%	160.0%	-7.8%	>14.22	>14.54	flash	
	2.06	103.0%	160.0%		>14.22	>14.64		

	500 HRS IN R-123 @ 194F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5521	0.8661	56.87%	N/C
B1 MYLAR	0.5001	0.6193	23.84%	N/C
C1 NO/MY	0.3953	0.4845	22.57%	N/C
	R-123 @ 194F----->24 hrs @ 302F			
A2 NOMEX	0.5453	0.5264	-3.47%	Darkened
B2 MYLAR	0.4608	0.4533	-1.63%	Darkened Warped
C2 NO/MY	0.3935	0.3832	-2.62%	Darkened Warped

	500 HRS IN R-123 @ 194 F								
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS
A1 Glass	1.5632	1.5969	2.16%	39.02	36.85		0.07	3.50%	N/C
				39.02	47.35	0.69%	0.05	2.50%	
				39.02	32.05		0.04	2.00%	
B1 Polyester	0.6933	0.7383	6.49%	56.12	60.15		0.73	36.50%	N/C
				56.12	58.40	5.81%	0.66	33.00%	
				56.12	59.60		0.77	38.50%	
C1 Permacel	1.8506	1.7466	-5.62%	88.50	78.85		0.07	3.50%	Rolled
				88.50	81.05	-12.34%	0.09	4.50%	up,turn
				88.50	72.85		0.08	4.00%	green
	500 HRS in R-123 -> 302 F 24 HRS								
A2 Glass	1.5994	1.5976	-0.11%	39.02	59.05		0.05	2.50%	N/C
				39.02	49.95	18.83%	0.05	2.50%	
				39.02	30.10		0.04	2.00%	
B2 Polyester	0.6907	0.6801	-1.53%	56.12	52.80		0.50	25.00%	N/C
				56.12	60.70	2.90%	0.70	35.00%	
				56.12	59.75		0.60	30.00%	
C2 Permacel	1.7841	1.5248	-14.53%	88.50	96.90		0.09	4.50%	Darkened
				88.50	98.49	20.49%	0.10	5.00%	
				88.50	124.50		0.11	5.50%	

	500 HRS IN R-123 @ 194 F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1.	0.2827	0.2996	5.98%	N/C	28.36	33.55		0.23	11.5%
					28.36	28.55	10.13%	0.20	10.0%
					28.36	31.60		0.19	9.5%
	500 HRS IN R-123 -> 24 HRS @ 302F								
A2	0.2824	0.2868	1.558%	N/C	28.36	30.80		0.29	14.5%
					28.36	30.45	4 96%	0.29	14.5%
					28.36	28.05		0.29	14.5%

	500 HRS IN R-123 @ 194 F						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	3.9693	4.1624	4.86%	N/C	9.61	7.52	
A1					9.61	9.73	-5.06%
					9.61	10.12	
DTMD	4.1800	4.3446	3.94%	N/C	9.95	13.62	
B1					9.95	13.90	42.78%
					9.95	15.10	
	R-123 @ 194 F -> 24 HRS @ 302F						
DMD	3.8983	3.8924	-0.15%	N/C	9.61	9.04	
A2					9.61	9.05	-4.82%
					9.61	9.35	
DTMD	4.1036	4.0977	-0.14%	N/C	9.95	10.79	
B2					9.95	10.37	6.10%
					9.95	10.51	

Appendix E

Experimental Data for HCFC-124 Exposure at 90°C(194°F)

	500 HRS IN R-124 @ 194 F									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	26.8128	26.8163	0.013%	N/C	576	415		15.80	15.43	
					576	454	-20.9%	15.80	16.12	3.1%
					576	497		15.80	17.30	
B1	24.6689	24.7140	0.183%	N/C	736	733		11.62	11.15	
					736	730	-0.7%	11.62	12.21	1.5%
					736	730		11.62	12.01	
C1	25.2283	25.2294	0.004%	N/C	579	395		16.58	11.32	
					579	561	-13.6%	16.58	13.63	-17.0%
					579	544		16.58	16.35	
	R-124-->24 HRS @ 302 F									
A2	23.1202	23.1164	-0.016%	N/C	576	479		15.80	15.06	
					576	423	-19.7%	15.80	14.98	-2.8%
					576	486		15.80	16.02	
B2	23.9815	23.9635	-0.075%	N/C	736	658		11.62	12.00	
					736	655	-12.4%	11.62	11.62	0.3%
					736	621		11.62	11.34	
C2	23.5253	23.5238	-0.006%	N/C	579	521		16.58	14.22	
					579	570	-9.9%	16.58	9.75	-16.6%
					579	474		16.58	17.49	

	500 HOURS IN R-124 @ 194 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	21.4225	21.4566	0.159%	N/C	16.24	16.30		430	332	
						16.24	12.77	-5.25%	430	318	-27.13%
						16.24	17.09		430	290	
	Y-390 B1	21.8935	21.9259	0.148%	N/C	18.77	19.66		510	423	
						18.77	20.00	4.23%	510	416	-18.82%
						18.77	19.03		510	403	
	ER-610 C1	21.8850	21.9070	0.101%	N/C	15.57	13.93		442	411	
						15.57	13.29	-15.24%	442	407	-7.16%
						15.57	12.37		442	413	
	Y-833 D1	21.6046	21.6004	-0.019%	N/C	12.04	9.73		578	510	
						12.04	12.53	-6.15%	578	392	-21.22%
						12.04	11.64		578	464	
	923 E1	22.5209	22.5604	0.175%	N/C	16.76	broke		606	421	
						16.76	20.00	-5.58%	606	418	-32.45%
						16.76	11.65		606	389	
	ISO-800 F1	22.0486	22.0563	0.035%	N/C	19.08	14.30		580	558	
						19.08	12.47	-25.40%	580	580	-1.90%
						19.08	15.93		580	569	
		24 HOURS AT 302 F									
	U-475 A2	21.6149	21.6137	-0.006%	N/C	16.24	13.36		430	274	
						16.24	13.99	-5.48%	430	271	-36.74%
						16.24	18.70		430	271	
	Y-390 B2	21.7951	21.7538	-0.189%	N/C	18.77	12.99		510	477	
						18.77	20.00	-7.57%	510	410	-10.46%
						18.77	19.06		510	483	
	ER-610 C2	21.5499	21.5448	-0.024%	N/C	15.57	12.27		442	414	
						15.57	12.17	-21.52%	442	427	-2.87%
						15.57	BROKE		442	447	
	Y-833 D2	21.5756	21.5590	-0.077%	N/C	12.04	11.06		578	567	
						12.04	9.17	-12.21%	578	555	-7.73%
						12.04	11.48		578	478	
	923 E2	22.2525	22.2537	0.005%	N/C	16.76	20.00		606	370	
						16.76	20.00	19.33%	606	395	-37.02%
						16.76	20.00		606	380	
	ISO-800 F2	22.0184	22.0156	-0.013%	N/C	19.08	18.79		580	589	
						19.08	13.13	-13.75%	580	564	-1.09%
						19.08	17.45		580	568	

	500 HOURS IN R-124 @ 194 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE EPOXY GLASS	U-475 A1	22.9533	23.2238	1.18%	N/C	13.32	13.78		746	734	
						13.32	15.14	8.13%	746	724	-3.57%
						13.32	14.29		746	700	
	Y-390 B1	23.2879	23.3028	0.06%	N/C	12.28	12.31		755	735	
						12.28	10.13	-8.93%	755	743	-2.38%
						12.28	11.11		755	733	
	ER-610 C1	22.5862	22.6263	0.18%	N/C	12.73	13.85		734	728	
						12.73	14.57	9.45%	734	728	-0.82%
						12.73	13.38		734	728	
	Y-833 D1	21.1237	21.1519	0.13%	N/C	12.49	12.69		734	726	
						12.49	9.95	-6.73%	734	725	-1.36%
						12.49	12.31		734	721	
	923 E1	23.5952	23.6168	0.09%	N/C	14.38	14.59		742	734	
						14.38	13.98	-7.79%	742	728	-1.48%
						14.38	11.21		742	731	
	ISO-800 F1	22.9195	23.1347	0.94%	N/C	12.29	12.67		747	696	
						12.29	12.30	-3.06%	747	728	-4.42%
						12.29	10.77		747	718	
		R-124 --> 24 hours @ 302 F									
	U-475 A2	22.8840	22.8661	-0.08%	N/C	13.32	11.69		746	727	
						13.32	13.45	-6.38%	746	737	-2.06%
						13.32	12.27		746	728	
	Y-390 B2	23.2460	23.2468	0.00%	N/C	12.28	11.98		755	737	
						12.28	12.90	6.32%	755	726	-3.11%
						12.28	14.29		755	741	
	ER-610 C2	22.1358	22.1309	-0.02%	N/C	12.73	13.17		734	674	
						12.73	11.32	-0.76%	734	726	-5.09%
						12.73	13.41		734	690	
	Y-833 D2	21.2747	21.2619	-0.06%	N/C	12.49	12.69		734	727	
						12.49	12.07	-1.33%	734	726	-1.00%
						12.49	12.21		734	727	
	923 E2	23.4878	23.4504	-0.16%	N/C	14.38	12.04		742	727	
						14.38	17.30	-5.10%	742	738	-2.02%
						14.38	11.60		742	736	
	ISO-800 F2	23.4103	23.4085	-0.01%		12.29	11.42		747	727	
					N/C	12.29	12.18	-10.31%	747	735	-2.14%
						12.29	9.47		747	725	

500 HOURS IN R-124 @ 194 F											
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE	U-475 A1	21.8953	21.9376	0.193%	N/C	15.10	13.60		469	257	
						15.10	14.52	5.54%	469	390	-35.82%
						15.10	19.69		469	256	
	Y-390 B1	22.4581	22.4738	0.070%	N/C	18.24	18.59		473	400	
						18.24	17.07	-11.77%	473	380	-6.34%
						18.24	12.62		473	549	
	ER-610 C1	21.4721	21.4754	0.015%	N/C	14.53	16.00		494	350	
						14.53	15.37	7.85%	494	314	-34.62%
						14.53	15.64		494	305	
	Y-833 D1	21.6585	21.6542	-0.020%	N/C	11.38	11.23		557	477	
						11.38	11.67	-4.13%	557	581	-2.87%
						11.38	9.83		557	565	
	923 E1	21.8834	21.9140	0.140%	N/C	15.85	14.38		503	403	
						15.85	20.00	12.72%	503	407	-20.28%
						15.85	19.22		503	393	
	ISO-800 F1	21.8049	21.8118	0.032%	N/C	14.75	16.05		632	573	
						14.75	20.00	25.76%	632	570	-9.23%
						14.75	19.60		632	578	
POLYAMIDE IMIDE		R-124 --> 24 hours @ 302 F									
	U-475 A2	21.8226	21.8219	-0.003%	N/C	15.10	14.65		469	248	
						15.10	15.93	3.16%	469	245	-48.05%
						15.10	16.15		469	238	
	Y-390 B2	22.4706	22.4721	0.007%	N/C	18.24	17.44		473	414	
						18.24	20.00	-5.62%	473	398	-14.24%
						18.24	14.43		473	405	
	ER-610 C2	21.4497	21.4479	-0.008%	N/C	14.53	15.86		494	387	
						14.53	10.61	-10.05%	494	366	-26.45%
						14.53	12.74		494	337	
	Y-833 D2	21.6146	21.5521	-0.289%	N/C	11.38	10.00		557	482	
						11.38	12.50	-6.36%	557	566	-6.22%
						11.38	9.47		557	519	
	923 E2	21.7620	21.7601	-0.009%	N/C	15.85	11.81		503	392	
						15.85	19.90	-7.59%	503	436	-18.82%
						15.85	12.23		503	397	
	ISO-800 F2	21.5591	21.5553	-0.018%	N/C	14.75	15.22		632	562	
						14.75	19.64	18.17%	632	477	-15.82%
						14.75	BROKE		632	557	

		500 HRS IN R-124 @ 194F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS -	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	39.2143	39.2760	0.157%	N/C	73.73	64.75	
						73.73	69.17	-5.58%
						73.73	74.92	
	Y-390 B1	37.7832	37.7556	-0.073%	N/C	43.78	50.32	
						43.78	45.92	7.58%
						43.78	45.05	
	ER-610 C1	37.8531	37.9195	0.175%	N/C	51.81	51.87	
						51.81	58.32	9.79%
						51.81	60.45	
	Y-833 D1	38.0912	38.0545	-0.096%	N/C	9.85	7.00	
						9.85	8.10	58.78%
						9.85	31.82	
	923 E1	38.6221	38.6373	0.039%	N/C	41.28	41.30	
						41.28	43.97	3.15%
						41.28	42.47	
	ISO-800 F1	37.2150	37.2185	0.009%	N/C	45.01	38.77	
						45.01	43.80	-8.28%
						45.01	52.72	
		R-124 -> 24 HRS 302 F						
	U-475 A2	38.7454	38.7464	0.003%	N/C	73.73	*13.75	
						73.73	*29.70	0.30%
						73.73	73.95	
	Y-390 B2	38.2281	38.2228	-0.014%	N/C	43.78	66.00	
						43.78	44.67	22.65%
						43.78	50.42	
	ER-610 C2	37.4667	37.4681	0.004%	N/C	51.81	57.97	
						51.81	67.60	27.29%
						51.81	72.27	
	Y-833 D2	37.9894	37.8537	-0.357%	N/C	9.85	25.32	
						9.85	20.87	134.55%
						9.85	23.12	
	923 E2	38.9174	38.9139	-0.009%	N/C	41.28	35.12	
						41.28	48.82	6.15%
						41.28	47.52	
	ISO-800 F2	37.1861	37.1777	-0.023%	N/C	45.01	53.75	
						45.01	42.05	6.51%
						45.01	48.02	

*These values were obtained with speed set at 20 in/min.

		500 HRS IN R-124 @ 194F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER	U-475 A1	36.9795	37.0610	0.220%	N/C	40.14	32.52	
						40.14	32.27	-16.84%
						40.14	35.35	
	Y-390 B1	36.9108	36.9729	0.168%	N/C	36.12	37.35	
						36.12	39.22	0.67%
						36.12	32.52	
	ER-610 C1	37.1115	37.1695	0.156%	N/C	35.96	32.72	
						35.96	35.87	-5.86%
						35.96	32.97	
POLYAMIDE	Y-833 D1	36.3222	36.3535	0.086%	N/C	33.14	32.47	
						33.14	28.95	-8.40%
						33.14	29.65	
	923 E1	35.9855	36.1269	0.393%	N/C	40.52	44.72	
						40.52	56.90	22.85%
						40.52	47.72	
	ISO-800 F1	35.6655	35.6779	0.035%	N/C	20.20	19.95	
						20.20	19.60	-7.15%
						20.20	16.72	
		R-124 -> 24 HRS 302 F						
IMIDE EPOXY GLASS	U-475 A2	37.1098	37.1129	0.008%	N/C	40.14	34.42	
						40.14	39.17	-9.48%
						40.14	35.42	
	Y-390 B2	36.3441	36.3526	0.023%	Varnish	36.12	35.10	
					Pockets	36.12	35.87	0.17%
						36.12	37.57	
	ER-610 C2	37.2841	37.2795	-0.012%	N/C	35.96	42.45	
						35.96	35.52	6.73%
						35.96	37.17	
	Y-833 D2	36.9409	36.9460	0.014%	N/C	33.14	34.87	
						33.14	30.15	8.92%
						33.14	43.27	
	923 E2	37.0416	37.0523	0.029%	N/C	40.52	49.67	
						40.52	48.00	17.61%
						40.52	45.30	
	ISO-800 F2	35.7067	35.7010	-0.016%	N/C	20.20	18.20	
						20.20	17.82	-5.58%
						20.20	21.20	

		500 HRS IN R-124 @ 194F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE POLYAMIDE IMIDE,	U-475 A1	38.7159	38.7754	0.154%	N/C	51.21	55.00	5.48%
						51.21	46.90	
						51.21	60.15	
	Y-390 B1	37.8168	37.8353	0.049%	N/C	50.72	66.60	20.86%
						50.72	58.60	
						50.72	58.70	
	ER-610 C1	36.2751	36.3299	0.151%	N/C	58.33	49.77	-5.91%
						58.33	54.12	
						58.33	60.75	
	Y-833 D1	37.5073	37.5010	-0.017%	N/C	5.84	18.10	170.26%
						5.84	8.10	
						5.84	21.15	
	923 E1	38.8092	38.8148	0.014%	N/C	49.26	40.75	-20.02%
						49.26	41.32	
						49.26	36.12	
	ISO-800 F1	37.6076	37.6148	0.019%	N/C	36.08	47.22	25.50%
						36.08	39.07	
						36.08	49.55	
		R-124-> 24 HRS 302 F						
	U-475 A2	38.4566	38.4570	0.001%	N/C	51.21	53.67	11.17%
						51.21	53.80	
						51.21	63.32	
	Y-390 B2	38.0765	38.0746	-0.005%	N/C	50.72	67.10	22.99%
						50.72	54.77	
						50.72	65.27	
	ER-610 C2	36.3845	36.3613	-0.064%	N/C	58.33	65.80	6.33%
						58.33	56.97	
						58.33	63.30	
	Y-833 D2	36.7843	36.7485	-0.097%	N/C	5.84	2.00	160.22%
						5.84	29.87	
						5.84	13.72	
	923 E2	38.3985	38.3535	-0.117%	N/C	49.26	59.07	-4.55%
						49.26	35.77	
						49.26	46.22	
	ISO-800 F2	37.6736	37.6665	-0.019%	N/C	36.08	32.97	2.42%
						36.08	32.77	
						36.08	45.12	

	500 HRS IN R-124 @ 194F				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	5.4458	5.4482	0.044%	N/C	
					YES
B1	5.4296	5.4437	0.260%	N/C	
					YES
C1	5.2747	5.2769	0.042%	N/C	
					YES
	R-124 -> 302F 24 HRS				
A2	5.4788	5.4764	-0.044%	N/C	
					YES
B2	5.4733	5.4726	-0.013%	N/C	
					YES
C2	5.483	5.4779	-0.093%	N/C	
					YES

	500 hrs in R-124 at 194 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE	U-475 A1	5.7451	5.7572	0.211%	N/C	YES
	Y-390 B1	5.8114	5.8189	0.129%	N/C	NO
	ER-610 C1	5.6636	5.6672	0.064%	N/C	YES
	Y-833 D1	5.8064	5.8062	-0.003%	N/C	YES
	923 E1	6.7930	6.7590	-0.501%	N/C	NO
	ISO-800 F1	5.7631	5.7657	0.045%	N/C	YES
		R-124 -> 24 HRS @ 302F				
	U-475 A2	5.8504	5.8455	-0.084%	N/C	YES
	Y-390 B2	5.7720	5.7715	-0.009%	N/C	NO
	ER-610 C2	5.5941	5.5507	-0.776%	N/C	YES
	Y-833 D2	5.8438	5.8389	-0.084%	N/C	YES
	923 E2	6.6622	6.6590	-0.048%	N/C	NO
	ISO-800 F2	5.7790	5.7779	-0.019%	N/C	YES

	R-124 at 194 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE	U-475 A1	5.2571	5.2772	0.382%	N/C	NO
	Y-390 B1	6.9350	6.9404	0.078%	N/C	NO
	ER-610 C1	5.7867	5.7582	-0.493%	N/C	YES
	Y-833 D1	6.0301	6.0404	0.171%	N/C	NO
	923 E1	6.2356	6.2448	0.148%	N/C	NO
	ISO-800 F1	5.8951	5.8583	-0.624%	N/C	NO
		R-124 -> 24 HRS @ 302F				
IMIDE EPOXY GLASS	U-475 A2	5.2357	5.2333	-0.046%	N/C	YES
	Y-390 B2	6.9309	6.9275	-0.049%	N/C	NO
	ER-610 C2	5.8271	5.8207	-0.110%	N/C	YES
	Y-833 D2	5.9747	5.9745	-0.003%	N/C	NO
	923 E2	6.1623	6.1620	-0.005%	N/C	NO
	ISO-800 F2	5.8702	5.8702	0.000%	N/C	YES

	R-124 at 194 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER IMIDE	U-475 A1	5.0701	5.0611	-0.178%	N/C	YES
	Y-390 B1	5.6765	5.6654	-0.196%	N/C	NO
	ER-610 C1	5.3035	5.3054	0.036%	N/C	YES
	Y-833 D1	5.4575	5.4582	0.013%	N/C	YES
	923 E1	6.6778	6.6638	-0.210%	N/C	NO
	ISO-800 F1	4.9968	4.9595	-0.746%	N/C	YES
		R-124 -> 24 HRS @ 302F				
POLYAMIDE IMIDE	U-475 A2	5.9661	5.9633	-0.047%	N/C	YES
	Y-390 B2	5.7308	5.7276	-0.056%	N/C	NO
	ER-610 C2	5.3213	5.3167	-0.086%	N/C	YES
	Y-833 D2	5.3454	5.3441	-0.024%	N/C	YES
	923 E2	6.6660	6.6617	-0.065%	N/C	NO
	ISO-800 F2	5.0181	5.0132	-0.098%	N/C	NO

500 HRS IN R-124 @ 194 F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	1.7177	1.8007	4.83%	N/C	N/C
Y-390 B1	2.2927	2.3483	2.43%	Slightly warped	N/C
ER-610 C1	2.5342	2.7208	7.36%	N/C	N/C
Y-833 D1	2.0407	2.3107	13.23%	N/C	N/C
923 E1	1.6968	1.7265	1.75%	Slightly Warped	N/C
ISO-800 F1	1.7118	1.7279	0.94%	Slightly Warped	Slightly More Flexible
	R-124 at ->302F 24 HRS				
U-475 A2	2.3232	2.3333	0.43%	Darkened Slighlty Warped	N/C
Y-390 B2	1.8264	1.8197	-0.37%	Slightly warped	N/C
ER-610 C2	2.0113	2.0513	1.99%	Darkened	N/C
Y-833 D2	2.3261	2.3569	1.32%	Internal Bubbles	N/C
923 E2	1.6644	1.6710	0.40%	Slighlty Warped	N/C
ISO-800 F2	1.5467	1.5176	-1.88%	Slightly warped	N/C

500 HR IN R-124 @ 194F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS MILS	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	4.3892	4.6516	5.98%	0.408	143.80	22	17.4	16.02	
				0.348	123.80	22	17.4	16.17	-7.19%
				0.392	140.20	22	17.4	16.26	
DA/MY/DA B1	4.4190	4.6139	4.41%	0.390	107.40	22	13.7	12.52	
				0.475	125.70	22	13.7	12.03	-9.69%
				0.410	113.40	22	13.7	12.57	
MYLAR MO C1	2.3154	2.4045	3.85%	0.461	84.15	10	21.7	18.25	
				0.440	84.30	10	21.7	19.16	-13.87%
				0.398	74.25	10	21.7	18.66	
NO 410 D1	2.1084	2.1714	2.99%	0.505	97.75	10	18.7	19.36	
				0.435	92.25	10	18.7	21.21	6.47%
				0.510	97.75	10	18.7	19.17	
NO MI 418 E1	2.4478	2.4525	0.19%	0.507	28.70	9	7.5	6.29	
				0.478	26.20	9	7.5	6.09	-17.00%
				0.489	27.70	9	7.5	6.29	
MEL 228 F1	2.3964	2.4502	2.25%	0.530	105.30	11	21.7	18.06	
				0.522	101.80	11	21.7	17.73	-18.43%
				0.485	92.35	11	21.7	17.31	
	500 HRS IN R-124 @ 194 F ->24 HRS @ 302 F								R-124 -->
NO/MY/NO A2	4.5503	4.5526	0.05%	0.495	187.50	22	17.4	17.22	
				0.375	131.20	22	17.4	15.90	-4.01%
				0.350	130.80	22	17.4	16.99	
DA/MY/DA B2	4.2276	4.2519	0.57%	0.342	102.20	22	13.7	13.58	
				0.387	107.90	22	13.7	12.67	-4.63%
				0.438	124.70	22	13.7	12.94	
MYLAR MO C2	2.2746	2.2745	0.00%	0.502	89.35	10	21.7	17.80	
				0.469	96.00	10	21.7	20.47	-13.91%
				0.414	73.60	10	21.7	17.78	
NOMEX 410 D2	2.0827	2.0535	-1.40%	0.506	100.30	10	18.7	19.82	
				0.487	97.00	10	18.7	19.92	7.67%
				0.511	105.60	10	18.7	20.67	
NO/MI 418 E2	2.1911	2.2088	0.81%	0.510	26.15	9	7.5	5.70	
				0.462	24.55	9	7.5	5.90	-23.00%
				0.526	27.10	9	7.5	5.72	
MEL 228 F2	2.4317	2.4355	0.16%	0.412	77.70	10	21.7	18.86	
				0.413	72.30	10	21.7	17.51	-14.69%
				0.399	76.50	10	21.7	19.17	

After 500 hour exposure plus 24 hour airbake @ 302°F(150°C)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO	0.91	22.8%	20.0%		>18.97	>15.17		N/C
A1	0.91	22.8%	20.0%	15.0%	>18.97	>14.93	FLASH	
	0.94	23.5%	20.0%		>18.97	>15.44		
DA/MY/DA	0.56	28.0%	46.0%		>15.27	>13.17		slighlty
B1	0.59	29.5%	46.0%	-36.2%	>15.27	>13.53	FLASH	warped
	0.61	30.5%	46.0%		>15.27	>13.73		discolore
MYLAR MO	2.59	129.5%	131.0%		>14.91	>12.53		N/C
C1	2.71	135.5%	131.0%	-0.3%	>14.91	>13.66	FLASH	
	2.54	127.0%	131.0%		>14.91	>13.30		
NO 410	0.50	12.5%	17.0%		10.67	8.62		N/C
D1	0.71	17.8%	17.0%	-17.6%	10.67	9.88	-6.4%	
	0.47	11.8%	17.0%		10.67	11.45		
NO MI 418	0.09	2.3%	4.0%		10.23	10.25		N/C
E1	0.09	2.3%	4.0%	-45.8%	10.23	9.93	-3.6%	
	0.08	2.0%	4.0%		10.23	9.40		
MEL 228	3.54	177.0%	160.0%		>14.22	>11.88		N/C
F1	3.54	177.0%	160.0%	6.9%	>14.22	>12.40	FLASH	
	3.18	159.0%	160.0%		>14.22	>12.07		
	After 500 hour exposure plus a 24 hour air bake @ 302°F(150°C)							
NO/MY/NO	0.96	24.0%	20.0%		>18.97	>15.99		bubbles
A2	0.76	19.0%	20.0%	14.2%	>18.97	>16.54	FLASH	pulling
	1.02	25.5%	20.0%		>18.97	>15.96		away
DA/MY/DA	0.61	30.5%	46.0%		>15.27	>13.13		slighlty
B2	*2.09		46.0%	-36.4%	>15.27	>12.61	FLASH	warped
	0.56	28.0%	46.0%		>15.27	>13.20		
MYLAR MO	1.79	89.5%	131.0%		>14.91	>12.43		N/C
C2	2.91	145.5%	131.0%	-12.0%	>14.91	>11.69	FLASH	
	2.22	111.0%	131.0%		>14.91	>13.53		
NOMEX 410	0.58	14.5%	17.0%		10.67	11.99		N/C
D2	0.60	15.0%	17.0%	-13.7%	10.67	8.70	-3.0%	
	0.58	14.5%	17.0%		10.67	10.36		
NO/MI 418	0.06	1.5%	4.0%		10.23	9.83		N/C
E2	0.11	2.8%	4.0%	-50.0%	10.23	9.41	-5.7%	
	0.07	1.8%	4.0%		10.23	9.69		
MEL 228	3.14	157.0%	160.0%		>14.22	>11.97		N/C
F2	2.46	123.0%	160.0%	-7.4%	>14.22	>13.46	FLASH	
	3.29	164.5%	160.0%		>14.22	>12.57		

	500 HRS IN R-124 @ 194F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5374	0.6092	13.36%	N/C
B1 MYLAR	0.4755	0.5050	6.20%	N/C
C1 NO/MY	0.3947	0.4155	5.27%	N/C
	R-124 @ 194F---->24 hrs @ 302F			
A2 NOMEX	0.5779	0.5726	-0.92%	N/C
B2 MYLAR	0.4659	0.4637	-0.47%	Some delamination
C2 NO/MY	0.4026	0.4012	-0.35%	Pockects where mylar pulled away

	500 HRS IN R-124 @ 194 F									
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS	
A1 Glass	1.4492	1.4525	0.23%	39.02	31.00		0.07	3.50%	N/C	
				39.02	54.85	12.16%	0.05	2.50%		
				39.02	45.45		0.04	2.00%		
B1 Polyester	0.7147	0.7420	3.82%	56.12	47.00		0.36	18.00%	N/C	
				56.12	63.05	5.55%	0.67	33.50%		
				56.12	67.65		0.89	44.50%		
C1 Permacel	1.6045	1.6477	2.69%	88.50	116.40		0.10	5.00%	N/C	
				88.50	85.90	10.64%	0.08	4.00%	Ends Slightly	
				88.50	91.45		0.08	4.00%	rolled up	
	500 HRS in R-124 -> 302 F 24 HRS									
A2 Glass	1.5190	1.5150	-0.26%	39.02	40.40		0.05	2.50%	N/C	
				39.02	46.75	11.61%	0.05	2.50%		
				39.02	43.50		0.04	2.00%		
B2 Polyester	0.6668	0.6656	-0.18%	56.12	64.65		0.81	40.50%	N/C	
				56.12	52.50	4.39%	0.53	26.50%		
				56.12	58.60		0.69	34.50%		
C2 Permacel	1.5211	1.4117	-7.19%	88.50	139.30		0.09	4.50%	Slightly	
				88.50	129.50	43.47%	0.08	4.00%	Darkened	
				88.50	112.10		0.08	4.00%		

	500 HRS IN R-124 @ 194 F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1	0.2834	0.2916	2.89%	N/C	28.36	39.95		0.30	15.0%
					28.36	36.55	35.75%	0.33	16.5%
					28.36	39.00		0.41	20.5%
	500 HRS IN R-124 -> 24 HRS @ 302F								
A2	0.2812	0.2802	-0.356%	N/C	28.36	31.55		0.38	19.0%
					28.36	33.15	12.72%	0.41	20.5%
					28.36	31.20		0.40	20.0%

	500 HRS IN R-124 @ 194 F						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	4.0438	4.0648	0.52%	N/C	9.61	10.31	
A1					9.61	7.56	-10.06%
					9.61	8.06	
DTMD	4.3667	4.3556	-0.25%	N/C	9.95	10.07	
B1					9.95	9.84	3.58%
					9.95	11.01	
	R-124 @ 194 F -> 24 HRS @ 302F						
DMD	4.0232	4.0192	-0.10%	N/C	9.61	9.54	
A2					9.61	9.50	-1.77%
					9.61	9.28	
DTMD	4.2619	4.2570	-0.11%	N/C	9.95	7.83	
B2					9.95	10.09	-9.51%
					9.95	9.09	

Appendix F

Experimental Data for HCFC-142b Exposure at 90°C(194°F)

	500 HRS IN R-142b @ 194 F									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	25.6511	25.7016	0.197%	N/C	576	230		15.80	16.26	
					576	272	-54.9%	15.80	17.32	7.5%
					576	277		15.80	17.39	
B1	24.3511	24.4163	0.268%	N/C	736	735		11.62	12.03	
					736	730	-0.5%	11.62	12.82	5.1%
					736	732		11.62	11.78	
C1	25.0366	25.0444	0.031%	N/C	579	284		16.58	16.19	
					579	287	-54.9%	16.58	15.30	-10.5%
					579	213		16.58	13.04	
	R-142b									
A2	25.2514	25.2543	0.011%	N/C	576	524		15.80	14.09	
					576	519	-12.7%	15.80	16.90	-9.8%
					576	466		15.80	11.78	
B2	24.4042	24.4077	0.014%	N/C	736	650		11.62	12.42	
					736	651	-8.0%	11.62	12.69	6.0%
					736	730		11.62	11.83	
C2	25.3238	25.3244	0.002%	N/C	579	450		16.58	18.00	
					579	337	-28.4%	16.58	18.86	10.4%
					579	457		16.58	18.04	

	500 HOURS IN R-142b @ 194 F										
	VARN	TWISTED PAIR WT	Exp Pair weight	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	22.2514	22.3185	0.302%	N/C	16.24	17.70		430	212	
						16.24	15.87	2.81%	430	162	-54.65%
						16.24	16.52		430	211	
	Y-390 B1	22.8135	22.9002	0.380%	N/C	18.77	20.00		510	447	
						18.77	17.20	1.58%	510	320	-24.31%
						18.77	20.00		510	391	
	ER-610 C1	21.4572	21.5180	0.283%	N/C	15.57	13.03		442	330	
						15.57	15.73	-13.12%	442	318	-30.17%
						15.57	11.82		442	278	
	Y-833 D1	23.2688	23.2737	0.021%	N/C	12.04	11.48		578	349	
						12.04	11.03	-4.35%	578	472	-34.83%
						12.04	12.04		578	309	
	923 E1	22.8538	22.9475	0.410%	N/C	16.76	19.66		606	337	
						16.76	18.30	3.88%	606	336	-41.09%
						16.76	14.27		606	398	
	ISO-800 F1	21.6544	21.6819	0.127%	N/C	19.08	16.09		580	285	
						19.08	20.00	-2.01%	580	313	-47.93%
						19.08	20.00		580	308	
		24 HOURS AT 302 F									
	U-475 A2	22.1512	22.1542	0.014%	N/C	16.24	16.59		430	217	
						16.24	15.89	0.02%	430	217	-47.60%
						16.24	16.25		430	242	
	Y-390 B2	22.9632	22.9882	0.109%	N/C	18.77	16.91		510	394	
						18.77	16.29	-8.03%	510	423	-23.53%
						18.77	18.59		510	353	
	ER-610 C2	21.7431	21.7448	0.008%	N/C	15.57	14.04		442	372	
						15.57	14.65	-9.18%	442	366	-16.52%
						15.57	13.73		442	369	
	Y-833 D2	23.6078	23.6080	0.001%	N/C	12.04	11.10		578	513	
						12.04	9.89	-11.68%	578	504	-12.00%
						12.04	10.91		578	509	
	923 E2	22.6395	22.6474	0.035%	N/C	16.76	20.00		606	303	
						16.76	10.83	-9.49%	606	377	-45.76%
						16.76	14.68		606	306	
	ISO-800 F2	21.7078	21.7090	0.006%	N/C	19.08	17.09		580	507	
						19.08	20.00	-2.90%	580	401	-22.87%
						19.08	18.49		580	434	

500 HOURS IN R-142b @ 194°F												
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	26.3169	26.4343	0.45%	N/C	13.32	18.70		746	683	
						13.32	16.63	18.54%	746	648	-10.05%
						13.32	12.04		746	682	
	Y-390 B1	23.3508	23.4053	0.23%	N/C	12.28	11.11		755	691	
						12.28	12.70	-5.65%	755	687	-9.36%
						12.28	10.95		755	675	
	ER-610 C1	25.1144	25.1901	0.30%	N/C	12.73	15.30		734	615	
						12.73	13.22	9.66%	734	655	-12.67%
						12.73	13.36		734	653	
	Y-833 D1	22.0235	22.0715	0.22%	N/C	12.49	10.92		734	652	
						12.49	13.43	0.69%	734	633	-11.40%
						12.49	13.38		734	666	
	923 E1	26.8758	26.9648	0.33%	N/C	14.38	12.23		742	698	
						14.38	12.23	-17.50%	742	669	-8.54%
						14.38	11.13		742	669	
	ISO-800 F1	29.2546	29.3207	0.23%	N/C	12.29	12.82		747	725	
						12.29	13.09	1.27%	747	724	-2.81%
						12.29	11.43		747	729	
		R-142b --> 24 hours @ 302 F									
	U-475 A2	26.6580	26.6723	0.05%	N/C	13.32	13.48		746	685	
						13.32	12.27	-1.93%	746	683	-8.04%
						13.32	13.44		746	690	
	Y-390 B2	23.1102	23.1155	0.02%	N/C	12.28	11.33		755	691	
						12.28	12.20	-3.58%	755	688	-8.68%
						12.28	11.99		755	708	
	ER-610 C2	25.1733	25.1717	-0.01%	N/C	12.73	12.17		734	654	
						12.73	11.47	-6.42%	734	667	-10.58%
						12.73	12.10		734	648	
	Y-833 D2	21.8724	21.8676	-0.02%	N/C	12.49	12.63		734	649	
						12.49	12.60	0.29%	734	650	-12.67%
						12.49	12.35		734	624	
	923 E2	26.2261	26.2384	0.05%	N/C	14.38	11.56		742	687	
						14.38	15.16	-17.55%	742	716	-7.41%
						14.38	8.85		742	667	
	ISO-800 F2	29.4112	29.4122	0.00%		12.29	12.85		747	726	
					N/C	12.29	11.97	1.84%	747	725	-2.88%
						12.29	12.73		747	725	

500 HOURS IN R-142b @ 194 F											
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE	U-475 A1	23.5589	23.6081	0.209%	N/C	15.10	11.51		469	322	
						15.10	11.70	-25.70%	469	293	-31.91%
						15.10	10.45		469	343	
	Y-390 B1	21.9781	22.0902	0.510%	N/C	18.24	12.36		473	333	
						18.24	14.39	-29.84%	473	380	-24.03%
						18.24	11.64		473	365	
	ER-610 C1	23.3581	23.4222	0.275%	N/C	14.53	18.20		494	240	
						14.53	16.94	14.75%	494	252	-48.99%
						14.53	14.88		494	264	
	Y-833 D1	24.9671	25.0433	0.305%	N/C	11.38	13.04		557	243	
						11.38	14.78	19.16%	557	223	-59.61%
						11.38	12.86		557	209	
	923 E1	23.1154	23.1816	0.286%	N/C	15.85	20.00		503	297	
						15.85	18.13	20.15%	503	363	-30.68%
						15.85	19.00		503	386	
	ISO-800 F1	22.1179	22.1443	0.119%	N/C	14.75	17.59		632	389	
						14.75	15.88	20.84%	632	308	-45.68%
						14.75	20.00		632	333	
		R-142b --> 24 hours @ 302 F									
POLYAMIDE IMIDE	U-475 A2	24.1347	24.1367	0.008%	N/C	15.10	10.96		469	340	
						15.10	11.56	-26.05%	469	435	-9.81%
						15.10	10.98		469	494	
	Y-390 B2	22.0216	22.0238	0.010%	N/C	18.24	17.26		473	385	
						18.24	12.51	-22.94%	473	397	-17.41%
						18.24	15.60		473	390	
	ER-610 C2	22.4370	22.4406	0.016%	N/C	14.53	20.00		494	296	
						14.53	13.82	5.18%	494	277	-41.84%
						14.53	12.03		494	289	
	Y-833 D2	24.7470	24.7495	0.010%	N/C	11.38	15.09		557	216	
						11.38	16.06	46.95%	557	222	-59.31%
						11.38	19.02		557	242	
	923 E2	23.0308	23.0354	0.020%	N/C	15.85	17.00		503	335	
						15.85	11.21	1.39%	503	309	-36.12%
						15.85	20.00		503	320	
	ISO-800 F2	22.2205	22.2222	0.008%	N/C	14.75	14.72		632	354	
						14.75	13.69	1.54%	632	514	-33.76%
						14.75	16.52		632	388	

		500 HRS IN R-142b @ 194°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	39.6774	39.7926	0.290%	N/C	73.73	51.45	
						73.73	66.25	-23.12%
						73.73	52.35	
	Y-390 B1	38.9263	38.9807	0.140%	N/C	43.78	53.65	
						43.78	55.15	16.26%
						43.78	43.90	
	ER-610 C1	37.9514	38.0910	0.368%	N/C	51.81	47.85	
						51.81	50.75	-2.62%
						51.81	52.75	
	Y-833 D1	37.8674	37.8941	0.071%	N/C	9.85	48.65	
						9.85	9.65	167.34%
						9.85	20.70	
	923 E1	39.2632	39.3330	0.178%	N/C	41.28	42.45	
						41.28	48.90	5.22%
						41.28	38.95	
	ISO-800 F1	38.3631	38.3900	0.070%	N/C	45.01	45.80	
						45.01	36.40	-8.69%
						45.01	38.85	
		R-142b -> 24 HRS 302°F						
	U-475 A2	41.1729	41.1730	0.000%	N/C	73.73	58.80	
						73.73	62.00	-9.70%
						73.73	71.15	
	Y-390 B2	39.1542	39.1519	-0.006%	N/C	43.78	57.15	
						43.78	58.75	30.46%
						43.78	55.45	
	ER-610 C2	38.9205	38.9228	0.006%	N/C	51.81	61.15	
						51.81	62.90	22.31%
						51.81	66.05	
	Y-833 D2	38.6547	38.6543	-0.001%	N/C	9.85	57.65	
						9.85	52.05	361.93%
						9.85	26.80	
	923 E2	38.9026	38.8995	-0.008%	N/C	41.28	66.20	
						41.28	47.25	25.48%
						41.28	41.95	
	ISO-800 F2	37.3546	37.3863	0.085%	N/C	45.01	54.15	
						45.01	39.90	13.38%
						45.01	59.05	

		500 HRS IN R-142b @ 194°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE EPOXY GLASS	U-475 A1	37.1752	37.3126	0.370%	N/C	40.14	48.75	
						40.14	36.05	6.71%
						40.14	43.70	
	Y-390 B1	38.4599	38.5376	0.202%	N/C	36.12	39.15	
						36.12	39.15	9.54%
						36.12	40.40	
	ER-610 C1	39.2710	39.4002	0.329%	N/C	35.96	32.90	
						35.96	37.90	-1.00%
						35.96	36.00	
	Y-833 D1	36.2675	36.3489	0.224%	N/C	33.14	27.25	
						33.14	18.60	-38.09%
						33.14	15.70	
	923 E1	38.4320	38.4873	0.144%	N/C	40.52	39.20	
						40.52	34.50	-8.28%
						40.52	37.80	
	ISO-800 F1	36.8168	36.8582	0.112%	N/C	20.20	24.55	
						20.20	6.50	-11.80%
						20.20	22.40	
		R-142b -> 24 HRS 302°F						
	U-475 A2	37.6223	37.6403	0.048%	N/C	40.14	38.70	
						40.14	35.50	-8.07%
						40.14	36.50	
	Y-390 B2	38.0742	38.0844	0.027%	N/C	36.12	31.55	
						36.12	37.20	-1.81%
						36.12	37.65	
	ER-610 C2	37.7659	37.7702	0.011%	N/C	35.96	34.10	
						35.96	35.50	-0.54%
						35.96	37.70	
	Y-833 D2	36.5670	36.5665	-0.001%	N/C	33.14	32.35	
						33.14	33.25	-16.11%
						33.14	17.80	
	923 E2	38.2670	38.2661	-0.002%	N/C	40.52	34.45	
						40.52	29.95	-19.38%
						40.52	33.60	
	ISO-800 F2	37.1301	37.1209	-0.025%	N/C	20.20	24.95	
						20.20	16.85	-2.39%
						20.20	17.35	

		500 HRS IN R-142b @ 194°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE	U-475 A1	40.4592	40.5632	0.257%	N/C	51.21	60.95	
						51.21	64.60	26.24%
						51.21	68.40	
	Y-390 B1	38.8349	38.8761	0.106%	N/C	50.72	43.35	
						50.72	43.05	-12.59%
						50.72	46.60	
	ER-610 C1	40.0091	40.1035	0.236%	N/C	58.33	41.05	
						58.33	67.20	-11.45%
						58.33	46.70	
	Y-833 D1	38.2793	38.2726	-0.018%	N/C	5.84	34.75	
						5.84	8.00	306.96%
						5.84	28.55	
	923 E1	40.8484	40.8950	0.114%	N/C	49.26	45.70	
						49.26	35.20	-17.07%
						49.26	41.65	
	ISO-800 F1	38.3174	38.3424	0.065%	N/C	36.08	44.95	
						36.08	56.55	41.86%
						36.08	52.05	
		R-142b-> 24 HRS 302°F						
POLYAMIDE IMIDE	U-475 A2	38.8175	38.8068	-0.028%	N/C	51.21	54.85	
						51.21	57.90	10.18%
						51.21	56.52	
	Y-390 B2	38.7690	38.7516	-0.045%	N/C	50.72	44.77	
						50.72	46.52	-11.55%
						50.72	43.30	
	ER-610 C2	39.2222	39.2052	-0.043%	N/C	58.33	80.80	
						58.33	58.30	10.21%
						58.33	53.75	
	Y-833 D2	40.1391	40.0481	-0.227%	N/C	5.84	29.92	
						5.84	29.97	528.65%
						5.84	50.25	
	923 E2	40.4078	40.3954	-0.031%	N/C	49.26	45.42	
						49.26	55.25	1.72%
						49.26	49.65	
	ISO-800 F2	38.2570	38.2463	-0.028%	N/C	36.08	60.90	
						36.08	36.40	38.37%
						36.08	52.47	

	500 HRS IN R-142b @ 194°F				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	4.2682	4.2904	0.520%	N/C	YES
B1	4.2503	4.3073	1.341%	N/C	YES
C1	3.9537	3.9962	1.075%	N/C	YES
	R-142b -> 302°F for 24 HRS				
A2	4.0574	4.0567	-0.017%	N/C	YES
B2	4.5649	4.5627	-0.048%	N/C	YES
C2	3.9148	3.913	-0.046%	N/C	YES

	500 hrs in R-142b at 194° F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE	U-475 A1	5.3285	5.3624	0.636%	N/C	YES
	Y-390 B1	5.0661	5.0845	0.363%	N/C	NO
	ER-610 C1	4.7466	4.7491	0.053%	N/C	YES
	Y-833 D1	5.1636	5.1655	0.037%	N/C	YES
	923 E1	5.2390	5.2592	0.386%	N/C	NO
	ISO-800 F1	5.0703	5.0756	0.105%	N/C	NO
		R-142b -> 24 HRS @ 302°F				
	U-475 A2	5.3445	5.3450	0.009%	N/C	YES
	Y-390 B2	5.0482	5.0458	-0.048%	N/C	NO
	ER-610 C2	4.7660	4.7651	-0.019%	N/C	YES
	Y-833 D2	5.4164	5.4129	-0.065%	N/C	YES
	923 E2	5.2444	5.2454	0.019%	N/C	NO
	ISO-800 F2	5.1130	5.1110	-0.039%	N/C	NO

	R-142b at 194 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	4.9403	4.9605	0.409%	N/C	NO
	Y-390 B1	5.6547	5.7126	1.024%	N/C	NO
	ER-610 C1	5.5189	5.5333	0.261%	N/C	YES
	Y-833 D1	5.1344	5.1314	-0.058%	N/C	YES
	923 E1	5.3487	5.3759	0.509%	N/C	NO
	ISO-800 F1	5.2394	5.2443	0.094%	N/C	NO
		R-142b -> 24 HRS @ 302F				
	U-475 A2	4.9378	4.9306	-0.146%	N/C	NO
	Y-390 B2	5.6387	5.6354	-0.059%	N/C	NO
	ER-610 C2	5.6372	5.6320	-0.092%	N/C	YES
	Y-833 D2	5.1290	5.1242	-0.094%	N/C	YES
	923 E2	5.4040	5.4004	-0.067%	N/C	NO
	ISO-800 F2	5.1027	5.0990	-0.073%	N/C	NO

		R-142b at 194 F				
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER IMIDE	U-475 A1	5.5579	5.5724	0.261%	N/C	YES
	Y-390 B1	5.5488	5.5596	0.195%	N/C	NO
	ER-610 C1	4.8393	4.8410	0.035%	N/C	YES
	Y-833 D1	5.1629	5.1837	0.403%	N/C	YES
	923 E1	5.1725	5.1870	0.280%	N/C	NO
	ISO-800 F1	5.0644	5.0664	0.039%	N/C	NO
		R-142b -> 24 HRS @ 302F				
POLYAMIDE IMIDE	U-475 A2	5.6183	5.6152	-0.055%	N/C	NO
	Y-390 B2	5.5335	5.5309	-0.047%	N/C	NO
	ER-610 C2	4.8481	4.8481	0.000%	N/C	YES
	Y-833 D2	5.2166	5.2123	-0.082%	N/C	YES
	923 E2	5.1255	5.1247	-0.016%	N/C	NO
	ISO-800 F2	5.0303	5.0304	0.002%	N/C	NO

500 HRS IN R-142b @ 194 F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	2.3328	2.4757	6.13%	N/C	N/C
Y-390 B1	1.8525	1.9728	6.49%	N/C	N/C
ER-610 C1	2.0392	2.2438	10.03%	N/C	N/C
Y-833 D1	2.1642	2.3002	6.28%	N/C	N/C
923 E1	1.9760	2.0977	6.16%	N/C	N/C
ISO-800 F1	1.8749	1.8753	0.02%	N/C	N/C
	R-142b at --->24 hour at 302°F.				
U-475 A2	2.1650	2.1325	-1.50%	Darkened slightly warped	N/C
Y-390 B2	2.2528	2.1869	-2.93%	Few Internal Bubbles	N/C
ER-610 C2	2.3422	2.3367	-0.23%	Few Internal Bubbles	N/C darkened
Y-833 D2	2.5179	2.3634	-6.14%	Many Internal bubbles	brittle
923 E2	2.0426	2.0362	-0.31%	few Internal bubbles	N/C
ISO-800 F2	1.9216	1.8191	-5.33%	Few Internal bubbles	very warped

500 HR IN R-142b @ 194°F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS Mils	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	4.5092	4.6627	3.40%	0.392	132.70	21	17.4	16.12	
				0.446	157.10	21	17.4	16.77	-5.16%
				0.452	157.70	21	17.4	16.61	
DA/MY/DA B1	4.3303	4.5003	3.93%	0.418	102.30	21	13.7	11.65	
				0.488	136.30	21	13.7	13.30	-7.72%
				0.395	107.60	21	13.7	12.97	
MYLAR MO C1	2.4419	2.5224	3.30%	0.498	102.40	10	21.7	20.56	
				0.475	96.20	10	21.7	20.25	-8.68%
				0.417	77.70	10	21.7	18.63	
NO 410 D1	2.3591	2.3717	0.53%	0.505	99.40	10	18.7	19.68	
				0.440	84.70	10	18.7	19.25	2.80%
				0.495	92.75	10	18.7	18.74	
NO MI 418 E1	2.2739	2.2827	0.39%	0.489	26.50	9	7.5	6.02	
				0.477	25.30	9	7.5	5.89	-19.99%
				0.490	26.85	9	7.5	6.09	
MEL 228 F1	2.4609	2.5631	4.15%	0.452	82.60	10	21.7	18.27	
				0.514	98.90	10	21.7	19.24	-12.41%
				0.483	94.20	10	21.7	19.50	
	500 HRS IN R-142b @ 194°F ->24 HRS @ 302°F								
NO/MY/NO A2	4.3502	4.3645	0.33%	0.476	173.50	21	17.4	17.36	
				0.502	164.60	21	17.4	15.61	-4.80%
				0.404	141.90	21	17.4	16.73	
DA/MY/DA B2	4.1032	4.0864	-0.41%	0.378	107.30	21	13.7	13.52	
				0.424	118.90	21	13.7	13.35	-3.89%
				0.411	109.00	21	13.7	12.63	
MYLAR MO C2	2.2106	2.2071	-0.16%	0.405	74.85	10	21.7	18.48	
				0.429	84.35	10	21.7	19.66	-13.36%
				0.414	75.60	10	21.7	18.26	
NOMEX 410 D2	2.2600	2.2456	-0.64%	0.505	92.60	10	18.7	18.34	
				0.488	96.85	10	18.7	19.85	5.31%
				0.447	93.40	10	18.7	20.89	
NO/MI 418 E2	2.3795	2.3579	-0.91%	0.499	25.65	9	7.5	5.71	
				0.508	27.80	9	7.5	6.08	-21.48%
				0.503	26.60	9	7.5	5.88	
MEL 228 F2	2.5156	2.5105	-0.20%	0.492	92.10	10	21.7	18.72	
				0.431	80.50	10	21.7	18.68	-12.77%
				0.481	93.25	10	21.7	19.39	

After 500 hour exposure @ 194°F(90°C)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO	0.85	21.3%	20.0%		>18.97	>15.60		N/C
A1	1.02	25.5%	20.0%	21.7%	>18.97	>16.31	flash	
	1.05	26.3%	20.0%		>18.97	>17.14		
DA/MY/DA	0.69	34.5%	46.0%		>15.27	>15.10		slighlty
B1	0.62	31.0%	46.0%	-30.8%	>15.27	>14.42	flash	warped
	0.60	30.0%	46.0%		>15.27	>14.56		
MYLAR MO	3.26	163.0%	131.0%		>14.91	>13.91		N/C
C1	3.18	159.0%	131.0%	17.2%	>14.91	>13.89	flash	
	2.77	138.5%	131.0%		>14.91	>14.08		
NO 410	0.55	13.8%	17.0%		10.67	10.39		N/C
D1	0.53	13.3%	17.0%	-26.0%	10.67	9.60	-0.8%	
	0.43	10.8%	17.0%		10.67	11.76		
NO MI 418	0.07	1.8%	4.0%		10.23	9.45		N/C
E1	0.08	2.0%	4.0%	-54.2%	10.23	10.28	-2.7%	
	0.07	1.8%	4.0%		10.23	10.13		
MEL 228	3.15	157.5%	160.0%		>14.22	>12.37		N/C
F1	3.47	173.5%	160.0%	5.3%	>14.22	>14.21	flash	
	3.49	174.5%	160.0%		>14.22	>13.84		
	After 500 hour exposure plus a 24 hour air bake @ 302°F(150°C)							
NO/MY/NO	0.81	20.3%	20.0%		>18.97	>15.72		Bubbles
A2	0.39	9.8%	20.0%	-16.7%	>18.97	>15.90	flash	delamination
	0.80	20.0%	20.0%		>18.97	>16.27		
DA/MY/DA	0.52	26.0%	46.0%		>15.27	>12.73		slighlty
B2	0.56	28.0%	46.0%	-46.0%	>15.27	>12.70	flash	warped
	0.41	20.5%	46.0%		>15.27	>12.89		
MYLAR MO	2.64	132.0%	131.0%		>14.91	>13.22		N/C
C2	2.99	149.5%	131.0%	6.7%	>14.91	>11.66	flash	
	2.76	138.0%	131.0%		>14.91	>13.19		
NOMEX 410	0.42	10.5%	17.0%		10.67	9.81		N/C
D2	0.55	13.8%	17.0%	-23.0%	10.67	10.22	-8.4%	
	0.60	15.0%	17.0%		10.67	9.30		
NO/MI 418	0.08	2.0%	4.0%		10.23	9.90		N/C
E2	0.09	2.3%	4.0%	-47.9%	10.23	9.42	-8.0%	
	0.08	2.0%	4.0%		10.23	8.91		
MEL 228	3.24	162.0%	160.0%		>14.22	>14.25		N/C
F2	3.32	166.0%	160.0%	5.6%	>14.22	>14.21	flash	
	3.58	179.0%	160.0%		>14.22	>12.16		

	500 HRS IN R-142b @ 194°F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5407	0.5735	6.07%	N/C
B1 MYLAR	0.4647	0.5048	8.63%	Bubble between layers
C1 NO/MY	0.4025	0.4164	3.45%	N/C
	R-142b @ 194°F----->24 hrs @ 302°F			
A2 NOMEX	0.5363	0.5242	-2.26%	N/C
B2 MYLAR	0.4614	0.4602	-0.26%	Some delamination *see photo
C2 NO/MY	0.4037	0.4005	-0.79%	Pockects where mylar pulled away *see photo

	500 HRS IN R-142b @ 194 F								
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS
A1 Glass	1.5101	1.5089	-0.08%	39.02	45.30		0.07	3.50%	N/C
				39.02	46.50	19.77%	0.05	2.50%	
				39.02	48.40		0.05	2.50%	
B1 Polyester	0.6358	0.6595	3.73%	56.12	60.90		0.67	33.50%	N/C
				56.12	58.75	5.07%	0.64	32.00%	
				56.12	57.25		0.65	32.50%	
C1 Permacel	1.4760	1.5803	7.07%	88.50	111.10		0.09	4.50%	Darkened
				88.50	88.35	1.66%	0.09	4.70%	
				88.50	70.45		0.10	5.00%	
	500 HRS in R-142b -> 302°F 24 HRS								
A2 Glass	1.3670	1.3669	-0.01%	39.02	46.65		0.04	2.00%	N/C
				39.02	53.45	17.97%	0.06	3.00%	
				39.02	38.00		0.05	2.50%	
B2 Polyester	0.5821	0.5845	0.41%	56.12	57.45		0.62	31.00%	N/C
				56.12	52.65	-2.95%	0.51	25.50%	
				56.12	53.30		0.53	26.50%	
C2 Permacel	1.2669	1.1915	-5.95%	88.50	97.25		0.10	5.00%	
				88.50	99.65	6.78%	0.14	7.00%	Darkened
				88.50	86.60		0.14	7.00%	

	500 HRS IN R-142b @ 194° F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1	0.2500	0.2565	2.60%	N/C	28.36	35.65		0.37	18.5%
					28.36	33.25	14.36%	0.36	18.0%
					28.36	28.40		0.32	16.0%
	500 HRS IN R-142b -> 24 HRS @ 302°F								
A2	0.2464	0.2462	-0.081%	N/C	28.36	28.05		0.47	23.5%
					28.36	26.55	-2.15%	0.42	21.0%
					28.36	28.65		0.45	22.5%

	500 HRS IN R-142b @ 194°F						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	4.0523	4.0711	0.46%	N/C	9.61	9.90	
A1					9.61	8.37	-3.75%
					9.61	9.48	
DTMD	4.3348	4.3587	0.55%	N/C	9.95	10.96	
B1					9.95	10.86	11.26%
					9.95	11.39	
	R-142b @ 194°F -> 24 HRS @ 302°F						
DMD	4.0691	4.0687	-0.01%	N/C	9.61	9.53	
A2					9.61	8.17	-5.90%
					9.61	9.43	
DTMD	4.4000	4.3997	-0.01%	N/C	9.95	9.11	
B2					9.95	10.57	0.37%
					9.95	10.28	

Appendix G

Experimental Data for HFC-152a Exposure at 90°C(194°F)

	500 HRS IN R-152a @ 194 F									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	24.8314	24.8562	0.100%	N/C	576	429		15.80	20.00	
					576	402	-28.4%	15.80	13.01	7.5%
					576	407		15.80	17.95	
B1	24.7799	24.8528	0.294%	N/C	736	731		11.62	12.87	
					736	733	-3.5%	11.62	12.09	7.8%
					736	667		11.62	12.62	
C1	22.6199	22.6448	0.110%	N/C	579	454		16.58	12.95	
					579	452	-18.9%	16.58	9.95	-22.7%
					579	503		16.58	15.57	
	R-152a-->24 HRS @ 302 F									
A2	24.7114	24.7101	-0.005%	N/C	576	491		15.80	15.88	
					576	467	-11.2%	15.80	16.16	-1.0%
					576	576		15.80	14.87	
B2	24.2052	24.2038	-0.006%	N/C	736	712		11.62	11.03	
					736	671	-5.8%	11.62	10.83	-5.1%
					736	697		11.62	11.23	
C2	24.0461	24.0452	-0.004%	N/C	579	454		16.58	14.89	
					579	520	-15.8%	16.58	18.21	-3.3%
					579	488		16.58	14.99	

	500 HOURS IN R-152a @ 194 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	21.0623	21.1329	0.335%	N/C	16.24	12.44		430	363	
						16.24	12.02	-18.19%	430	438	-12.17%
						16.24	15.40		430	332	
	Y-390 B1	21.1133	21.1509	0.178%	N/C	18.77	15.97		510	312	
						18.77	15.51	-15.17%	510	295	-41.24%
						18.77	16.29		510	292	
	ER-610 C1	21.6699	21.7622	0.426%	N/C	15.57	11.51		442	418	
						15.57	14.53	-9.08%	442	434	2.04%
						15.57	16.43		442	501	
	Y-833 D1	21.0502	21.0690	0.089%	N/C	12.04	8.34		578	440	
						12.04	9.69	-5.18%	578	425	-26.41%
						12.04	16.22		578	411	
	923 E1	22.4011	22.5076	0.475%	N/C	16.76	15.90		606	552	
						16.76	9.16	-23.33%	606	553	-12.05%
						16.76	13.49		606	494	
	ISO-800 F1	21.4539	21.5023	0.226%	N/C	19.08	17.88		580	500	
						19.08	12.72	-21.35%	580	479	-14.20%
						19.08	14.42		580	514	
		24 HOURS AT 302 F									
	U-475 A2	21.3650	21.3896	0.115%	N/C	16.24	14.47		430	267	
						16.24	16.34	-8.37%	430	390	-22.25%
						16.24	13.83		430	346	
	Y-390 B2	21.1121	21.1148	0.013%	N/C	18.77	9.81		510	314	
						18.77	10.37	-40.45%	510	358	-30.92%
						18.77	13.35		510	385	
	ER-610 C2	21.9094	21.9133	0.018%	N/C	15.57	11.08		442	418	
						15.57	10.10	-26.05%	442	425	-1.06%
						15.57	13.36		442	469	
	Y-833 D2	21.6282	21.6186	-0.044%	N/C	12.04	10.58		578	535	
						12.04	11.74	-6.40%	578	490	-12.05%
						12.04	11.49		578	500	
	923 E2	22.3357	22.3421	0.029%	N/C	16.76	6.43		606	558	
						16.76	9.61	-50.14%	606	564	-12.21%
						16.76	9.03		606	474	
	ISO-800 F2	21.4186	21.4165	-0.010%	N/C	19.08	14.15		580	474	
						19.08	14.59	-24.63%	580	430	-16.55%
						19.08	14.40		580	548	

	500 HOURS IN R-152a @ 194°F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE EPOXY GLASS	U-475 A1	22.3329	22.4749	0.64%	N/C	13.32	10.13		746	669	
						13.32	12.87	-6.91%	746	665	-9.34%
						13.32	14.20		746	695	
	Y-390 B1	23.4162	23.5983	0.78%	N/C	12.28	12.86		755	709	
						12.28	13.28	2.42%	755	730	-3.93%
						12.28	11.59		755	737	
	ER-610 C1	22.2562	22.3454	0.40%	N/C	12.73	12.63		734	657	
						12.73	13.74	1.31%	734	733	-3.91%
						12.73	12.32		734	726	
	Y-833 D1	22.5501	22.6615	0.49%	N/C	12.49	11.98		734	729	
						12.49	11.17	-6.11%	734	656	-8.36%
						12.49	12.03		734	633	
	923 E1	22.7557	22.9268	0.75%	N/C	14.38	10.13		742	689	
						14.38	9.83	-20.96%	742	728	-3.68%
						14.38	14.14		742	727	
	ISO-800 F1	26.1670	26.3362	0.65%	N/C	12.29	12.93		747	730	
						12.29	12.65	3.55%	747	726	-2.59%
						12.29	12.60		747	727	
		R-152a --> 24 hours @ 302 F									
	U-475 A2	22.2596	22.2730	0.06%	N/C	13.32	12.47		746	703	
						13.32	12.64	-6.83%	746	675	-6.03%
						13.32	12.12		746	725	
	Y-390 B2	23.2541	23.2654	0.05%	N/C	12.28	11.79		755	728	
						12.28	12.46	2.36%	755	728	-3.58%
						12.28	13.46		755	728	
	ER-610 C2	23.0588	23.0541	-0.02%	N/C	12.73	11.70		734	729	
						12.73	11.65	-10.53%	734	647	-6.86%
						12.73	10.82		734	675	
	Y-833 D2	22.0554	22.0849	0.13%	N/C	12.49	12.12		734	664	
						12.49	11.51	-7.05%	734	679	-8.13%
						12.49	11.20		734	680	
	923 E2	22.8751	22.8728	-0.01%	N/C	14.38	10.79		742	668	
						14.38	10.82	-24.92%	742	728	-9.97%
						14.38	10.78		742	715	
	ISO-800 F2	23.3631	23.3646	0.01%		12.29	10.92		747	730	
					N/C	12.29	11.90	-6.83%	747	732	-2.14%
						12.29	11.53		747	729	

	500 HOURS IN R-152a @ 194 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE	U-475 A1	21.5151	21.5316	0.077%	N/C	15.10	9.51		469	449	
						15.10	10.10	-34.61%	469	417	-6.11%
						15.10	10.01		469	455	
	Y-390 B1	22.3769	22.4665	0.400%	N/C	18.24	20.00		473	404	
						18.24	20.00	9.65%	473	433	-8.32%
						18.24	20.00		473	464	
	ER-610 C1	21.1644	21.2074	0.203%	N/C	14.53	12.17		494	318	
						14.53	14.85	-8.33%	494	379	-36.77%
						14.53	12.94		494	240	
	Y-833 D1	22.1708	22.2422	0.322%	N/C	11.38	13.13		557	547	
						11.38	20.00	42.77%	557	529	-4.31%
						11.38	15.61		557	523	
	923 E1	22.9794	23.0795	0.436%	N/C	15.85	8.30		503	582	
						15.85	13.50	-12.09%	503	592	11.46%
						15.85	20.00		503	508	
	ISO-800 F1	18.4390	18.4777	0.210%	N/C	14.75	12.25		632	562	
						14.75	14.57	-8.75%	632	561	-11.13%
						14.75	13.56		632	562	
POLYAMIDE IMIDE		R-152a --> 24 hours @ 302 F									
	U-475 A2	21.4513	21.4253	-0.121%	N/C	15.10	10.17		469	559	
						15.10	11.24	-31.43%	469	436	3.62%
						15.10	9.65		469	463	
	Y-390 B2	22.3525	22.3606	0.036%	N/C	18.24	7.30		473	450	
						18.24	10.70	-36.29%	473	427	-2.89%
						18.24	12.54		473	501	
	ER-610 C2	21.2577	21.3018	0.207%	N/C	14.53	11.38		494	351	
						14.53	11.13	-9.64%	494	373	-29.76%
						14.53	16.88		494	317	
	Y-833 D2	21.9670	21.9633	-0.017%	N/C	11.38	11.03		557	350	
						11.38	14.16	12.39%	557	350	-37.52%
						11.38	(13.18)		557	344	
	923 E2	23.0549	23.0573	0.010%	N/C	15.85	11.84		503	551	
						15.85	18.76	-3.01%	503	512	2.72%
						15.85	15.52		503	487	
	ISO-800 F2	21.7205	21.7203	-0.001%	N/C	14.75	9.20		632	558	
						14.75	9.07	-32.61%	632	475	-16.24%
						14.75	11.55		632	555	

		500 HRS IN R-152a @ 194°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	39.4503	39.6157	0.419%	N/C	73.73	63.25	
						73.73	48.75	-23.30%
						73.73	57.65	
	Y-390 B1	39.6170	39.7676	0.380%	N/C	43.78	38.75	
						43.78	38.30	-5.66%
						43.78	46.85	
	ER-610 C1	39.4370	39.5862	0.378%	N/C	51.81	61.25	
						51.81	55.65	9.31%
						51.81	53.00	
	Y-833 D1	39.3500	39.4063	0.143%	N/C	9.85	32.80	
						9.85	9.40	181.22%
						9.85	40.90	
	923 E1	37.9121	38.0459	0.353%	N/C	41.28	30.40	
						41.28	27.75	-27.61%
						41.28	31.50	
	ISO-800 F1	38.9161	39.0020	0.221%	N/C	45.01	49.00	
						45.01	39.75	-1.41%
						45.01	48.30	
		R-152a -> 24 HRS 302°F						
	U-475 A2	40.0779	40.0836	0.014%	N/C	73.73	6.00	
						73.73	9.00	-91.18%
						73.73	4.00	
	Y-390 B2	38.8683	38.8711	0.007%	N/C	43.78	9.50	
						43.78	6.50	-83.10%
						43.78	6.20	
	ER-610 C2	39.3700	39.3680	-0.005%	N/C	51.81	8.60	
						51.81	8.80	-84.82%
						51.81	6.20	
	Y-833 D2	39.3364	39.2506	-0.218%	N/C	9.85	18.60	
						9.85	25.12	152.18%
						9.85	30.80	
	923 E2	38.3294	38.3301	0.002%	N/C	41.28	30.92	
						41.28	27.90	-19.36%
						41.28	41.05	
	ISO-800 F2	37.7502	37.7388	-0.030%	N/C	45.01	26.60	
						45.01	31.62	-36.70%
						45.01	27.25	

		500 HRS IN R-152a @ 194°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER	U-475 A1	37.9781	37.7047	-0.720%	N/C	40.14	46.40	
						40.14	45.90	23.57%
						40.14	56.50	
	Y-390 B1	37.5730	37.7732	0.533%	N/C	36.12	53.15	
						36.12	56.15	43.27%
						36.12	45.95	
	ER-610 C1	36.9680	37.1863	0.591%	N/C	35.96	42.30	
						35.96	38.95	24.72%
						35.96	53.30	
POLYAMIDE	Y-833 D1	36.4794	36.5855	0.291%	N/C	33.14	30.50	
						33.14	3.50	-59.26%
						33.14	6.50	
	923 E1	38.4704	38.6675	0.512%	N/C	40.52	50.65	
						40.52	36.30	10.36%
						40.52	47.20	
	ISO-800 F1	37.6078	37.7456	0.366%	N/C	20.20	28.25	
						20.20	27.25	40.43%
						20.20	29.60	
		R-152a -> 24 HRS 302°F						
IMIDE EPOXY GLASS	U-475 A2	37.2778	37.2701	-0.021%	N/C	40.14	*4.03	
						40.14	21.80	-38.63%
						40.14	27.47	
	Y-390 B2	37.8149	37.7934	-0.057%	N/C	36.12	*2.65	
						36.12	17.82	-47.62%
						36.12	20.02	
	ER-610 C2	37.3670	37.3662	-0.002%	N/C	35.96	26.52	
						35.96	30.52	-22.84%
						35.96	26.20	
	Y-833 D2	36.7123	36.6887	-0.064%	N/C	33.14	21.92	
						33.14	22.27	-48.51%
						33.14	7.00	
	923 E2	38.4742	38.4756	0.004%	N/C	40.52	22.92	
						40.52	17.75	-52.09%
						40.52	17.57	
	ISO-800 F2	37.5588	37.5866	0.074%	N/C	20.20	18.15	
						20.20	17.15	-6.85%
						20.20	21.15	

		500 HRS IN R-152a @ 194°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE	U-475 A1	38.0610	38.2107	0.393%	N/C	51.21	63.25	
						51.21	54.25	17.00%
						51.21	62.25	
	Y-390 B1	40.2181	40.3501	0.328%	N/C	50.72	39.95	
						50.72	52.25	-3.23%
						50.72	55.05	
	ER-610 C1	38.3553	38.5204	0.430%	N/C	58.33	56.30	
						58.33	42.15	-16.34%
						58.33	47.95	
	Y-833 D1	38.8750	38.8334	-0.107%	N/C	5.84	14.00	
						5.84	6.35	44.69%
						5.84	5.00	
	923 E1	40.2082	40.3342	0.313%	N/C	49.26	36.80	
						49.26	28.60	-35.34%
						49.26	30.15	
	ISO-800 F1	39.6130	39.6897	0.194%	N/C	36.08	52.60	
						36.08	51.35	38.35%
						36.08	45.80	
POLYAMIDE IMIDE		R-152a-> 24 HRS 302°F						
	U-475 A2	38.6175	38.6222	0.012%	N/C	51.21	*4.2	
						51.21	53.95	16.04%
						51.21	64.90	
	Y-390 B2	40.5325	40.5367	0.010%	N/C	50.72	50.77	
						50.72	64.25	13.39%
						50.72	*1.33	
	ER-610 C2	37.9514	37.9841	0.086%	N/C	58.33	64.27	
						58.33	*9.0	0.03%
						58.33	52.42	
	Y-833 D2	38.5393	38.3856	-0.399%	N/C	5.84	20.70	
						5.84	21.45	155.59%
						5.84	2.63	
	923 E2	39.8368	39.8273	-0.024%	N/C	49.26	26.90	
						49.26	31.85	-39.05%
						49.26	31.32	
	ISO-800 F2	39.7550	39.7827	0.070%	N/C	36.08	66.17	
						36.08	66.85	83.59%
						36.08	65.70	

*Experimental Data was not used in the average due to unusually low result.

	500 HRS IN R-152a @ 194°F				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	4.2534	4.3003	1.103%	N/C	YES
B1	4.8444	4.8605	0.332%	N/C	YES
C1	4.8118	4.8178	0.125%	N/C	YES
	R-152a -> 302°F for 24 HRS				
A2	4.4174	4.416	-0.032%	N/C	YES
B2	4.8465	4.8462	-0.006%	N/C	YES
C2	4.8307	4.8311	0.008%	N/C	YES

	500 hrs in R-152a at 194° F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE	U-475 A1	5.0793	5.0993	0.394%	N/C	NO
	Y-390 B1	4.7749	4.7964	0.450%	N/C	NO
	ER-610 C1	4.9490	4.9571	0.164%	N/C	YES
	Y-833 D1	4.4198	4.4265	0.152%	N/C	YES
	923 E1	5.1487	5.1785	0.579%	N/C	NO
	ISO-800 F1	4.5572	4.5683	0.244%	N/C	NO
		R-152a -> 24 HRS @ 302°F				
	U-475 A2	5.1377	5.1381	0.008%	N/C	NO
	Y-390 B2	4.9062	4.9075	0.026%	N/C	NO
	ER-610 C2	4.9620	4.9815	0.393%	N/C	YES
	Y-833 D2	4.4224	4.4216	-0.018%	N/C	YES
	923 E2	5.2446	5.2469	0.044%	N/C	NO
	ISO-800 F2	4.5704	4.5705	0.002%	N/C	NO

	R-152A at 194 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	5.3646	5.4139	0.919%	N/C	YES
	Y-390 B1	5.6584	5.7040	0.806%	N/C	NO
	ER-610 C1	5.2424	5.2631	0.395%	N/C	YES
	Y-833 D1	5.2235	5.2407	0.329%	N/C	YES
	923 E1	5.1009	5.1429	0.823%	N/C	NO
	ISO-800 F1	5.2543	5.3218	1.285%	N/C	NO
		R-152a -> 24 HRS @ 302F				
	U-475 A2	5.4235	5.4253	0.033%	N/C	NO
	Y-390 B2	5.6519	5.6533	0.025%	N/C	NO
	ER-610 C2	5.1653	5.1832	0.347%	N/C	YES
	Y-833 D2	5.4754	5.4735	-0.035%	N/C	YES
	923 E2	5.1398	5.1388	-0.019%	N/C	NO
	ISO-800 F2	5.3229	5.3245	0.030%	N/C	NO

		R-152a at 194 F				
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTERIMIDE	U-475 A1	5.0628	5.0786	0.312%	N/C	YES
	Y-390 B1	5.2072	5.2326	0.488%	N/C	NO
	ER-610 C1	5.0604	5.0877	0.539%	N/C	YES
	Y-833 D1	5.0473	5.0522	0.097%	N/C	NO
	923 E1	5.3439	5.3671	0.434%	N/C	NO
	ISO-800 F1	5.2092	5.2218	0.242%	N/C	YES
POLYAMIDEIMIDE		R-152a -> 24 HRS @ 302F				
	U-475 A2	5.0646	5.0658	0.024%	N/C	YES
	Y-390 B2	5.1683	5.1706	0.045%	N/C	NO
	ER-610 C2	5.0547	5.0549	0.004%	N/C	YES
	Y-833 D2	5.0511	5.0487	-0.048%	N/C	YES
	923 E2	5.3394	5.3384	-0.019%	N/C	NO
	ISO-800 F2	5.2430	5.2433	0.006%	N/C	NO

500 HRS IN R-152a @ 194 F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	2.7075	2.8816	6.43%	N/C	N/C
Y-390 B1	2.1165	2.2205	4.91%	N/C	N/C
ER-610 C1	3.0231	3.2992	9.13%	N/C	N/C
Y-833 D1	2.2243	2.4034	8.05%	N/C	Slightly More Flexible
923 E1	1.9237	2.0239	5.21%	N/C	N/C
ISO-800 F1	1.4577	1.4593	0.11%	N/C	N/C
	R-152a at --->24 hour at 302°F.				
U-475 A2	2.4002	2.3680	-1.34%	Few Internal Bubbles	N/C
Y-390 B2	2.1426	2.0738	-3.21%	Few Internal Bubbles	N/C
ER-610 C2	2.2565	2.2679	0.51%	Two Internal Bubbles	N/C
Y-833 D2	2.5410	2.3516	-7.45%	Many Internal bubbles	brittle slightly warped
923 E2	1.7713	1.7432	-1.59%	few Internal bubbles	Brittle
ISO-800 F2	1.7211	1.6226	-5.72%	Many Internal bubbles	brittle slightly warped

500 HR IN R-152a @ 194°F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS Mils	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	4.7048	4.8982	4.11%	0.473	165.90	21	17.4	16.70	
				0.403	142.90	21	17.4	16.89	-4.22%
				0.401	138.20	21	17.4	16.41	
DA/MY/DA B1	4.3255	4.4528	2.94%	0.464	120.30	21	13.7	12.35	
				0.366	101.20	21	13.7	13.17	-6.35%
				0.415	113.10	21	13.7	12.98	
MYLAR MO C1	2.3334	2.4003	2.87%	0.459	94.40	10	21.7	20.57	
				0.371	72.70	10	21.7	19.60	-9.24%
				0.423	80.05	10	21.7	18.92	
NO 410 D1	2.3604	2.4802	5.08%	0.496	94.95	10	18.7	19.14	
				0.521	106.80	10	18.7	20.50	6.73%
				0.494	99.95	10	18.7	20.23	
NO MI 418 E1	2.2491	2.2942	2.01%	0.481	25.85	10	7.5	5.37	
				0.505	26.90	10	7.5	5.33	-28.35%
				0.499	27.05	10	7.5	5.42	
MEL 228 F1	2.3339	2.4041	3.01%	0.373	72.15	10	21.7	19.34	
				0.480	80.10	10	21.7	16.69	-15.22%
				0.470	90.05	10	21.7	19.16	
	500 HRS IN R-152a @ 194°F ->24 HRS @ 302°F								
NO/MY/NO A2	4.4061	4.4033	-0.06%	0.418	149.70	21	17.4	17.05	
				0.333	118.20	21	17.4	16.90	-1.78%
				0.539	196.00	21	17.4	17.32	
DA/MY/DA B2	4.9090	4.8904	-0.38%	0.398	116.50	21	13.7	13.94	
				0.392	110.00	21	13.7	13.36	0.06%
				0.422	122.50	21	13.7	13.82	
MYLAR MO C2	2.2682	2.2863	0.80%	0.402	75.20	10	21.7	18.71	
				0.481	95.05	10	21.7	19.76	-10.28%
				0.407	81.15	10	21.7	19.94	
NOMEX 410 D2	2.2259	2.2213	-0.21%	0.500	98.60	10	18.7	19.72	
				0.508	92.75	10	18.7	18.26	3.20%
				0.498	99.20	10	18.7	19.92	
NO/MI 418 E2	2.1262	2.1171	-0.43%	0.503	26.65	10	7.5	5.30	
				0.473	27.60	10	7.5	5.84	-26.22%
				0.492	26.90	10	7.5	5.47	
MEL 228 F2	2.3115	2.3109	-0.03%	0.458	88.90	10	21.7	19.41	
				0.490	95.65	10	21.7	19.52	-9.35%
				0.433	86.95	10	21.7	20.08	

After 500 hour exposure @ 194°F(90°C)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO A1	1.24	31.0%	20.0%		>18.97	>16.23		N/C
	1.27	31.8%	20.0%	55.8%	>18.97	>15.93	flash	
	1.23	30.8%	20.0%		>18.97	>16.85		
DA/MY/DA B1	0.60	30.0%	46.0%		>15.27	>14.10		slighlty
	0.64	32.0%	46.0%	-31.2%	>15.27	>12.18	flash	warped
	0.66	33.0%	46.0%		>15.27	>14.07		
MYLAR MO C1	3.21	160.5%	131.0%		>14.91	>13.07		N/C
	3.07	153.5%	131.0%	17.0%	>14.91	>13.31	flash	
	2.92	146.0%	131.0%		>14.91	>13.39		
NO 410 D1	0.62	15.5%	17.0%		10.67	10.34		N/C
	0.85	21.3%	17.0%	11.3%	10.67	10.35	-0.1%	
	0.80	20.0%	17.0%		10.67	11.28		
NO MI 418 E1	0.11	2.8%	4.0%		10.23	9.73		N/C
	0.12	3.0%	4.0%	-27.1%	10.23	9.30	-9.0%	
	0.12	3.0%	4.0%		10.23	8.91		
MEL 228 F1	3.46	173.0%	160.0%		>14.22	>12.63		N/C
	2.19	109.5%	160.0%	-5.2%	>14.22	>13.46	flash	
	3.45	172.5%	160.0%		>14.22	>13.66		
	After 500 hour exposure plus 24 hour @ 302°F(150°C)							
NO/MY/NO A2	0.65	16.3%	20.0%		>18.97	>16.23		N/C
	0.75	18.8%	20.0%	-9.6%	>18.97	>16.96	flash	
	0.77	19.3%	20.0%		>18.97	>17.76		
DA/MY/DA B2	0.56	28.0%	46.0%		>15.27	>15.39		slighlty
	0.56	28.0%	46.0%	-38.0%	>15.27	>14.64	flash	warped
	0.59	29.5%	46.0%		>15.27	>13.41		
MYLAR MO C2	2.69	134.5%	131.0%		>14.91	>13.46		N/C
	2.84	142.0%	131.0%	8.9%	>14.91	>13.26	flash	
	3.03	151.5%	131.0%		>14.91	>13.25		
NOMEX 410 D2	0.53	13.3%	17.0%		10.67	10.00		N/C
	0.36	9.0%	17.0%	-30.4%	10.67	10.52	-2.9%	
	0.53	13.3%	17.0%		10.67	10.57		
NO/MI 418 E2	0.06	1.5%	4.0%		10.23	7.94		N/C
	0.07	1.8%	4.0%	-56.3%	10.23	9.93	-12.1%	
	0.08	2.0%	4.0%		10.23	9.10		
MEL 228 F2	3.27	163.5%	160.0%		>14.22	>13.57		N/C
	3.34	167.0%	160.0%	4.9%	>14.22	>13.30	flash	
	3.46	173.0%	160.0%		>14.22	>13.98		

	500 HRS IN R-152a @ 194°F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5371	0.6003	11.77%	N/C
B1 MYLAR	0.4612	0.5023	8.91%	Bubble between layers
C1 NO/MY	0.3583	0.4200	17.22%	N/C
	R-152a @ 194°F----->24 hrs @ 302°F			
A2 NOMEX	0.5433	0.5435	0.04%	N/C
B2 MYLAR	0.4789	0.4779	-0.21%	Some delamination *see photo
C2 NO/MY	0.4085	0.4053	-0.78%	Pockects where mylar pulled away *see photo

	500 HRS IN R-152a @ 194 F								
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS
A1 Glass	1.5302	1.0502 1-sample missing	-31.37%	39.02	51.10		0.06	3.00%	N/C
				39.02	60.95	43.58%	0.07	3.50%	
				39.02				0.00%	
B1 Polyester	0.6340	0.6540	3.15%	56.12	52.45		0.58	29.00%	N/C
				56.12	55.40	7.94%	0.71	35.50%	
				56.12	47.15		0.43	21.50%	
C1 Permacel	1.4119	1.4632	3.63%	88.50	77.10		0.09	4.50%	Darkened
				88.50	73.00	-15.16%	0.14	7.00%	
				88.50	75.15		0.12	6.00%	
	500 HRS in R-152a -> 302°F 24 HRS								
A2 Glass	1.5066	1.5090	0.16%	39.02	46.40		0.06	3.00%	N/C
				39.02	21.70	-0.26%	0.03	1.50%	
				39.02	48.65		0.05	2.50%	
B2 Polyester	0.5907	0.5906	-0.02%	56.12	56.85		0.62	31.00%	N/C
				56.12	57.15	0.02%	0.57	28.50%	
				56.12	54.40		0.49	24.50%	
C2 Permacel	1.2621	1.2198	-3.35%	88.50	104.30		0.12	6.00%	
				88.50	82.60	0.53%	0.08	4.00%	Darkened
				88.50	80.00		0.10	5.00%	

	500 HRS IN R-152a @ 194° F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1	0.2602	0.2705	3.96%	N/C	28.36	33.05		0.40	20.0%
					28.36	31.00	13.42%	0.37	18.5%
					28.36	32.45		0.38	19.0%
	500 HRS IN R-152a -> 24 HRS @ 302°F								
A2	0.2493	0.2509	0.642%	N/C	28.36	25.90		0.43	21.5%
					28.36	38.85	14.36%	0.45	22.5%
					28.36	32.55		0.45	22.5%

	500 HRS IN R-152a @ 194°F						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	4.0361	4.0565	0.51%	N/C	9.61	9.49	
A1					9.61	8.64	-11.48%
					9.61	7.39	
DTMD	4.3611	4.3812	0.46%	N/C	9.95	10.28	
B1					9.95	9.16	-9.11%
					9.95	7.69	
	R-152a @ 194°F -> 24 HRS @ 302°F						
DMD	4.0487	4.0456	-0.08%	N/C	9.61	9.78	
A2					9.61	9.94	1.98%
					9.61	9.68	
DTMD	4.4312	4.4288	-0.05%	N/C	9.95	9.18	
B2					9.95	9.77	-0.40%
					9.95	10.78	

Appendix H

Experimental Data for HFC-134a Exposure at 90°C(194°F)

	500 HRS IN R-134a @ 194 F									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	21.7392	21.7518	0.058%	N/C	576	451		15.80	17.82	
					576	459	-23.0%	15.80	17.51	6.9%
					576	421		15.80	15.32	
B1	23.9183	23.9778	0.249%	N/C	736	720		11.62	11.06	
					736	721	-2.1%	11.62	12.26	3.0%
					736	721		11.62	12.59	
C1	21.5932	21.6071	0.064%	N/C	579	411		16.58	13.42	
					579	443	-24.8%	16.58	17.40	-1.2%
					579	453		16.58	18.34	
	R-134a-->24 HRS @ 302 F									
A2	21.7854	21.7880	0.012%	N/C	576	549		15.80	11.65	
					576	611	-1.5%	15.80	11.93	-20.4%
					576	542		15.80	14.13	
B2	23.0417	23.0430	0.006%	N/C	736	720		11.62	10.94	
					736	720	-6.3%	11.62	10.38	-8.5%
					736	630		11.62	10.58	
C2	21.2863	21.2890	0.013%	N/C	579	549		16.58	13.29	
					579	571	-2.9%	16.58	17.03	-12.6%
					579	567		16.58	13.13	

500 HOURS IN R-134a @ 194 F											
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	22.4783	22.5036	0.113%	N/C	16.24	19.75		430	546	
						16.24	15.16	6.44%	430	414	4.88%
						16.24	16.95		430	393	
	Y-390 B1	23.1672	23.1955	0.122%	N/C	18.77	20.00		510	452	
						18.77	15.73	-4.05%	510	446	-13.99%
						18.77	18.30		510	418	
	ER-610 C1	22.3418	22.3397	-0.009%	N/C	15.57	15.33		442	385	
						15.57	16.37	3.79%	442	367	-14.78%
						15.57	16.78		442	378	
	Y-833 D1	22.4853	22.4881	0.012%	N/C	12.04	14.76		578	552	
						12.04	11.17	0.97%	578	552	-4.27%
						12.04	10.54		578	556	
	923 E1	23.8426	23.8723	0.125%	N/C	16.76	18.56		606	566	
						16.76	20.00	16.47%	606	440	-12.49%
						16.76	20.00		606	585	
	ISO-800 F1	22.3021	22.3146	0.056%	N/C	19.08	16.38		580	553	
						19.08	14.94	-18.45%	580	462	-9.66%
						19.08	15.36		580	557	
	U-475 A2	22.6408	22.6460	0.023%	N/C	16.24	13.83		430	302	
						16.24	13.39	-18.10%	430	276	-32.48%
						16.24	12.68		430	293	
	Y-390 B2	23.1389	23.1410	0.009%	N/C	18.77	20.00		510	408	
						18.77	15.30	-17.05%	510	422	-18.43%
						18.77	11.41		510	418	
	ER-610 C2	22.2601	22.2604	0.001%	N/C	15.57	12.75		442	407	
						15.57	13.98	-14.22%	442	414	-6.94%
						15.57	13.34		442	413	
	Y-833 D2	22.4472	22.4356	-0.052%	N/C	12.04	10.86		578	573	
						12.04	9.67	-18.30%	578	493	-6.46%
						12.04	8.98		578	556	
	923 E2	23.4721	23.4640	-0.035%	N/C	16.76	19.30		606	577	
						16.76	20.00	8.41%	606	555	-8.69%
						16.76	15.21		606	528	
	ISO-800 F2	22.5023	22.5007	-0.007%	N/C	19.08	13.45		580	429	
						19.08	14.64	-20.48%	580	585	-8.05%
						19.08	17.43		580	586	

500 HOURS IN R-134a @ 194 F												
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	24.4352	24.4862	0.21%	N/C	13.32	8.88		746	721	
						13.32	12.92	-13.11%	746	720	-3.35%
						13.32	12.92		746	722	
	Y-390 B1	24.9362	24.9814	0.18%	N/C	12.28	14.19		755	720	
						12.28	14.39	9.69%	755	722	-4.42%
						12.28	11.83		755	723	
	ER-610 C1	23.4987	23.5430	0.19%	N/C	12.73	13.47		734	722	
						12.73	13.72	9.66%	734	721	-1.73%
						12.73	14.69		734	721	
	Y-833 D1	23.3314	23.3758	0.19%	N/C	12.49	12.73		734	721	
						12.49	13.41	3.60%	734	722	-1.73%
						12.49	12.68		734	721	
	923 E1	24.9493	24.9923	0.17%	N/C	14.38	13.77		742	723	
						14.38	18.02	8.00%	742	722	-2.61%
						14.38	14.80		742	723	
	ISO-800 F1	24.5264	24.5529	0.11%	N/C	12.29	13.49		747	720	
						12.29	13.71	10.60%	747	722	-3.44%
						12.29	13.58		747	722	
		R-134a --> 24 hours @ 302 F									
	U-475 A2	24.5684	24.5723	0.02%	N/C	13.32	12.09		746	721	
						13.32	12.43	-8.31%	746	722	-3.31%
						13.32	12.12		746	721	
	Y-390 B2	24.9671	24.9671	0.00%	N/C	12.28	13.92		755	721	
						12.28	13.25	11.13%	755	722	-4.44%
						12.28	13.77		755	585	
	ER-610 C2	23.6134	23.6134	0.00%	N/C	12.73	11.07		734	715	
						12.73	12.08	-10.45%	734	670	-4.41%
						12.73	11.05		734	720	
	Y-833 D2	23.1894	23.1754	-0.06%	N/C	12.49	11.38		734	721	
						12.49	12.95	-0.67%	734	720	-1.84%
						12.49	12.89		734	n/a	
	923 E2	25.6773	25.6786	0.01%	N/C	14.38	11.63		742	720	
						14.38	14.39	-8.37%	742	543	-2.96%
						14.38	13.51		742	621	
	ISO-800 F2	24.4514	24.4501	-0.01%		12.29	11.56		747	720	
					N/C	12.29	12.03	-4.37%	747	721	-3.55%
						12.29	11.67		747	542	

500 HOURS IN R-134a @ 194 F											
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE	U-475 A1	22.4893	22.5189	0.132%	N/C	15.10	12.73		469	497	
						15.10	14.21	-10.26%	469	402	-11.02%
						15.10	13.71		469	353	
	Y-390 B1	22.7946	22.8121	0.077%	N/C	18.24	14.86		473	429	
						18.24	20.00	0.26%	473	401	-11.35%
						18.24	20.00		473	428	
	ER-610 C1	22.2324	22.3373	0.472%	N/C	14.53	15.53		494	382	
						14.53	10.98	-7.32%	494	385	-16.87%
						14.53	13.89		494	465	
	Y-833 D1	22.2320	22.2281	-0.018%	N/C	11.38	11.62		557	524	
						11.38	11.95	1.52%	557	562	-2.15%
						11.38	11.09		557	549	
	923 E1	23.0072	23.0361	0.126%	N/C	15.85	10.28		503	401	
						15.85	19.81	-0.57%	503	443	-12.06%
						15.85	17.19		503	483	
	ISO-800 F1	22.2834	22.2924	0.040%	N/C	14.75	16.34		632	565	
						14.75	15.33	9.40%	632	529	-12.61%
						14.75	16.74		632	563	
POLYAMIDE IMIDE		R-134a --> 24 hours @ 302 F									
	U-475 A2	22.5743	22.5800	0.025%	N/C	15.10	15.20		469	304	
						15.10	12.77	-9.45%	469	319	-30.28%
						15.10	13.05		469	358	
	Y-390 B2	22.8234	22.8264	0.013%	N/C	18.24	16.73		473	415	
						18.24	15.25	-17.54%	473	594	2.82%
						18.24	14.83		473	450	
	ER-610 C2	22.7663	22.7664	0.000%	N/C	14.53	12.58		494	508	
						14.53	14.17	-24.32%	494	448	-2.50%
						14.53	6.24		494	489	
	Y-833 D2	22.0447	22.0298	-0.068%	N/C	11.38	9.17		557	533	
						11.38	8.89	-20.50%	557	483	-11.97%
						11.38	9.08		557	455	
	923 E2	22.9803	22.9840	0.016%	N/C	15.85	17.57		503	413	
						15.85	12.46	-6.65%	503	437	-16.37%
						15.85	14.36		503	412	
	ISO-800 F2	22.2901	22.2898	-0.001%	N/C	14.75	13.86		632	570	
						14.75	12.97	-8.52%	632	573	-9.97%
						14.75	13.65		632	564	

		500 HRS IN R-134a @ 194F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	39.0797	39.1246	0.115%	N/C	73.73	73.12	
						73.73	67.00	-5.40%
						73.73	69.12	
	Y-390 B1	37.5377	37.5638	0.070%	N/C	43.78	42.10	
						43.78	39.10	-1.17%
						43.78	48.60	
	ER-610 C1	37.2996	37.3400	0.108%	N/C	51.81	60.25	
						51.81	62.25	11.18%
						51.81	50.30	
	Y-833 D1	37.1235	37.1393	0.043%	N/C	9.85	15.07	
						9.85	19.47	98.68%
						9.85	24.17	
	923 E1	37.7061	37.7316	0.068%	N/C	41.28	38.47	
						41.28	34.87	-9.92%
						41.28	38.22	
	ISO-800 F1	37.5909	37.6029	0.032%	N/C	45.01	41.32	
						45.01	46.20	-2.78%
						45.01	*22.42	
		R-134a -> 24 HRS 302 F						
	U-475 A2	38.9395	38.9402	0.002%	N/C	73.73	72.62	
						73.73	91.25	19.02%
						73.73	84.25	
	Y-390 B2	37.5374	37.5370	-0.001%	N/C	43.78	40.10	
						43.78	38.90	-11.07%
						43.78	37.80	
	ER-610 C2	38.1618	38.1605	-0.003%	N/C	51.81	58.25	
						51.81	55.37	7.59%
						51.81	53.61	
	Y-833 D2	37.2040	37.1894	-0.039%	N/C	9.85	13.10	
						9.85	11.00	4.57%
						9.85	6.80	
	923 E2	37.6274	37.6268	-0.002%	N/C	41.28	40.55	
						41.28	44.47	7.45%
						41.28	48.05	
	ISO-800 F2	37.2730	37.2711	-0.005%	N/C	45.01	50.57	
						45.01	49.92	5.71%
						45.01	42.25	

*This number was not included in the average

		500 HRS IN R-134a @ 194F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	37.1147	37.1729	0.157%	N/C	40.14	37.42	
						40.14	33.40	-9.47%
						40.14	38.20	
	Y-390 B1	36.3902	36.4363	0.127%	N/C	36.12	41.32	
						36.12	35.47	0.63%
						36.12	32.25	
	ER-610 C1	37.1452	37.1909	0.123%	N/C	35.96	28.32	
						35.96	34.40	-14.73%
						35.96	29.27	
	Y-833 D1	36.5883	36.6357	0.130%	N/C	33.14	35.30	
						33.14	34.70	2.65%
						33.14	32.05	
	923 E1	36.3319	36.3932	0.169%	N/C	40.52	42.35	
						40.52	46.02	11.83%
						40.52	47.57	
	ISO-800 F1	35.2993	35.3187	0.055%	N/C	20.20	21.70	
						20.20	19.00	-6.93%
						20.20	15.70	
		R-134a -> 24 HRS 302 F						
	U-475 A2	37.1800	37.1817	0.005%	N/C	40.14	45.20	
						40.14	37.82	0.00%
						40.14	37.40	
	Y-390 B2	36.2323	36.2332	0.002%	N/C	36.12	34.82	
						36.12	35.72	-2.19%
						36.12	35.45	
	ER-610 C2	36.2481	36.2462	-0.005%	N/C	35.96	31.75	
						35.96	31.72	-5.46%
						35.96	38.52	
	Y-833 D2	36.5078	36.5057	-0.006%	N/C	33.14	31.22	
						33.14	31.17	-11.53%
						33.14	25.57	
	923 E2	36.3960	36.3862	-0.027%	N/C	40.52	40.70	
						40.52	36.95	0.44%
						40.52	44.45	
	ISO-800 F2	35.0732	35.0733	0.000%	N/C	20.20	18.77	
						20.20	19.47	-6.83%
						20.20	18.22	

		500 HRS IN R-134a @ 194F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE	U-475 A1	37.4206	37.4664	0.122%	N/C	51.21	55.60	
						51.21	68.42	18.38%
						51.21	57.85	
	Y-390 B1	38.5014	38.5438	0.110%	N/C	50.72	48.77	
						50.72	46.60	-4.43%
						50.72	50.05	
	ER-610 C1	37.6576	37.6928	0.093%	N/C	58.33	65.80	
						58.33	58.55	5.09%
						58.33	59.55	
	Y-833 D1	37.0345	37.0488	0.039%	N/C	5.84	27.15	
						5.84	21.02	327.63%
						5.84	26.75	
	923 E1	38.2019	38.2190	0.045%	N/C	49.26	32.35	
						49.26	49.72	-14.66%
						49.26	44.05	
	ISO-800 F1	37.5214	37.5375	0.043%	N/C	36.08	43.87	
						36.08	40.15	19.98%
						36.08	45.85	
POLYAMIDE IMIDE		R-134a -> 24 HRS 302 F						
	U-475 A2	37.6974	37.6956	-0.005%	N/C	51.21	64.72	
						51.21	60.55	22.87%
						51.21	63.50	
	Y-390 B2	38.2755	38.2774	0.005%	N/C	50.72	47.80	
						50.72	37.42	-14.98%
						50.72	44.15	
	ER-610 C2	37.4381	37.4361	-0.005%	N/C	58.33	60.95	
						58.33	62.12	10.97%
						58.33	71.12	
	Y-833 D2	36.6439	36.6266	-0.047%	N/C	5.84	9.00	
						5.84	32.85	395.55%
						5.84	44.97	
	923 E2	38.1007	38.0994	-0.003%	N/C	49.26	40.95	
						49.26	53.20	9.77%
						49.26	68.07	
	ISO-800 F2	37.3299	37.3291	-0.002%	N/C	36.08	35.95	
						36.08	36.90	-12.32%
						36.08	22.05	

	500 HRS IN R-134a @ 194F				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	5.2036	5.2056	0.038%	N/C	YES
B1	5.3451	5.3608	0.294%	N/C	YES
C1	5.2057	5.2094	0.071%	N/C	YES
	R-134a -> 302F 24 HRS				
A2	5.3427	5.3434	0.013%	N/C	YES
B2	5.4569	5.4558	-0.020%	N/C	YES
C2	5.3887	5.3873	-0.026%	N/C	YES

	500 hrs in R-134a at 194 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE	U-475 A1	5.9910	6.0056	0.244%	N/C	NO
	Y-390 B1	5.8761	5.8853	0.157%	N/C	NO
	ER-610 C1	5.7963	5.7998	0.060%	N/C	YES
	Y-833 D1	5.7353	5.7401	0.084%	N/C	NO
	923 E1	5.9683	5.9776	0.156%	N/C	NO
	ISO-800 F1	5.7126	5.7172	0.081%	N/C	YES
		R-134a -> 24 HRS @ 302F				
	U-475 A2	5.9463	5.9479	0.027%	N/C	NO
	Y-390 B2	5.8482	5.8474	-0.014%	N/C	NO
	ER-610 C2	5.7073	5.7069	-0.007%	N/C	NO
	Y-833 D2	5.6829	5.6810	-0.033%	N/C	NO
	923 E2	5.9231	5.9308	0.130%	N/C	NO
	ISO-800 F2	5.6817	5.6800	-0.030%	N/C	YES

	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	5.5926	5.6121	0.349%	N/C	NO
	Y-390 B1	5.1736	5.1815	0.153%	N/C	NO
	ER-610 C1	5.5086	5.5228	0.258%	N/C	YES
	Y-833 D1	5.4108	5.4190	0.152%	N/C	YES
	923 E1	5.8931	5.9084	0.260%	N/C	NO
	ISO-800 F1	5.5308	5.5374	0.119%	N/C	NO
		R-134a -> 24 HRS @ 302F				
	U-475 A2	5.6293	5.6320	0.048%	N/C	NO
	Y-390 B2	5.6951	5.6960	0.016%	N/C	NO
	ER-610 C2	5.6413	5.6367	-0.082%	N/C	YES
	Y-833 D2	5.4317	5.4328	0.020%	N/C	YES
	923 E2	5.7078	5.7053	-0.044%	N/C	NO
	ISO-800 F2	5.3936	5.3927	-0.017%	N/C	NO

	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER IMIDE	U-475 A1	5.7074	5.7208	0.235%	N/C	YES
	Y-390 B1	5.6910	5.7010	0.176%	N/C	NO
	ER-610 C1	5.5428	5.5451	0.042%	N/C	YES
	Y-833 D1	5.5716	5.5762	0.083%	N/C	YES
	923 E1	5.7632	5.7762	0.226%	N/C	NO
	ISO-800 F1	5.5515	5.5586	0.128%	N/C	YES
		R-134a -> 24 HRS @ 302F				
POLYAMIDE IMIDE	U-475 A2	5.6180	5.6194	0.025%	N/C	NO
	Y-390 B2	5.7160	5.7113	-0.082%	N/C	NO
	ER-610 C2	5.4621	5.4617	-0.007%	N/C	YES
	Y-833 D2	5.5708	5.5705	-0.005%	N/C	NO
	923 E2	5.7753	5.7735	-0.031%	N/C	NO
	ISO-800 F2	5.5591	5.5626	0.063%	N/C	NO

500 HRS IN R-134a @ 194 F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	2.5242	2.5664	1.67%	N/C	N/C
Y-390 B1	2.7829	2.8159	1.19%	Slightly Warped	N/C
ER-610 C1	2.4045	2.4713	2.78%	N/C	N/C
Y-833 D1	2.6305	2.7540	4.69%	N/C	N/C
923 E1	2.1588	2.1904	1.46%	N/C	N/C
ISO-800 F1	1.3455	1.3578	0.91%	Slightly Warped	N/C
	R-134a at ->302F 24 HRS				
U-475 A2	2.4729	2.4316	-1.67%	Darkened Slighlty Warped	N/C
Y-390 B2	2.1316	2.0918	-1.87%	Darkened Slightly warped	N/C
ER-610 C2	2.7314	2.7129	-0.68%	Darkened	N/C
Y-833 D2	2.2510	2.2529	0.08%	N/C	N/C
923 E2	1.8864	1.8827	-0.20%	N/C	N/C
ISO-800 F2	2.0169	1.9608	-2.78%	Darkened Slightly warped	N/C

500 HR IN R-123 @ 194F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS Mils	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	4.4064	4.5387	3.00%	0.383	98.00	21	17.4	12.18	
				0.430	110.60	21	17.4	12.25	-30.72%
				0.470	115.80	21	17.4	11.73	
DA/MY/DA B1	4.7649	4.9538	3.96%	0.396	147.60	21	13.7	17.75	
				0.430	159.70	21	13.7	17.69	29.34%
				0.450	167.50	21	13.7	17.72	
MYLAR MO C1	2.5463	2.6073	2.40%	0.391	78.60	10	21.7	20.10	
				0.439	87.15	10	21.7	19.85	-12.02%
				0.468	81.05	10	21.7	17.32	
NO 410 D1	2.4418	2.5394	4.00%	0.434	81.05	11	18.7	16.98	
				0.449	83.55	11	18.7	16.92	-6.66%
				0.490	99.55	11	18.7	18.47	
NO MI 418 E1	2.4396	2.4700	1.25%	0.486	26.40	9	7.5	6.04	
				0.505	28.55	9	7.5	6.28	-18.85%
				0.474	25.35	9	7.5	5.94	
MEL 228 F1	2.9838	3.0587	2.51%	0.468	88.15	11	21.7	17.12	
				0.486	97.80	11	21.7	18.29	-19.97%
				0.492	90.30	11	21.7	16.69	
	500 HRS IN R-123 @ 194 F ->24 HRS @ 302 F								
NO/MY/NO A2	4.1748	4.1629	-0.29%	0.450	124.50	21	17.4	13.17	
				0.441	124.10	21	17.4	13.40	-26.37%
				0.455	113.30	21	17.4	11.86	
DA/MY/DA B2	4.9291	4.9370	0.16%	0.480	185.90	21	13.7	18.44	
				0.423	157.50	21	13.7	17.73	32.91%
				0.520	201.50	21	13.7	18.45	
MYLAR MO C2	2.5361	2.5358	-0.01%	0.408	74.70	10	21.7	18.31	
				0.390	77.80	10	21.7	19.95	-13.61%
				0.407	73.20	10	21.7	17.99	
NOMEX 410 D2	2.4506	2.4622	0.47%	0.498	95.75	11	18.7	17.48	
				0.500	98.75	11	18.7	17.95	-4.72%
				0.493	97.70	11	18.7	18.02	
NO/MI 418 E2	2.4969	2.5012	0.17%	0.488	29.45	9	7.5	6.71	
				0.485	29.00	9	7.5	6.64	-11.94%
				0.483	28.10	9	7.5	6.46	
MEL 228 F2	2.7959	2.7959	0.00%	0.420	66.75	11	21.7	14.45	
				0.477	84.45	11	21.7	16.09	-30.55%
				0.436	70.35	11	21.7	14.67	

After 500 hour exposure to R-134a @ 194°F(90°C)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO	1.17	29.3%	20.0%		>18.97	>14.54		Slightly
A1	1.11	27.8%	20.0%	38.3%	>18.97	>14.40	flash	warped
	1.04	26.0%	20.0%		>18.97	>14.96		bubbles
DA/MY/DA	0.49	24.5%	46.0%		>15.27	>15.86		N/C
B1	0.44	22.0%	46.0%	-46.7%	>15.27	>15.94	flash	
	0.54	27.0%	46.0%		>15.27	>17.29		
MYLAR MO	2.76	138.0%	131.0%		>14.91	>12.86		N/C
C1	2.88	144.0%	131.0%	-7.4%	>14.91	>14.94	flash	
	1.64	82.0%	131.0%		>14.91	>13.62		
NO 410	0.52	13.0%	17.0%		10.67	10.01		N/C
D1	0.49	12.3%	17.0%	-19.6%	10.67	11.94	6.0%	
	0.63	15.8%	17.0%		10.67	11.99		
NO MI 418	0.09	2.3%	4.0%		10.23	9.24		N/C
E1	0.09	2.3%	4.0%	-43.8%	10.23	10.61	-2.7%	
	0.09	2.3%	4.0%		10.23	10.00		
MEL 228	3.09	154.5%	160.0%		>14.22	>14.24		N/C
F1	3.33	166.5%	160.0%	-5.1%	>14.22	>13.78	flash	
	2.69	134.5%	160.0%		>14.22	>14.10		
	After 500 hour exposure plus 24 hour airbake at 150°C(302°F)							
NO/MY/NO	1.12	28.0%	20.0%		>18.97	>13.83		Bubbles
A2	1.19	29.8%	20.0%	31.3%	>18.97	>12.10	flash	
	0.84	21.0%	20.0%		>18.97	>12.11		
DA/MY/DA	0.47	23.5%	46.0%		>15.27	>16.64		slightly
B2	0.47	23.5%	46.0%	-48.2%	>15.27	>16.76	flash	warped
	0.49	24.5%	46.0%		>15.27	>15.96		
MYLAR MO	2.08	104.0%	131.0%		>14.91	>13.49		bubbles
C2	2.79	139.5%	131.0%	-11.2%	>14.91	>13.54	flash	
	2.11	105.5%	131.0%		>14.91	>13.86		
NOMEX 410	0.46	11.5%	17.0%		10.67	10.50		N/C
D2	0.52	13.0%	17.0%	-28.4%	10.67	11.77	3.9%	
	0.48	12.0%	17.0%		10.67	11.00		
NO/MI 418	0.07	1.8%	4.0%		10.23	11.19		N/C
E2	0.09	2.3%	4.0%	-56.3%	10.23	10.10	2.4%	
	0.05	1.3%	4.0%		10.23	10.13		
MEL 228	0.57	28.5%	160.0%		>14.22	>14.73		bubbles
F2	3.81	190.5%	160.0%	-42.5%	>14.22	>14.49	flash	
	1.14	57.0%	160.0%		>14.22	>14.14		

	500 HRS IN R-134a @ 194F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5209	0.5496	5.51%	N/C
B1 MYLAR	0.4804	0.4956	3.16%	Bubbles
C1 NO/MY	0.3927	0.4045	3.00%	N/C
	R-134a @ 194F---->24 hrs @ 302F			
A2 NOMEX	0.5296	0.5319	0.43%	N/C
B2 MYLAR	0.4211	0.4213	0.05%	Delamination Pockets
C2 NO/MY	0.3944	0.3937	-0.18%	Delamination Pockets

	500 HRS IN R-134a @ 194 F								
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS
A1 Glass	1.7086	1.7075	-0.06%	39.02	48.05		0.06	3.00%	N/C
				39.02	57.15	25.11%	0.05	2.50%	
				39.02	41.25		0.05	2.50%	
B1 Polyester	0.7054	0.7226	2.44%	56.12	67.47		0.72	36.00%	N/C
				56.12	63.77	12.56%	0.58	29.00%	
				56.12	58.27		0.55	27.50%	
C1 Permacel	1.6459	1.7019	3.40%	88.50	102.30		0.08	4.00%	
				88.50	105.90	27.34%	0.08	4.00%	
				88.50	129.90		0.09	4.50%	
	500 HRS in R-134a -> 302 F 24 HRS								
A2 Glass	1.6612	1.6517	-0.57%	39.02	48.80		0.05	2.50%	N/C
				39.02	49.60	16.44%	0.05	2.50%	
				39.02	37.90		0.05	2.50%	
B2 Polyester	0.6874	0.6888	0.20%	56.12	49.32		0.41	20.50%	N/C
				56.12	49.37	-8.17%	0.42	21.00%	
				56.12	55.92		0.52	26.00%	
C2 Permacel	1.6204	1.5174	-6.36%	88.50	117.10		0.08	4.00%	Darkened
				88.50	124.30	39.74%	0.10	5.00%	
				88.50	129.60		0.11	5.50%	

	500 HRS IN R-134a @ 194 F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1	0.3059	0.3116	1.86%	N/C	28.36	35.00		0.32	16.0%
					28.36	29.45	13.95%	0.28	14.0%
					28.36	32.50		0.29	14.5%
	500 HRS IN R-134a -> 24 HRS @ 302F								
A2	0.2889	0.2875	-0.485%	N/C	28.36	23.70		0.37	18.5%
					28.36	29.77	0.93%	0.5	25.0%
					28.36	30.82		0.42	21.0%

	500 HRS IN R-134a @ 194 F						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	4.0043	4.0190	0.37%	N/C	9.61	9.91	
A1					9.61	9.82	1.63%
					9.61	9.57	
DTMD	4.3321	4.3455	0.31%	N/C	9.95	7.64	
B1					9.95	8.49	-10.02%
					9.95	10.73	
	R-134a @ 194 F -> 24 HRS @ 302F						
DMD	3.9967	3.9951	-0.04%	See Photo	9.61	8.60	
A2					9.61	8.61	-9.43%
					9.61	8.90	
DTMD	4.3818	4.3766	-0.12%	See Photo	9.95	10.58	
B2					9.95	11.29	8.54%
					9.95	10.53	

Appendix I

Experimental Data for HFC-134 Exposure at 90°C(194°F)

TWISTED PAIRS WITHOUT VARNISH-HFC-134 @ 194°F(90°C)

	500 HRS IN R-134 @ 194 F									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	25.52	25.5571	0.145%	N/C	576	433		15.80	12.57	
					576	461	-23.1%	15.80	12.76	-27.0%
					576	434		15.80	9.26	
B1	24.1469	24.1747	0.115%	N/C	736	732		11.62	12.30	
					736	732	-1.7%	11.62	13.15	7.0%
					736	707		11.62	11.86	
C1	24.3298	24.3586	0.118%	N/C	579	400		16.58	16.85	
					579	405	-30.1%	16.58	18.73	10.2%
					579	409		16.58	19.23	
	500 hr in R-134 plus 24 hr at 302F									
A2	25.6523	25.6559	0.014%	N/C	576	480		15.80	11.70	
					576	466	-19.5%	15.80	10.79	-22.7%
					576	445		15.80	14.14	
B2	25.1286	25.1326	0.016%	N/C	736	730		11.62	12.78	
					736	733	-0.6%	11.62	11.55	3.0%
					736	732		11.62	11.57	
C2	22.8864	22.8908	0.019%	N/C	579	571		16.58	13.41	
					579	559	-1.8%	16.58	9.37	-30.1%
					579	576		16.58	11.97	

500 HOURS IN R-134 @ 194 F											
	VARN	TWISTED PAIR WT	Exp Pair weight	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE	U-475 A1	22.3767	22.4549	0.349%	N/C	16.24	12.28		430	364	
						16.24	16.36	-9.42%	430	428	-8.84%
						16.24	15.49		430	384	
	Y-390 B1	22.5770	22.6392	0.276%	N/C	18.77	13.72		510	532	
						18.77	19.39	-5.68%	510	565	-0.07%
						18.77	20.00		510	432	
	ER-610 C1	25.3129	25.3540	0.162%	N/C	15.57	18.55		442	392	
						15.57	18.95	14.13%	442	326	-21.87%
						15.57	15.81		442	318	
	Y-833 D1	21.5035	21.5201	0.077%	N/C	12.04	12.31		578	460	
						12.04	11.38	-2.80%	578	450	-16.44%
						12.04	11.42		578	539	
	923 E1	23.2030	23.2606	0.248%	N/C	16.76	20.00		606	591	
						16.76	11.74	2.90%	606	562	-7.32%
						16.76	20.00		606	532	
	ISO-800 F1	21.5581	21.5910	0.153%	N/C	19.08	broke		580	478	
						19.08	18.77	1.60%	580	446	-17.93%
						19.08	20.00		580	504	
		24 HOURS AT 302 F									
IMIDE	U-475 A2	23.1981	23.1979	-0.001%	N/C	16.24	13.10		430	417	
						16.24	10.87	-25.92%	430	328	-18.22%
						16.24	12.12		430	310	
	Y-390 B2	24.0372	24.0446	0.031%	N/C	18.77	14.05		510	471	
						18.77	9.10	-38.22%	510	579	-0.20%
						18.77	11.64		510	477	
	ER-610 C2	22.7487	22.7509	0.010%	N/C	15.57	13.28		442	347	
						15.57	12.88	-21.90%	442	431	-17.72%
						15.57	10.32		442	313	
	Y-833 D2	21.3948	21.3904	-0.021%	N/C	12.04	9.34		578	428	
						12.04	10.10	-18.83%	578	504	-15.92%
						12.04	9.88		578	526	
	923 E2	23.7700	23.7792	0.039%	N/C	16.76	10.99		606	521	
						16.76	10.50	-30.81%	606	471	-20.41%
						16.76	13.30		606	455	
	ISO-800 F2	24.7974	24.8003	0.012%	N/C	19.08	14.43		580	544	
						19.08	19.87	-7.93%	580	567	-3.74%
						19.08	18.40		580	564	

500 HOURS IN R-134 @ 194°F											
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475	27.0522	27.0610	0.03%	N/C	13.32	12.36		746	736	
	A1					13.32	13.25	-4.60%	746	735	-0.98%
						13.32	12.51		746	745	
	Y-390	26.0751	26.0745	0.00%	N/C	12.28	10.89		755	743	
	B1					12.28	11.93	-4.02%	755	736	-2.16%
						12.28	12.54		755	737	
	ER-610	26.2937	26.2898	-0.01%	N/C	12.73	13.17		734	730	
	C1					12.73	11.94	-5.47%	734	727	-0.86%
						12.73	10.99		734	726	
	Y-833	25.4006	25.3880	-0.05%	N/C	12.49	12.71		734	734	
	D1					12.49	12.83	1.63%	734	735	-0.14%
						12.49	12.54		734	730	
	923	26.0053	26.0103	0.02%	N/C	14.38	11.24		742	732	
	E1					14.38	11.27	-21.14%	742	759	0.67%
						14.38	11.51		742	750	
	ISO-800	26.3863	26.3853	0.00%	N/C	12.29	12.24		747	753	
	F1					12.29	11.66	-5.78%	747	738	0.04%
						12.29	10.84		747	751	
		R-134 --> 24 hours @ 302 F									
	U-475	26.6020	26.6042	0.01%	N/C	13.32	12.01		746	741	
	A2					13.32	12.86	-5.63%	746	742	-1.03%
						13.32	12.84		746	732	
	Y-390	26.8160	26.8160	0.00%	N/C	12.28	9.74		755	737	
	B2					12.28	11.86	-8.55%	755	748	-1.66%
						12.28	12.09		755	743	
	ER-610	26.9333	26.9027	-0.11%	N/C	12.73	11.22		734	730	
	C2					12.73	13.10	-6.47%	734	726	-0.73%
						12.73	11.40		734	730	
	Y-833	25.3814	25.3594	-0.09%	N/C	12.49	12.49		734	727	
	D2					12.49	12.01	-2.86%	734	730	-0.68%
						12.49	11.90		734	730	
	923	25.2467	25.2424	-0.02%	N/C	14.38	12.10		742	748	
	E2					14.38	10.73	-20.91%	742	751	0.81%
						14.38	11.29		742	753	
	ISO-800	26.1409	26.1437	0.01%		12.29	12.08		747	738	
	F2				N/C	12.29	11.01	-5.61%	747	736	-1.34%
						12.29	11.71		747	738	

	500 HOURS IN R-134 @ 194 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE	U-475 A1	22.9348	22.9409	0.027%	N/C	15.10	12.55		469	569	
						15.10	11.18	-20.49%	469	454	10.66%
						15.10	12.29		469	534	
	Y-390 B1	24.1008	24.1626	0.256%	N/C	18.24	20.00		473	467	
						18.24	20.00	9.65%	473	468	-1.90%
						18.24	20.00		473	457	
	ER-610 C1	21.6848	21.7132	0.131%	N/C	14.53	11.00		494	392	
						14.53	15.40	-0.44%	494	391	-21.05%
						14.53	17.00		494	387	
	Y-833 D1	25.1992	25.2828	0.332%	N/C	11.38	17.64		557	438	
						11.38	18.40	61.54%	557	397	-26.45%
						11.38	19.11		557	394	
	923 E1	23.3072	23.3705	0.272%	N/C	15.85	11.96		503	589	
						15.85	15.71	-17.67%	503	445	-3.78%
						15.85	11.48		503	418	
	ISO-800 F1	22.1375	22.1650	0.124%	N/C	14.75	13.50		632	551	
						14.75	19.40	19.39%	632	537	-13.29%
						14.75	19.93		632	556	
		R-134 --> 24 hours @ 302 F									
POLYAMIDE IMIDE	U-475 A2	23.8288	23.8331	0.018%	N/C	15.10	17.36		469	253	
						15.10	18.95	16.56%	469	291	-37.95%
						15.10	16.49		469	329	
	Y-390 B2	24.0029	24.0048	0.008%	N/C	18.24	15.56		473	568	
						18.24	18.41	-11.90%	473	503	15.15%
						18.24	13.73		473	563	
	ER-610 C2	23.6103	23.6109	0.003%	N/C	14.53	16.84		494	379	
						14.53	13.62	4.08%	494	353	-27.13%
						14.53	14.91		494	348	
	Y-833 D2	23.8421	23.8328	-0.039%	N/C	11.38	10.68		557	428	
						11.38	11.08	-5.83%	557	578	-5.86%
						11.38	10.39		557	567	
	923 E2	23.6598	23.6589	-0.004%	N/C	15.85	12.62		503	479	
						15.85	12.46	-17.43%	503	491	0.86%
						15.85	14.18		503	552	
	ISO-800 F2	24.0365	24.0368	0.001%	N/C	14.75	19.79		632	484	
						14.75	13.69	8.52%	632	568	-18.04%
						14.75	14.54		632	502	

		500 HRS IN R-134 @ 194°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	40.1112	40.2182	0.267%	N/C	73.73	54.30	
						73.73	48.82	-31.01%
						73.73	49.47	
	Y-390 B1	39.5473	39.6004	0.134%	N/C	43.78	71.47	
						43.78	52.70	28.46%
						43.78	44.55	
	ER-610 C1	38.9483	39.0510	0.264%	N/C	51.81	43.40	
						51.81	48.50	-10.18%
						51.81	47.70	
	Y-833 D1	37.8394	37.8747	0.093%	N/C	9.85	35.67	
						9.85	5.85	66.23%
						9.85	7.60	
	923 E1	39.3268	39.3827	0.142%	N/C	41.28	56.27	
						41.28	43.65	10.78%
						41.28	37.27	
	ISO-800 F1	38.8790	38.9129	0.087%	N/C	45.01	50.27	
						45.01	34.55	-5.78%
						45.01	35.10	
		R-134 -> 24 HRS 302°F						
	U-475 A2	39.4902	39.4891	-0.003%	N/C	73.73	48.77	
						73.73	35.52	-31.05%
						73.73	66.15	
	Y-390 B2	39.7613	39.7723	0.028%	N/C	43.78	69.35	
						43.78	74.52	45.52%
						43.78	47.26	
	ER-610 C2	39.7521	39.7531	0.003%	N/C	51.81	47.50	
						51.81	17.70	-23.28%
						51.81	54.05	
	Y-833 D2	38.7982	38.7912	-0.018%	N/C	9.85	18.40	
						9.85	49.90	201.76%
						9.85	20.87	
	923 E2	39.7495	39.7468	-0.007%	N/C	41.28	40.90	
						41.28	43.70	2.12%
						41.28	41.87	
	ISO-800 F2	38.2454	38.2462	0.002%	N/C	45.01	53.42	
						45.01	48.40	0.16%
						45.01	33.42	

		500 HRS IN R-134 @ 194°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE EPOXY GLASS	U-475 A1	37.3566	37.4843	0.342%	N/C	40.14	37.20	
						40.14	44.97	5.36%
						40.14	44.70	
	Y-390 B1	37.5060	37.6283	0.326%	N/C	36.12	52.02	
						36.12	52.27	40.54%
						36.12	48.00	
	ER-610 C1	37.4990	37.6254	0.337%	N/C	35.96	38.95	
						35.96	39.47	2.56%
						35.96	32.22	
	Y-833 D1	36.5017	36.6252	0.338%	N/C	33.14	29.75	
						33.14	35.37	-19.49%
						33.14	14.92	
	923 E1	38.3531	38.4203	0.175%	N/C	40.52	39.02	
						40.52	38.65	2.04%
						40.52	46.37	
	ISO-800 F1	36.3362	36.3712	0.096%	N/C	20.20	23.40	
						20.20	24.32	11.91%
						20.20	20.10	
		R-134 -> 24 HRS 302°F						
	U-475 A2	38.3979	38.3980	0.000%	N/C	40.14	38.27	
						40.14	36.65	-5.88%
						40.14	38.42	
	Y-390 B2	36.7192	36.7171	-0.006%	N/C	36.12	38.75	
						36.12	40.15	13.48%
						36.12	44.07	
	ER-610 C2	37.8417	37.8425	0.002%	N/C	35.96	30.70	
						35.96	broken	-8.20%
						35.96	35.32	
	Y-833 D2	36.5801	36.5821	0.005%	N/C	33.14	2.05	
						33.14	30.65	-47.27%
						33.14	19.72	
	923 E2	39.6921	39.6901	-0.005%	N/C	40.52	34.30	
						40.52	36.87	-11.92%
						40.52	35.90	
	ISO-800 F2	36.4985	36.4921	-0.018%	N/C	20.20	24.35	
						20.20	19.97	6.83%
						20.20	20.42	

		500 HRS IN R-134 @ 194°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE	U-475 A1	37.4697	37.5825	0.301%	N/C	51.21	44.77	
						51.21	57.67	2.53%
						51.21	55.07	
	Y-390 B1	40.8719	40.9278	0.137%	N/C	50.72	40.15	
						50.72	66.95	13.22%
						50.72	65.17	
	ER-610 C1	37.8055	37.9012	0.253%	N/C	58.33	50.37	
						58.33	45.65	-24.97%
						58.33	35.27	
	Y-833 D1	38.4200	38.3476	-0.188%	N/C	5.84	7.00	
						5.84	7.50	18.15%
						5.84	6.20	
	923 E1	40.2699	40.3341	0.159%	N/C	49.26	42.20	
						49.26	39.97	-18.45%
						49.26	38.35	
	ISO-800 F1	39.8724	39.9030	0.077%	N/C	36.08	46.40	
						36.08	55.22	41.20%
						36.08	51.22	
		R-134-> 24 HRS 302°F						
POLYAMIDE-IMIDE	U-475 A2	25.0768	25.0797	0.012%	N/C	51.21	30.70	
						51.21	27.30	-46.56%
						51.21	24.10	
	Y-390 B2	38.6863	38.6879	0.004%	N/C	50.72	53.67	
						50.72	41.27	-6.01%
						50.72	48.07	
	ER-610 C2	37.3621	37.3601	-0.005%	N/C	58.33	47.28	
						58.33	58.82	-3.21%
						58.33	63.27	
	Y-833 D2	38.3697	38.3586	-0.029%	N/C	5.84	29.90	
						5.84	24.97	334.59%
						5.84	21.27	
	923 E2	39.6921	39.6901	-0.005%	N/C	49.26	48.40	
						49.26	44.60	-1.50%
						49.26	52.57	
	ISO-800 F2	37.3701	37.3618	-0.022%	N/C	36.08	41.77	
						36.08	38.62	29.03%
						36.08	59.27	

	500 HRS IN R-134 @ 194°F				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	5.0972	5.1077	0.206%	N/C	
					YES
B1	6.077	6.095	0.296%	N/C	
					YES
C1	3.9145	3.9223	0.199%	N/C	
					YES
	R-134 -> 302°F for 24 HRS				
A2	5.0449	5.0487	0.075%	N/C	
					YES
B2	6.0727	6.0789	0.102%	N/C	
					YES
C2	5.6072	5.6132	0.107%	N/C	
					YES

	500 hrs in R-134 at 194° F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE	U-475 A1	5.2879	5.3057	0.337%	N/C	NO
	Y-390 B1	5.5591	5.5787	0.353%	N/C	NO
	ER-610 C1	5.2970	5.3067	0.183%	N/C	YES
	Y-833 D1	5.8143	5.8253	0.189%	N/C	YES
	923 E1	5.5400	5.5627	0.410%	N/C	NO
	ISO-800 F1	5.4424	5.4524	0.184%	N/C	NO
		R-134 -> 24 HRS @ 302°F				
	U-475 A2	5.3553	5.3647	0.176%	N/C	NO
	Y-390 B2	5.4998	5.5085	0.158%	N/C	NO
	ER-610 C2	5.3108	5.3137	0.055%	N/C	YES
	Y-833 D2	5.9941	5.9942	0.002%	N/C	YES
	923 E2	5.4951	5.5016	0.118%	N/C	NO
	ISO-800 F2	5.4805	5.4853	0.088%	N/C	NO

	R-134 at 194 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	5.5120	5.5519	0.724%	N/C	NO
	Y-390 B1	5.8472	5.8774	0.516%	N/C	NO
	ER-610 C1	5.4087	5.4219	0.244%	N/C	YES
	Y-833 D1	5.7486	5.7672	0.324%	N/C	YES
	923 E1	5.4250	5.4597	0.640%	N/C	NO
	ISO-800 F1	5.5216	5.5449	0.422%	N/C	NO
		R-134 -> 24 HRS @ 302F				
	U-475 A2	5.5686	5.5813	0.228%	N/C	NO
	Y-390 B2	5.8163	5.8246	0.143%	N/C	NO
	ER-610 C2	5.4054	5.4014	-0.074%	N/C	YES
	Y-833 D2	5.7349	5.7347	-0.003%	N/C	YES
	923 E2	5.3691	5.3779	0.164%	N/C	NO
	ISO-800 F2	5.4815	5.4885	0.128%	N/C	NO

		R-134 at 194 F				
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER IMIDE	U-475 A1	5.5207	5.5407	0.362%	N/C	NO
	Y-390 B1	5.4103	5.4285	0.336%	N/C	NO
	ER-610 C1	5.5234	5.5405	0.310%	N/C	YES
	Y-833 D1	5.0827	5.0934	0.211%	N/C	YES
	923 E1	5.6398	5.6690	0.518%	N/C	NO
	ISO-800 F1	5.4337	5.4427	0.166%	N/C	YES
POLYAMIDE IMIDE		R-134 -> 24 HRS @ 302F				
	U-475 A2	5.5873	5.5897	0.043%	N/C	NO
	Y-390 B2	5.3341	5.3451	0.206%	N/C	NO
	ER-610 C2	5.4830	5.4894	0.117%	N/C	YES
	Y-833 D2	5.0909	5.0968	0.116%	N/C	YES
	923 E2	5.7159	5.7251	0.161%	N/C	NO
	ISO-800 F2	5.3782	5.3805	0.043%	N/C	NO

500 HRS IN R-134 @ 194 F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	2.1529	2.3152	7.54%	N/C	slightly
					more
					flexible
Y-390 B1	2.1604	2.2580	4.52%	slightly	slightly
				warped	more
					flexible
ER-610 C1	2.4726	2.6976	9.10%	darkened	slightly
					more
					flexible
Y-833 D1	2.7859	2.9962	7.55%	N/C	slightly
					more
					flexible
923 E1	1.6399	1.7599	7.32%	N/C	N/C
ISO-800 F1	1.8409	1.8202	-1.12%	warped	slightly
					more
					flexible
	R-134 at --->24 hour at 302°F.				
U-475 A2	2.0050	2.0228	0.89%	Darkened	N/C
				slightly	few
				warped	pockets
Y-390 B2	2.2055	2.1807	-1.12%	Few	N/C
				Internal	
				Bubbles	
ER-610 C2	1.9302	1.9588	1.48%		N/C
				darkened	darkened
Y-833 D2	2.3043	2.2420	-2.70%	Many	brittle
				Internal	
				bubbles	
923 E2	1.8422	1.8620	1.07%	many	
				Internal	N/C
				bubbles	
ISO-800 F2	1.3540	1.2483	-7.81%	many	
				Internal	brittle
				bubbles	warped

500 HR IN R-134 @ 194°F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS Mils	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	4.4740	4.7677	6.56%	0.384	128.40	21	17.4	15.92	
				0.448	152.10	21	17.4	16.17	-7.66%
				0.475	160.70	21	17.4	16.11	
DA/MY/DA B1	4.3937	4.6407	5.62%	0.396	101.20	21	13.7	12.17	
				0.398	105.90	21	13.7	12.67	-11.20%
				0.482	118.00	21	13.7	11.66	
MYLAR MO C1	2.3007	2.4161	5.02%	0.417	79.25	10	21.7	19.00	
				0.515	102.50	10	21.7	19.90	-13.83%
				0.461	79.25	10	21.7	17.19	
NO 410 D1	2.1866	2.2467	2.75%	0.525	102.50	10	18.7	19.52	
				0.442	84.70	10	18.7	19.16	3.92%
				0.505	99.05	10	18.7	19.61	
NO MI 418 E1	2.4751	2.5373	2.51%	0.468	23.35	10	7.5	4.99	
				0.495	25.90	10	7.5	5.23	-31.28%
				0.478	25.05	10	7.5	5.24	
MEL 228 F1	2.3316	2.4496	5.06%	0.454	88.80	11	21.7	17.78	
				0.496	101.40	11	21.7	18.59	-18.03%
				0.468	87.50	11	21.7	17.00	
	500 HRS IN R-134 @ 194°F ->24 HRS @ 302°F								
NO/MY/NO A2	5.2862	5.2948	0.16%	0.400	137.60	21	17.4	16.38	
				0.455	146.40	21	17.4	15.32	-6.53%
				0.460	165.10	21	17.4	17.09	
DA/MY/DA B2	4.3847	4.3693	-0.35%	0.418	117.40	21	13.7	13.37	
				0.458	130.70	21	13.7	13.59	-1.42%
				0.488	138.90	21	13.7	13.55	
MYLAR MO C2	2.2237	2.2229	-0.04%	0.350	70.35	10	21.7	20.10	
				0.433	85.05	10	21.7	19.64	-8.65%
				0.406	80.10	10	21.7	19.73	
NOMEX 410 D2	2.2360	2.2461	0.45%	0.479	102.10	10	18.7	21.32	
				0.412	83.70	10	18.7	20.32	11.24%
				0.503	104.50	10	18.7	20.78	
NO/MI 418 E2	2.4630	2.4665	0.14%	0.485	27.50	10	7.5	5.67	
				0.510	29.10	10	7.5	5.71	-24.10%
				0.490	27.95	10	7.5	5.70	
MEL 228 F2	2.3939	2.3957	0.08%	0.463	92.25	10	21.7	19.92	
				0.508	97.75	10	21.7	19.24	-10.17%
				0.480	92.70	10	21.7	19.31	

After 500 hour exposure to R-134 @ 194°F(90°C)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO	1.16	29.0%	20.0%		>18.97	>17.17		N/C
A1	1.08	27.0%	20.0%	37.9%	>18.97	>17.04	FLASH	
	1.07	26.8%	20.0%		>18.97	>16.18		
DA/MY/DA	0.60	30.0%	46.0%		>15.27	>14.55		slighlty
B1	0.62	31.0%	46.0%	-35.9%	>15.27	>14.16	FLASH	warped
	0.55	27.5%	46.0%		>15.27	>14.46		
MYLAR MO	2.75	137.5%	131.0%		>14.91	>13.93		N/C
C1	3.11	155.5%	131.0%	-1.9%	>14.91	>13.61	FLASH	
	1.85	92.5%	131.0%		>14.91	>12.77		
NO 410	0.57	14.3%	17.0%		10.67	12.17		N/C
D1	0.61	15.3%	17.0%	-13.7%	10.67	9.71	2.0%	
	0.58	14.5%	17.0%		10.67	10.78		
NO MI 418	0.10	2.5%	4.0%		10.23	8.60		N/C
E1	0.11	2.8%	4.0%	-29.2%	10.23	10.66	FLASH	
	0.13	3.3%	4.0%		10.23	9.04		
MEL 228	3.44	172.0%	160.0%		>14.22	>14.11		N/C
F1	3.71	185.5%	160.0%	7.9%	>14.22	>13.35	FLASH	
	3.21	160.5%	160.0%		>14.22	>14.27		
	After 500 hour exposure plus a 24 hour airbake @ 302°F(150°C).							
NO/MY/NO	0.55	13.8%	20.0%		>18.97	>16.01		Bubbles
A2	0.30	7.5%	20.0%	-37.1%	>18.97	>16.53	FLASH	delamination
	0.66	16.5%	20.0%		>18.97	>18.48		pulled away
DA/MY/DA	0.52	26.0%	46.0%		>15.27	>13.04		slighlty
B2	0.54	27.0%	46.0%	-40.2%	>15.27	>14.74	FLASH	warped
	0.59	29.5%	46.0%		>15.27	>15.93		
MYLAR MO	2.86	143.0%	131.0%		>14.91	>13.17		N/C
C2	2.62	131.0%	131.0%	6.0%	>14.91	>13.71	FLASH	
	2.85	142.5%	131.0%		>14.91	>13.23		
NOMEX 410	0.64	16.0%	17.0%		10.67	10.70		N/C
D2	0.53	13.3%	17.0%	-16.2%	10.67	9.98	-1.3%	
	0.54	13.5%	17.0%		10.67	10.90		
NO/MI 418	0.07	1.8%	4.0%		10.23	9.28		N/C
E2	0.07	1.8%	4.0%	-58.3%	10.23	7.88	-17.3%	
	0.06	1.5%	4.0%		10.23	8.23		
MEL 228	3.49	174.5%	160.0%		>14.22	>14.71		N/C
F2	3.16	158.0%	160.0%	3.2%	>14.22	>15.21	FLASH	
	3.26	163.0%	160.0%		>14.22	>13.91		

	500 HRS IN R-134 @ 194°F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5363	0.5862	9.30%	N/C
B1 MYLAR	0.4464	0.4756	6.54%	Bubbles between layers
C1 NO/MY	0.3923	0.4133	5.35%	N/C
	R-134 @ 194°F---->24 hrs @ 302°F			
A2 NOMEX	0.5512	0.5531	0.34%	N/C
B2 MYLAR	0.4971	0.4974	0.06%	Some delamination Pockets *see photo
C2 NO/MY	0.3968	0.3983	0.38%	Pockects where mylar pulled away *see photo

	500 HRS IN R-134 @ 194 F								
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS
A1 Glass	1.4875	1.4935	0.40%	39.02	55.90		0.06	3.00%	N/C
				39.02	56.60	36.13%	0.05	2.50%	
				39.02	46.85		0.06	3.00%	
B1 Polyester	0.7018	0.7407	5.54%	56.12	51.90		0.69	34.50%	N/C
				56.12	59.05	0.50%	0.76	38.00%	
				56.12	58.25		0.48	24.00%	
C1 Permacel	1.3719	1.5332	11.76%	88.50	104.40		0.13	6.50%	Darkened
				88.50	83.30	0.92%	0.11	5.50%	
				88.50	80.25		0.13	6.50%	
	500 HRS in R-134 -> 302°F 24 HRS								
A2 Glass	1.4283	1.4308	0.18%	39.02	50.35		0.77	38.50%	N/C
				39.02	50.15	28.87%	0.53	26.50%	
				39.02	50.35		0.57	28.50%	
B2 Polyester	0.6780	0.6799	0.28%	56.12	62.65		0.05	2.50%	N/C
				56.12	54.60	3.47%	0.05	2.50%	
				56.12	56.95		0.06	3.00%	
C2 Permacel	1.3053	1.2703	-2.68%	88.50	120.90		0.13	6.50%	N/C
				88.50	81.60	-3.69%	0.09	4.50%	
				88.50	53.20		0.08	4.00%	

	500 HRS IN R-134 @ 194° F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1	0.2273	0.2381	4.75%	N/C	28.36	28.50		0.43	21.5%
					28.36	33.00	8.25%	0.42	21.0%
					28.36	30.60		0.37	18.5%
	500 HRS IN R-134 -> 24 HRS @ 302°F								
A2	0.2622	0.2632	0.381%	N/C	28.36	28.70		0.36	18.0%
					28.36	29.95	4.84%	0.40	20.0%
					28.36	30.55		0.39	19.5%

	500 HRS IN R-134 @ 194°F						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	3.9412	3.9700	0.73%	N/C	9.61	9.56	
A1					9.61	7.35	-6.73%
					9.61	9.98	
DTMD	4.2204	4.2523	0.76%	N/C	9.95	8.51	
B1					9.95	11.61	1.98%
					9.95	10.32	
	R-134 @ 194°F -> 24 HRS @ 302°						
DMD	3.9266	3.9223	-0.11%	N/C	9.61	9.93	
A2					9.61	9.14	-3.43%
					9.61	8.77	
DTMD	4.2932	4.2901	-0.07%	N/C	9.95	11.27	
B2					9.95	9.38	2.21%
					9.95	9.86	

Appendix J

Experimental Data for HFC-125 Exposure at 60°C(140°F)

TWISTED PAIRS WITHOUT VARNISH

	500 HRS IN R-125 @ 140 F									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	24.6950	24.6671	-0.113%	N/C	576	536		15.80	17.54	
					576	506	-11.2%	15.80	14.31	0.0%
					576	493		15.80	15.53	
B1	26.8289	26.8308	0.007%	N/C	736	693		11.62	12.40	
					736	727	-5.4%	11.62	10.17	0.1%
					736	668		11.62	12.31	
C1	25.0019	25.0042	0.009%	N/C	579	573		16.58	16.70	
					579	587	0.4%	16.58	16.63	4.3%
					579	584		16.58	18.53	
	R-125-->24 HRS @ 302 F									
A2	24.1706	24.1727	0.009%	N/C	576	576		15.80	20.00	
					576	552	-2.4%	15.80	20.00	13.2%
					576	558		15.80	13.66	
B2	27.0670	27.0673	0.001%	N/C	736	652		11.62	12.27	
					736	729	-4.4%	11.62	11.65	2.0%
					736	730		11.62	11.65	
C2	24.5087	24.5103	0.007%	N/C	579	499		16.58	16.70	
					579	576	-5.0%	16.58	13.42	-8.4%
					579	576		16.58	15.42	

	500 HOURS IN R-125 @ 140 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	23.9222	23.9170	-0.022%	N/C	16.24	9.24		430	269	
						16.24	12.17	-24.86%	430	379	-21.09%
						16.24	15.20		430	370	
	Y-390 B1	21.8923	21.9054	0.060%	N/C	18.77	13.09		510	402	
						18.77	11.51	-21.65%	510	398	-18.82%
						18.77	19.52		510	442	
	ER-610 C1	23.5401	23.5332	-0.029%	N/C	15.57	14.69		442	399	
						15.57	17.08	10.83%	442	405	-9.35%
						15.57	20.00		442	398	
	Y-833 D1	24.4172	24.4103	-0.028%	N/C	12.04	12.01		578	570	
						12.04	10.15	-4.43%	578	546	-3.11%
						12.04	12.36		578	564	
	923 E1	22.1638	22.1559	-0.036%	N/C	16.76	10.76		606	403	
						16.76	12.68	-29.22%	606	406	-30.64%
						16.76	12.15		606	452	
	ISO-800 F1	21.7035	21.6579	-0.210%	N/C	19.08	18.60		580	545	
						19.08	19.72	-2.69%	580	493	-8.16%
						19.08	17.38		580	560	
		24 HOURS AT 302 F									
	U-475 A2	24.1100	24.1036	-0.027%	N/C	16.24	14.58		430	436	
						16.24	15.18	-7.29%	430	346	-15.97%
						16.24	15.41		430	302	
	Y-390 B2	22.0861	22.0791	-0.032%	N/C	18.77	13.62		510	422	
						18.77	20.00	-21.35%	510	469	-4.44%
						18.77	10.67		510	571	
	ER-610 C2	23.4269	23.4270	0.000%	N/C	15.57	14.33		442	413	
						15.57	11.91	-18.28%	442	433	-6.03%
						15.57	11.93		442	400	
	Y-833 D2	24.0632	24.0619	-0.005%	N/C	12.04	11.97		578	441	
						12.04	10.96	-3.43%	578	546	-10.61%
						12.04	11.95		578	563	
	923 E2	26.2051	26.1994	-0.022%	N/C	16.76	17.67		606	441	
						16.76	20.00	7.52%	606	430	-29.59%
						16.76	16.39		606	409	
	ISO-800 F2	21.7807	21.7782	-0.011%	N/C	19.08	19.74		580	461	
						19.08	17.79	-2.32%	580	583	-8.51%
						19.08	18.38		580	548	

	500 HOURS IN R-125 @ 140 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE EPOXY GLASS	U-475 A1	26.6872	26.6797	-0.03%	N/C	13.32	13.45		746	707	
						13.32	14.39	1.20%	746	708	-5.41%
						13.32	12.60		746	702	
	Y-390 B1	27.2615	27.2601	-0.01%	N/C	12.28	12.92		755	741	
						12.28	11.96	2.17%	755	738	-1.99%
						12.28	12.76		755	741	
	ER-610 C1	26.7332	26.7288	-0.02%	N/C	12.73	13.40		734	729	
						12.73	14.03	7.02%	734	730	-4.59%
						12.73	13.44		734	642	
	Y-833 D1	29.7619	29.7548	-0.02%	N/C	12.49	13.00		734	730	
						12.49	11.91	-1.01%	734	728	-0.68%
						12.49	12.18		734	729	
	923 E1	28.1158	28.1046	-0.04%	N/C	14.38	12.36		742	731	
						14.38	12.69	-7.88%	742	735	-1.44%
						14.38	14.69		742	728	
	ISO-800 F1	24.1429	24.1358	-0.03%	N/C	12.29	13.47		747	720	
						12.29	12.20	0.84%	747	731	-3.12%
						12.29	11.51		747	720	
		R-125 --> 24 hours @ 302 F									
	U-475 A2	26.7216	26.7084	-0.05%	N/C	13.32	13.25		746	698	
						13.32	12.56	-8.68%	746	729	-3.71%
						13.32	10.68		746	728	
	Y-390 B2	27.4061	27.3552	-0.19%	N/C	12.28	11.47		755	743	
						12.28	12.72	2.50%	755	747	-1.32%
						12.28	13.57		755	747	
	ER-610 C2	26.1216	26.1115	-0.04%	N/C	12.73	13.59		734	648	
						12.73	12.55	2.78%	734	659	-9.85%
						12.73	13.11		734	678	
	Y-833 D2	25.6699	25.6588	-0.04%	N/C	12.49	12.31		734	728	
						12.49	12.31	0.51%	734	727	-1.95%
						12.49	13.04		734	704	
	923 E2	27.5259	27.5167	-0.03%	N/C	14.38	12.55		742	734	
						14.38	11.60	-8.41%	742	735	-1.08%
						14.38	15.36		742	729	
	ISO-800 F2	24.6862	24.6650	-0.09%		12.29	11.37		747	733	
					N/C	12.29	12.10	-0.81%	747	732	-1.94%
						12.29	13.10		747	731	

	500 HOURS IN R-125 @ 140 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE	U-475 A1	24.5921	24.5643	-0.113%	N/C	15.10	8.22		469	364	
						15.10	broke	-43.18%	469	251	-36.11%
						15.10	8.94		469	284	
	Y-390 B1	21.8227	21.8228	0.000%	N/C	18.24	20.00		473	456	
						18.24	13.41	-2.39%	473	422	-3.49%
						18.24	20.00		473	491	
	ER-610 C1	22.6876	22.6602	-0.121%	N/C	14.53	16.04		494	388	
						14.53	15.89	8.63%	494	370	-22.06%
						14.53	15.42		494	397	
	Y-833 D1	23.9051	23.8516	-0.224%	N/C	11.38	11.51		557	592	
						11.38	11.70	2.58%	557	502	-0.90%
						11.38	11.81		557	562	
	923 E1	23.2545	23.2469	-0.033%	N/C	15.85	20.00		503	506	
						15.85	15.29	16.28%	503	403	-5.70%
						15.85	20.00		503	514	
	ISO-800 F1	22.1990	22.1527	-0.209%	N/C	14.75	15.71		632	501	
						14.75	13.33	5.88%	632	599	-14.66%
						14.75	17.81		632	518	
		R-125 --> 24 hours @ 302 F									
POLYAMIDE IMIDE	U-475 A2	24.4209	24.4132	-0.032%	N/C	15.10	broke		469	289	
						15.10	20.00	10.79%	469	258	-43.00%
						15.10	13.46		469	255	
	Y-390 B2	21.5328	21.5267	-0.028%	N/C	18.24	20.00		473	395	
						18.24	11.02	-14.97%	473	394	-17.20%
						18.24	20.00		473	386	
	ER-610 C2	22.6428	22.6436	0.004%	N/C	14.53	16.88		494	483	
						14.53	18.17	14.77%	494	391	-10.46%
						14.53	14.98		494	453	
	Y-833 D2	23.9028	23.8549	-0.200%	N/C	11.38	11.96		557	588	
						11.38	11.10	3.28%	557	586	5.80%
						11.38	12.20		557	587	
	923 E2	23.1540	23.1502	-0.016%	N/C	15.85	20.00		503	461	
						15.85	20.00	26.18%	503	428	-5.70%
						15.85	20.00		503	534	
	ISO-800 F2	21.9142	21.9090	-0.024%	N/C	14.75	15.77		632	577	
						14.75	12.02	-9.99%	632	571	-9.34%
						14.75	12.04		632	571	

		500 HRS IN R-125 @ 140 F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	39.3142	39.3074	-0.017%	N/C	73.73	56.55	
						73.73	49.80	-24.31%
						73.73	61.07	
	Y-390 B1	38.1491	38.1542	0.013%	N/C	43.78	48.30	
						43.78	41.82	-0.85%
						43.78	40.10	
	ER-610 C1	38.4070	38.3580	-0.128%	N/C	51.81	51.55	
						51.81	49.92	2.84%
						51.81	58.37	
	Y-833 D1	37.3510	37.3497	-0.003%	N/C	9.85	5.00	
						9.85	5.40	-27.58%
						9.85	11.00	
	923 E1	38.2370	38.2395	0.007%	N/C	41.28	30.80	
						41.28	42.15	-9.95%
						41.28	38.57	
	ISO-800 F1	37.1214	37.1160	-0.015%	N/C	45.01	50.05	
						45.01	42.80	3.14%
						45.01	42.62	
		R-125 -> 24 HRS 302 F						
	U-475 A2	39.3577	39.3530	-0.012%	N/C	73.73	54.75	
						73.73	75.00	-10.69%
						73.73	56.70	
	Y-390 B2	39.5198	39.5019	-0.045%	N/C	43.78	60.05	
						43.78	78.16	42.04%
						43.78	48.35	
	ER-610 C2	38.4961	38.4704	-0.067%	N/C	51.81	57.05	
						51.81	56.50	13.52%
						51.81	62.90	
	Y-833 D2	38.0796	38.0468	-0.086%	N/C	9.85	11.95	
						9.85	5.00	-29.10%
						9.85	4.00	
	923 E2	38.9747	38.9567	-0.046%	N/C	41.28	36.20	
						41.28	40.20	-11.46%
						41.28	33.25	
	ISO-800 F2	36.9124	36.8551	-0.155%	N/C	45.01	44.15	
						45.01	49.40	2.05%
						45.01	44.25	

		500 HRS IN R-125 @ 140 F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	37.2293	37.2294	0.000%	N/C	40.14	32.42	-7.58%
						40.14	42.57	
						40.14	36.30	
	Y-390 B1	37.5208	37.5246	0.010%	N/C	36.12	28.90	-2.05%
						36.12	42.07	
						36.12	35.17	
	ER-610 C1	37.4857	37.4877	0.005%	N/C	35.96	33.20	-5.15%
						35.96	38.87	
						35.96	30.25	
	Y-833 D1	37.1265	37.1273	0.002%	N/C	33.14	*6	-3.68%
						33.14	31.92	
						33.14	broke	
	923 E1	37.9865	37.9602	-0.069%	N/C	40.52	41.05	-2.42%
						40.52	39.80	
						40.52	37.77	
	ISO-800 F1	36.9714	36.9661	-0.014%	N/C	20.20	*3	-2.55%
						20.20	17.67	
						20.20	21.70	
		R-125 -> 24 HRS 302 F						
	U-475 A2	37.8072	37.7618	-0.120%	N/C	40.14	30.50	-10.81%
						40.14	37.70	
						40.14	39.20	
	Y-390 B2	37.3909	37.3677	-0.062%	Varnish Pockets	36.12	36.85	-10.02%
						36.12	31.65	
						36.12	29.00	
	ER-610 C2	37.6302	37.6029	-0.073%	N/C	35.96	33.35	-8.88%
						35.96	31.80	
						35.96	33.15	
	Y-833 D2	37.0162	36.9506	-0.177%	N/C	33.14	*3	-6.31%
						33.14	31.05	
						33.14	*2	
	923 E2	37.7107	37.6520	-0.156%	N/C	40.52	32.95	-12.47%
						40.52	32.75	
						40.52	40.70	
	ISO-800 F2	37.1228	37.1059	-0.046%	N/C	20.20	8.00	-41.73%
						20.20	8.15	
						20.20	19.16	

*Bond strength not included in average

		500 HRS IN R-125 @ 140 F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE	U-475 A1	38.5291	38.5390	0.026%	N/C	51.21	49.42	
						51.21	48.15	-8.26%
						51.21	43.37	
	Y-390 B1	38.8458	38.8556	0.025%	N/C	50.72	49.75	
						50.72	60.82	8.06%
						50.72	53.85	
	ER-610 C1	37.7271	37.7298	0.007%	N/C	58.33	52.25	
						58.33	55.40	-10.51%
						58.33	48.95	
	Y-833 D1	37.9983	37.9912	-0.019%	N/C	5.84	6.00	
						5.84	8.10	20.72%
						5.84	lost	
	923 E1	39.1852	39.1956	0.027%	N/C	49.26	39.27	
						49.26	39.60	-20.02%
						49.26	39.32	
	ISO-800 F1	38.0279	38.0297	0.005%	N/C	36.08	55.70	
						36.08	45.47	42.41%
						36.08	52.97	
		R-125-> 24 HRS 302 F						
POLYAMIDE IMIDE	U-475 A2	37.5879	37.5668	-0.056%	N/C	51.21	73.00	
						51.21	67.95	40.60%
						51.21	75.05	
	Y-390 B2	38.2550	38.2351	-0.052%	N/C	50.72	63.75	
						50.72	45.65	13.20%
						50.72	62.85	
	ER-610 C2	37.2382	37.2182	-0.054%	N/C	58.33	54.55	
						58.33	53.15	-7.19%
						58.33	54.70	
	Y-833 D2	37.2982	37.2556	-0.114%	N/C	5.84	2.00	
						5.84	broke	-65.75%
						5.84	2.00	
	923 E2	38.9400	38.9211	-0.049%	N/C	49.26	42.96	
						49.26	43.90	-10.84%
						49.26	44.90	
	ISO-800 F2	38.0697	38.0526	-0.045%	N/C	36.08	62.25	
						36.08	44.85	47.13%
						36.08	52.15	

	500 HRS IN R-125 @ 140 F				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	5.7870	5.7673	-0.340%	N/C	YES
B1	6.2820	6.2627	-0.307%	N/C	YES
C1	5.5910	5.5512	-0.712%	N/C	YES
	R-125 -> 302F 24 HRS				
A2	5.8551	5.8545	-0.010%	N/C	YES
B2	6.2047	6.2019	-0.045%	N/C	YES
C2	5.6289	5.6327	0.068%	N/C	YES

	500 hrs in R-125 at 140 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE	U-475 A1	5.3315	5.3299	-0.030%	N/C	NO
	Y-390 B1	5.2533	5.2562	0.055%	N/C	NO
	ER-610 C1	5.1190	5.1191	0.002%	N/C	NO
	Y-833 D1	5.2778	5.2798	0.038%	N/C	YES
	923 E1	5.3745	5.3745	0.000%	N/C	NO
	ISO-800 F1	5.1797	5.1795	-0.004%	N/C	NO
		R-125 -> 24 HRS @ 302F				
	U-475 A2	5.3009	5.2975	-0.064%	N/C	YES
	Y-390 B2	5.2219	5.2200	-0.036%	N/C	NO
	ER-610 C2	5.1316	5.1287	-0.057%	N/C	YES
	Y-833 D2	5.2734	5.2727	-0.013%	N/C	YES
	923 E2	5.6387	5.6376	-0.020%	N/C	NO
	ISO-800 F2	5.2067	5.2070	0.006%	N/C	NO

	R-125 at 140 F						
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX	
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	5.4760	5.4735	-0.046%	N/C	NO	
	Y-390 B1	5.8159	5.8141	-0.031%	N/C	NO	
	ER-610 C1	5.4904	5.4690	-0.390%	N/C	YES	
	Y-833 D1	5.2649	5.2653	0.008%	N/C	YES	
	923 E1	5.8073	5.8071	-0.003%	N/C	NO	
	ISO-800 F1	5.1773	5.1767	-0.012%	N/C	NO	
		R-125 -> 24 HRS @ 302F					
	U-475 A2	5.3829	5.3787	-0.078%	N/C	YES	
	Y-390 B2	5.7419	5.7439	0.035%	N/C	NO	
	ER-610 C2	5.6108	5.5890	-0.389%	N/C	YES	
	Y-833 D2	5.0629	5.0615	-0.028%	N/C	YES	
	923 E2	5.6817	5.6773	-0.077%	N/C	NO	
	ISO-800 F2	5.0834	5.0617	-0.427%	N/C	NO	

		R-125 at 140 F				
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER IMIDE	U-475 A1	5.6610	5.6602	-0.014%	N/C	NO
	Y-390 B1	3.9790	3.9622	-0.422%	N/C	NO
	ER-610 C1	5.1349	5.1353	0.008%	N/C	NO
	Y-833 D1	3.5206	3.5190	-0.045%	N/C	YES
	923 E1	5.4453	5.4458	0.009%	N/C	NO
	ISO-800 F1	4.9895	4.9608	-0.575%	N/C	YES
POLYAMIDE IMIDE		R-125 -> 24 HRS @ 302F				
	U-475 A2	5.4060	5.4052	-0.015%	N/C	YES
	Y-390 B2	5.7167	5.7139	-0.049%	N/C	NO
	ER-610 C2	5.1743	5.1729	-0.027%	N/C	NO
	Y-833 D2	5.1123	5.1119	-0.008%	N/C	YES
	923 E2	5.3961	5.3550	-0.762%	N/C	NO
	ISO-800 F2	5.3800	5.3799	-0.002%	N/C	NO

500 HRS IN R-125 @ 140 F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	2.2993	2.3361	1.60%	N/C	N/C
Y-390 B1	1.8397	1.8842	2.42%	N/C	N/C
ER-610 C1	2.9143	2.9827	2.35%	N/C	N/C
Y-833 D1	2.5433	2.5939	1.99%	N/C	N/C
923 E1	1.8270	1.8735	2.55%	N/C	N/C
ISO-800 F1	1.6265	1.6423	0.97%	N/C	N/C
	R-125 at ->302F 24 HRS				
U-475 A2	2.2500	2.2127	-1.66%	Darkened	N/C
Y-390 B2	1.7203	1.6822	-2.21%	Slightly warped	N/C
ER-610 C2	1.9862	1.9683	-0.90%	Darkened	N/C
Y-833 D2	1.9240	1.9095	-0.75%	N/C	N/C
923 E2	1.1838	1.1755	-0.70%	Slighlty Warped	N/C
ISO-800 F2	1.6070	1.5658	-2.56%	Slightly warped	N/C

500 HR IN R-125 @ 140 F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS Mils	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	4.5625	4.5628	0.01%	0.412	145.30	21	17.4	16.79	
				0.494	159.20	21	17.4	15.35	-5.14%
				0.410	149.60	21	17.4	17.38	
DA/MY/DA B1	4.0705	4.1196	1.21%	0.407	116.40	21	13.7	13.62	
				0.397	109.10	21	13.7	13.09	-3.84%
				0.379	102.00	21	13.7	12.82	
MYLAR MO C1	2.1565	2.1584	0.09%	0.495	87.50	10	21.7	17.68	
				0.438	78.45	10	21.7	17.91	-12.13%
				0.418	90.35	10	21.7	21.61	
NO 410 D1	2.9621	2.9432	-0.64%	0.458	84.65	11	18.7	16.80	
				0.526	102.00	11	18.7	17.63	-6.50%
				0.432	85.65	11	18.7	18.02	
NO MI 418 E1	2.3753	2.3642	-0.47%	0.500	27.75	9	7.5	6.17	
				0.509	29.00	9	7.5	6.33	-16.61%
				0.485	27.35	9	7.5	6.27	
MEL 228 F1	2.2965	2.2983	0.08%	0.416	82.25	10	21.7	19.77	
				0.440	76.55	10	21.7	17.40	-13.27%
				0.467	90.10	10	21.7	19.29	
	500 HRS IN R-125 ->24 HRS @ 302 F								R-125 -->
NO/MY/NO A2	4.4613	4.4584	-0.07%	0.521	153.00	21	17.4	13.98	
				0.417	154.30	21	17.4	17.62	-17.02%
				0.442	108.70	21	17.4	11.71	
DA/MY/DA B2	4.5090	4.4627	-1.03%	0.393	114.70	21	13.7	13.90	
				0.337	93.75	21	13.7	13.25	-2.43%
				0.444	120.80	21	13.7	12.96	
MYLAR MO C2	2.3352	2.3320	-0.14%	0.402	75.70	10	21.7	18.83	
				0.420	84.00	10	21.7	20.00	-12.21%
				0.425	77.85	10	21.7	18.32	
NOMEX 410 D2	2.2651	2.2001	-2.87%	0.439	82.95	11	18.7	17.18	
				0.513	108.60	11	18.7	19.25	-3.60%
				0.485	94.20	11	18.7	17.66	
NO/MI 418 E2	2.2896	2.2532	-1.59%	0.454	26.20	9	7.5	6.41	
				0.489	26.70	9	7.5	6.07	-14.26%
				0.477	29.25	9	7.5	6.81	
MEL 228 F2	2.3828	2.3784	-0.18%	0.427	82.95	10	21.7	19.43	
				0.493	95.05	10	21.7	19.28	-11.78%
				0.448	83.90	10	21.7	18.73	

After 500 hour exposure @ 140°F(60°C)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO A1	0.94	23.5%	20.0%		>18.97	>14.67		N/C
	0.48	12.0%	20.0%	2.5%	>18.97	>15.01	flash	
	1.04	26.0%	20.0%		>18.97	>14.11		
DA/MY/DA B1	0.64	32.0%	46.0%		>15.27	>12.75		N/C
	0.59	29.5%	46.0%	-33.2%	>15.27	>12.99	flash	
	lost	#####	46.0%		>15.27	>13.34		
MYLAR MO C1	1.84	92.0%	131.0%		>14.91	>13.62		N/C
	1.94	97.0%	131.0%	-10.2%	>14.91	>14.05	flash	
	3.28	164.0%	131.0%		>14.91	>12.57		
NO 410 D1	0.55	13.8%	17.0%		10.67	15.04		N/C
	0.63	15.8%	17.0%	-11.3%	10.67	11.16	16.4%	
	0.63	15.8%	17.0%		10.67	11.07		
NO MI 418 E1	0.08	2.0%	4.0%		10.23	9.50		N/C
	0.09	2.3%	4.0%	-45.8%	10.23	10.04	-5.9%	
	0.09	2.3%	4.0%		10.23	9.34		
MEL 228 F1	3.34	167.0%	160.0%		>14.22	>12.29		N/C
	2.46	123.0%	160.0%	-5.3%	>14.22	>13.29	flash	
	3.29	164.5%	160.0%		>14.22	>12.17		
After 500 hour exposure plus a 24 hour air bake at 320°F(150°C)								
NO/MY/NO A2	.13	3.2%	20.0%		>18.97	>14.25		bubbles
	0.72	18.0%	20.0%	-16.9%	>18.97	>14.78	flash	pulling
	0.61	15.3%	20.0%		>18.97	>14.67		away
DA/MY/DA B2	0.49	24.5%	46.0%		>15.27	>13.40		N/C
	0.55	27.5%	46.0%	-47.5%	>15.27	>13.36	flash	
	0.41	20.5%	46.0%		>15.27	>14.23		
MYLAR MO C2	2.45	122.5%	131.0%		>14.91	>13.63		N/C
	2.89	144.5%	131.0%	-1.4%	>14.91	>14.20	flash	
	2.41	120.5%	131.0%		>14.91	>12.10		
NOMEX 410 D2	0.61	15.3%	17.0%		10.67	10.35		N/C
	0.56	14.0%	17.0%	-20.6%	10.67	9.46	-7.9%	
	0.45	11.3%	17.0%		10.67	9.66		
NO/MI 418 E2	0.06	1.5%	4.0%		10.23	10.90		N/C
	0.07	1.8%	4.0%	-56.3%	10.23	8.68	-4.3%	
	0.08	2.0%	4.0%		10.23	9.80		
MEL 228 F2	3.22	161.0%	160.0%		>14.22	>13.14		N/C
	3.16	158.0%	160.0%	-2.5%	>14.22	>14.34	flash	
	2.98	149.0%	160.0%		>14.22	>13.48		

	500 HRS IN R-125 @ 140 F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5570	0.5620	0.90%	N/C
B1 MYLAR	0.5210	0.5262	1.00%	N/C
C1 NO/MY	0.4036	0.4042	0.15%	N/C
	R-125 ---->24 hrs @ 302F			
A2 NOMEX	0.5653	0.5438	-3.80%	N/C
B2 MYLAR	0.4806	0.4772	-0.71%	Some delamination pockets *see photo
C2 NO/MY	0.3983	0.3860	-3.09%	Pockects where mylar pulled away *see photo

	500 HRS IN R-125 @ 140 F								
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS
A1 Glass	1.5188	1.5119	-0.45%	39.02	34.20		0.03	1.50%	N/C
				39.02	34.30	-3.13%	0.04	2.00%	
				39.02	44.90		0.03	1.50%	
B1 Polyester	0.6223	0.6309	1.38%	56.12	63.00		0.64	32.00%	N/C
				56.12	59.45	5.73%	0.54	27.00%	
				56.12	55.55		0.62	31.00%	
C1 Permacel	1.7227	1.8374	6.66%	88.50	146.30		0.12	6.00%	N/C
				88.50	89.30	27.65%	0.10	5.00%	
				88.50	103.30		0.09	4.50%	
	500 HRS in R-125 -> 302 F 24 HRS								
A2 Glass	1.3779	1.3735	-0.32%	39.02	42.90		0.04	2.00%	N/C
				39.02	49.25	30.70%	0.04	2.00%	
				39.02	60.85		0.05	2.50%	
B2 Polyester	0.6050	0.6027	-0.38%	56.12	55.90		0.52	26.00%	N/C
				56.12	50.70	-0.60%	0.43	21.50%	
				56.12	60.75		0.70	35.00%	
C2 Permacel	1.4518	1.3762	-5.21%	88.50	117.00		0.08	4.00%	Slightly
				88.50	124.70	37.85%	0.09	4.50%	Darkened
				88.50	124.30		0.09	4.50%	

	500 HRS IN R-125 @ 140 F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1	0.2789	0.2801	0.43%	N/C	28.36	42.20		0.20	10.0%
					28.36	38.95	38.52%	0.23	11.5%
					28.36	36.70		0.23	11.5%
	500 HRS IN R-125 -> 24 HRS @ 302F								
A2	0.2601	0.2576	-0.961%	N/C	28.36	30.00		0.44	22.0%
					28.36	30.25	9.02%	0.42	21.0%
					28.36	32.50		0.39	19.5%

	500 HRS IN R-125 @ 140 F						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	4.0130	4.0188	0.14%	N/C	9.61	10.10	
A1					9.61	9.95	-0.07%
					9.61	8.76	
DTMD	4.3441	4.3606	0.38%	N/C	9.95	10.09	
B1					9.95	9.20	-2.55%
					9.95	9.80	
	R-125 - -> 24 HRS @ 302F						
DMD	4.0640	4.0556	-0.21%	N/C	9.61	7.89	
A2					9.61	8.75	-10.37%
					9.61	9.20	
DTMD	4.2724	4.2640	-0.20%	N/C	9.95	7.85	
B2					9.95	8.90	-10.62%
					9.95	9.93	

Appendix K

Experimental Data for HFC-32 Exposure at 60°C(140°F)

TWISTED PAIRS WITHOUT VARNISH

	500 HRS IN R-32 @ 140 F									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	24.2261	24.2619	0.148%	N/C	576	539		15.80	11.85	
					576	553	-9.3%	15.80	13.93	-13.6%
					576	475		15.80	15.19	
B1	24.0629	24.1299	0.278%	N/C	736	704		11.62	11.32	
					736	732	-2.6%	11.62	10.49	-5.1%
					736	714		11.62	11.26	
C1	21.9213	21.9522	0.141%	N/C	579	449		16.58	14.94	
					579	417	-24.0%	16.58	14.54	-13.6%
					579	454		16.58	13.51	
	R-32-->24 HRS @ 302 F									
A2	24.3791	24.3741	-0.021%	N/C	576	569		15.80	16.18	
					576	478	-7.5%	15.80	17.10	-2.2%
					576	552		15.80	13.07	
B2	24.0555	24.0491	-0.027%	N/C	736	631		11.62	11.85	
					736	727	-5.6%	11.62	11.94	0.8%
					736	726		11.62	11.34	
C2	21.9115	21.9051	-0.029%	N/C	579	572		16.58	17.66	
					579	488	-6.0%	16.58	14.85	-3.2%
					579	573		16.58	15.62	

	500 HOURS IN R-32 @ 140 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	22.1282	22.2030	0.338%	N/C	16.24	10.29		430	342	
						16.24	14.96	-18.49%	430	471	-8.14%
						16.24	14.46		430	372	
	Y-390 B1	22.3223	22.4285	0.476%	N/C	18.77	18.72		510	467	
						18.77	9.93	-24.67%	510	385	-7.91%
						18.77	13.77		510	557	
	ER-610 C1	21.6629	21.7377	0.345%	N/C	15.57	14.49		442	309	
						15.57	14.25	-17.17%	442	366	-24.28%
						15.57	9.95		442	329	
	Y-833 D1	21.7380	21.7708	0.151%	N/C	12.04	9.89		578	471	
						12.04	10.40	-15.89%	578	421	-22.43%
						12.04	10.09		578	453	
	923 E1	22.7043	22.8101	0.466%	N/C	16.76	20.00		606	556	
						16.76	17.29	2.53%	606	562	-9.90%
						16.76	14.26		606	520	
	ISO-800 F1	21.8757	21.9263	0.231%	N/C	19.08	broke		580	475	
						19.08	20.00	-0.24%	580	493	-19.48%
						19.08	18.07		580	433	
		24 HOURS AT 302 F									
	U-475 A2	23.5462	23.5495	0.014%	N/C	16.24	14.76		430	261	
						16.24	14.82	-20.96%	430	286	-36.28%
						16.24	8.93		430	275	
	Y-390 B2	22.7659	22.7667	0.004%	N/C	18.77	7.39		510	482	
						18.77	8.92	-54.00%	510	435	-9.22%
						18.77	9.59		510	472	
	ER-610 C2	22.3267	22.3266	0.000%	N/C	15.57	11.58		442	346	
						15.57	5.25	-54.68%	442	372	-22.40%
						15.57	4.34		442	311	
	Y-833 D2	21.5588	21.5543	-0.021%	N/C	12.04	11.76		578	573	
						12.04	10.05	-7.00%	578	554	-10.27%
						12.04	11.78		578	429	
	923 E2	22.4556	22.4548	-0.004%	N/C	16.76	9.72		606	492	
						16.76	4.83	-59.01%	606	549	-16.45%
						16.76	6.06		606	478	
	ISO-800 F2	21.6654	21.6654	0.000%	N/C	19.08	12.28		580	577	
						19.08	14.87	-28.85%	580	448	-12.24%
						19.08	broke		580	502	

	500 HOURS IN R-32 @ 140 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	26.7675	26.8676	0.37%	N/C	13.32	14.04		746	708	
						13.32	11.07	-1.80%	746	705	-6.30%
						13.32	14.13		746	684	
	Y-390 B1	23.6582	23.8639	0.87%	N/C	12.28	13.80		755	724	
						12.28	14.66	11.78%	755	726	-3.80%
						12.28	12.72		755	729	
	ER-610 C1	22.9426	23.0361	0.41%	N/C	12.73	11.17		734	689	
						12.73	12.32	-0.94%	734	731	-2.36%
						12.73	14.34		734	730	
	Y-833 D1	23.5357	23.5557	0.08%	N/C	12.49	10.63		734	728	
						12.49	12.10	-10.84%	734	728	-0.91%
						12.49	10.68		734	726	
	923 E1	26.3687	26.5639	0.74%	N/C	14.38	12.36		742	730	
						14.38	15.34	-3.18%	742	724	-2.07%
						14.38	14.07		742	726	
	ISO-800 F1	23.2657	23.3529	0.37%	N/C	12.29	11.65		747	795	
						12.29	12.28	-0.24%	747	738	1.20%
						12.29	12.85		747	735	
		R-32 --> 24 hours @ 302 F									
	U-475 A2	25.9263	25.9345	0.03%	N/C	13.32	12.62		746	728	
						13.32	11.15	-10.71%	746	714	-5.36%
						13.32	11.91		746	676	
	Y-390 B2	23.5550	23.5538	-0.01%	N/C	12.28	11.26		755	731	
						12.28	11.00	-11.05%	755	728	-3.38%
						12.28	10.51		755	730	
	ER-610 C2	23.1543	23.1452	-0.04%	N/C	12.73	12.04		734	729	
						12.73	12.09	-14.45%	734	678	-6.77%
						12.73	8.54		734	646	
	Y-833 D2	22.5095	22.5069	-0.01%	N/C	12.49	11.44		734	700	
						12.49	11.66	-7.82%	734	699	-3.59%
						12.49	11.44		734	724	
	923 E2	26.3520	26.3471	-0.02%	N/C	14.38	9.68		742	711	
						14.38	10.30	-33.59%	742	721	-4.18%
						14.38	8.67		742	723	
	ISO-800 F2	28.9787	28.9616	-0.06%		12.29	12.71		747	732	
					N/C	12.29	12.21	-1.19%	747	741	-1.41%
						12.29	11.51		747	728	

	500 HOURS IN R-32 @ 140 F										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE	U-475 A1	23.4125	23.4419	0.126%	N/C	15.10	10.54		469	490	
						15.10	9.50	-33.71%	469	471	0.85%
						15.10	9.99		469	458	
	Y-390 B1	22.1545	22.2518	0.439%	N/C	18.24	16.16		473	560	
						18.24	20.00	-2.85%	473	561	13.11%
						18.24	17.00		473	484	
	ER-610 C1	22.5643	22.6243	0.266%	N/C	14.53	12.91		494	278	
						14.53	16.31	-8.74%	494	340	-37.72%
						14.53	10.56		494	305	
	Y-833 D1	24.9140	24.9782	0.258%	N/C	11.38	15.45		557	504	
						11.38	10.96	35.94%	557	562	-7.72%
						11.38	20.00		557	476	
	923 E1	23.2640	23.3627	0.424%	N/C	15.85	broke		503	*733	
						15.85	12.44	-21.51%	503	490	-3.58%
						15.85	broke		503	480	
	ISO-800 F1	21.9105	21.9564	0.209%	N/C	14.75	15.05		632	446	
						14.75	17.77	19.37%	632	459	-24.47%
						14.75	20.00		632	527	
		R-32 --> 24 hours @ 302 F									
POLYAMIDE IMIDE	U-475 A2	23.7752	23.7714	-0.016%	N/C	15.10	11.33		469	545	
						15.10	9.64	-34.83%	469	481	4.90%
						15.10	8.55		469	450	
	Y-390 B2	22.3536	22.3663	0.057%	N/C	18.24	9.04		473	435	
						18.24	9.02	-43.39%	473	384	2.40%
						18.24	11.63		473	634	
	ER-610 C2	22.4434	22.4437	0.001%	N/C	14.53	12.49		494	334	
						14.53	11.94	-15.07%	494	391	-30.90%
						14.53	12.59		494	299	
	Y-833 D2	23.9644	23.9458	-0.078%	N/C	11.38	9.65		557	573	
						11.38	11.63	-8.23%	557	531	-1.68%
						11.38	10.05		557	539	
	923 E2	22.9571	22.9510	-0.027%	N/C	15.85	7.06		503	402	
						15.85	8.41	-56.38%	503	597	-1.06%
						15.85	5.27		503	494	
	ISO-800 F2	21.7519	21.7516	-0.001%	N/C	14.75	13.29		632	536	
						14.75	11.31	-14.12%	632	571	-9.60%
						14.75	13.40		632	607	

*Left lid of Burnout Tester open to observe sample.

		500 HRS IN R-32 @ 140 F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	39.3430	39.5255	0.464%	N/C	73.73	62.87	
						73.73	66.57	-11.55%
						73.73	66.20	
	Y-390 B1	39.0693	39.2649	0.501%	N/C	43.78	52.55	
						43.78	47.55	9.11%
						43.78	43.20	
	ER-610 C1	37.9682	38.1777	0.552%	N/C	51.81	48.65	
						51.81	50.35	-0.47%
						51.81	55.70	
	Y-833 D1	38.2552	38.3730	0.308%	N/C	9.85	27.05	
						9.85	18.45	114.11%
						9.85	17.77	
	923 E1	38.7620	38.9528	0.492%	N/C	41.28	29.12	
						41.28	37.92	-21.24%
						41.28	30.50	
	ISO-800 F1	36.9588	37.0676	0.294%	N/C	45.01	27.20	
						45.01	28.07	-38.60%
						45.01	31.60	
		R-32 -> 24 HRS 302 F						
	U-475 A2	39.4197	39.4193	-0.001%	small	73.73	5.70	
					pockets	73.73	9.60	-86.23%
						73.73	10.70	
	Y-390 B2	39.1560	39.1350	-0.054%	small	43.78	12.75	
					pockets	43.78	6.88	-80.06%
						43.78	6.57	
	ER-610 C2	37.8344	37.8320	-0.006%	small	51.81	2.73	
					pockets	51.81	4.10	-92.90%
						51.81	4.20	
	Y-833 D2	39.1627	39.1194	-0.111%	N/C	9.85	11.50	
						9.85	7.10	-26.90%
						9.85	3.00	
	923 E2	37.6732	37.6703	-0.008%	small	41.28	29.77	
					pockets	41.28	15.27	-55.96%
						41.28	9.50	
	ISO-800 F2	37.2624	37.2627	0.001%	N/C	45.01	49.37	
						45.01	32.90	-18.99%
						45.01	27.12	

		500 HRS IN R-32 @ 140 F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	37.1538	37.4124	0.696%	N/C	40.14	59.80	38.12%
						40.14	43.27	
						40.14	63.25	
	Y-390 B1	37.3189	37.6404	0.861%	N/C	36.12	60.20	75.18%
						36.12	57.82	
						36.12	71.80	
	ER-610 C1	38.0592	38.2561	0.517%	N/C	35.96	49.37	34.63%
						35.96	48.35	
						35.96	47.52	
	Y-833 D1	36.9525	37.1375	0.501%	N/C	33.14	broke	83.77%
						33.14	58.55	
						33.14	63.25	
	923 E1	38.6222	38.8701	0.642%	N/C	40.52	54.50	21.82%
						40.52	46.92	
						40.52	46.67	
	ISO-800 F1	37.6491	37.7581	0.290%	N/C	20.20	26.57	28.61%
						20.20	24.87	
						20.20	26.50	
		R-32 -> 24 HRS 302 F						
	U-475 A2	38.1236	38.1176	-0.016%	small	40.14	26.82	-34.86%
					pockets	40.14	27.05	
					in Varn	40.14	24.57	
	Y-390 B2	37.3841	37.7274	0.918%	small	36.12	25.90	-36.81%
					pocket	36.12	17.92	
					in Varn	36.12	24.65	
	ER-610 C2	37.2288	37.3500	0.326%	small	35.96	30.27	-31.60%
					pocket	35.96	21.40	
					in Varn	35.96	22.12	
	Y-833 D2	36.2789	36.2671	-0.033%	small	33.14	30.80	-17.85%
					pocket	33.14	25.57	
					in Varn	33.14	25.30	
	923 E2	38.6152	38.6101	-0.013%	small	40.52	11.00	-74.58%
					pocket	40.52	10.30	
					in Varn	40.52	9.60	
	ISO-800 F2	37.7990	37.7507	-0.128%	N/C	20.20	19.15	-5.71%
						20.20	17.52	
						20.20	20.47	

		500 HRS IN R-32 @ 140 F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE	U-475 A1	38.3767	38.5541	0.462%	N/C	51.21	40.20	4.37%
						51.21	68.27	
						51.21	51.87	
	Y-390 B1	39.2515	39.4782	0.578%	N/C	50.72	48.82	-8.43%
						50.72	45.95	
						50.72	44.57	
	ER-610 C1	37.2554	37.4610	0.552%	N/C	58.33	44.87	-15.26%
						58.33	58.85	
						58.33	44.57	
	Y-833 D1	37.5577	37.6008	0.115%	N/C	5.84	10.16	215.58%
						5.84	26.70	
						5.84	broke	
	923 E1	38.1450	38.6672	1.369%	N/C	49.26	33.75	-27.63%
						49.26	37.45	
						49.26	35.75	
	ISO-800 F1	37.5587	37.6634	0.279%	N/C	36.08	9.70	-19.82%
						36.08	32.17	
						36.08	44.92	
		R-32-> 24 HRS 302 F						
POLYAMIDE IMIDE	U-475 A2	38.1246	38.1192	-0.014%	small pockets in Varn	51.21	60.00	-20.97%
						51.21	53.92	
						51.21	7.50	
	Y-390 B2	38.8664	38.8773	0.028%	small pockets in Varn	50.72	14.25	-41.76%
						50.72	33.62	
						50.72	40.75	
	ER-610 C2	37.3591	37.2226	-0.365%	small pockets in Varn	58.33	3.50	-94.51%
						58.33	3.00	
						58.33	3.10	
	Y-833 D2	37.7553	37.6547	-0.266%	N/C	5.84	7.10	-9.25%
						5.84	3.50	
						5.84	broke	
	923 E2	39.2109	39.2013	-0.024%	small pockets in Varn	49.26	8.50	-82.88%
						49.26	9.00	
						49.26	7.80	
	ISO-800 F2	38.5920	38.5496	-0.110%	N/C	36.08	52.97	13.40%
						36.08	47.17	
						36.08	22.60	

	500 HRS IN R-32 @ 140 F				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	4.7835	4.7904	0.144%	N/C	
					YES
B1	4.8552	4.8697	0.299%	N/C	
					YES
C1	5.5652	5.5748	0.173%	N/C	
					YES
	R-32 -> 302F 24 HRS				
A2	4.6566	4.6557	-0.019%	N/C	
					YES
B2	4.8191	4.8198	0.015%	N/C	
					YES
C2	5.5709	5.5698	-0.020%	N/C	
					YES

	500 hrs in R-32 at 140 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE	U-475 A1	5.3667	5.3852	0.345%	N/C	YES
	Y-390 B1	5.5409	5.5682	0.493%	N/C	NO
	ER-610 C1	5.1505	5.1625	0.233%	N/C	YES
	Y-833 D1	4.8197	4.8263	0.137%	N/C	YES
	923 E1	5.4649	5.5152	0.920%	N/C	NO
	ISO-800 F1	5.3180	5.3338	0.297%	N/C	YES
		R-32-> 24 HRS @ 302F				
	U-475 A2	5.4166	5.4174	0.015%	N/C	NO
	Y-390 B2	5.6706	5.6751	0.079%	N/C	NO
	ER-610 C2	5.1260	5.1262	0.004%	N/C	YES
	Y-833 D2	4.9728	4.9725	-0.006%	N/C	YES
	923 E2	5.4262	5.4244	-0.033%	N/C	NO
	ISO-800 F2	5.3742	5.3750	0.015%	N/C	NO

	R-32 at 140 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	4.7536	4.8165	1.323%	N/C	NO
	Y-390 B1	5.1534	5.1664	0.252%	N/C	NO
	ER-610 C1	5.1129	5.1285	0.305%	N/C	YES
	Y-833 D1	5.0029	5.0216	0.374%	N/C	YES
	923 E1	5.0176	5.0471	0.588%	N/C	NO
	ISO-800 F1	5.0771	5.0910	0.274%	N/C	NO
		R-32-> 24 HRS @ 302F				
	U-475 A2	4.8150	4.8180	0.062%	N/C	NO
	Y-390 B2	5.1780	5.1615	-0.319%	N/C	NO
	ER-610 C2	5.2016	5.1971	-0.087%	N/C	YES
	Y-833 D2	5.0204	5.0182	-0.044%	N/C	YES
	923 E2	5.0068	5.0080	0.024%	N/C	NO
	ISO-800 F2	5.2100	5.2136	0.069%	N/C	NO

		R-32 at 140 F				
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER IMIDE	U-475 A1	5.4099	5.4291	0.355%	N/C	YES
	Y-390 B1	5.2117	5.2370	0.485%	N/C	NO
	ER-610 C1	5.5031	5.5118	0.158%	N/C	YES
	Y-833 D1	4.8109	4.8196	0.181%	N/C	YES
	923 E1	5.5256	5.5486	0.416%	N/C	NO
	ISO-800 F1	5.3274	5.3384	0.206%	N/C	NO
POLYAMIDE IMIDE		R-32 -> 24 HRS @ 302F				
	U-475 A2	5.3004	5.3028	0.045%	N/C	NO
	Y-390 B2	5.3558	5.3562	0.007%	N/C	NO
	ER-610 C2	5.6200	5.6206	0.011%	N/C	YES
	Y-833 D2	4.8195	4.8196	0.002%	N/C	YES
	923 E2	5.5091	5.5148	0.103%	N/C	NO
	ISO-800 F2	5.4299	5.4301	0.004%	N/C	NO

500 HRS IN R-32 @ 140 F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	2.0610	2.2277	8.09%	N/C	Slightly more Flexible
Y-390 B1	2.2609	2.4151	6.82%	N/C	slightly more flexible
ER-610 C1	2.1411	2.3385	9.22%	N/C	more flexible
Y-833 D1	1.9698	2.1565	9.48%	N/C	flexible
923 E1	1.6573	1.7579	6.07%	slightly warped	more flexible
ISO-800 F1	1.6188	1.6967	4.81%	warped	slightly more flexible
	R-32--->302F for 24 HRS				
U-475 A2	2.7049	2.6479	-2.11%	many pockets darkened	brittle
Y-390 B2	2.4693	2.3974	-2.91%	many pockets lightened	warped brittle
ER-610 C2	2.3109	2.3080	-0.13%	few big pockets	darkened N/C
Y-833 D2	2.6208	2.5472	-2.81%	many pockets lightened	brittle
923 E2	1.9706	1.8615	-5.54%	many pockets	brittle
ISO-800 F2	1.4728	1.3592	-7.71%	many pockets lightened	warped brittle

500 HR IN R-32 @ 140 F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS Mils	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	4.6528	4.9171	5.68%	0.381	122.30	21	17.4	15.29	
				0.364	114.60	21	17.4	14.99	-12.13%
				0.384	125.70	21	17.4	15.59	
DA/MY/DA B1	4.5349	4.7017	3.68%	0.527	131.90	21	13.7	11.92	
				0.431	111.10	21	13.7	12.27	-12.19%
				0.476	118.90	21	13.7	11.89	
MYLAR MO C1	2.1239	2.2094	4.03%	0.432	89.90	10	21.7	20.81	
				0.493	97.65	10	21.7	19.81	-6.71%
				0.477	95.95	10	21.7	20.12	
NO 410 D1	2.0229	2.1510	6.33%	0.531	98.05	11	18.7	16.79	
				0.422	81.55	11	18.7	17.57	-7.71%
				0.501	96.00	11	18.7	17.42	
NO MI 418 E1	2.5480	2.6046	2.22%	0.475	23.45	9	7.5	5.49	
				0.480	24.30	9	7.5	5.63	-24.87%
				0.490	25.55	9	7.5	5.79	
MEL 228 F1	2.3562	2.4685	4.77%	0.470	86.80	10	21.7	18.47	
				0.395	76.95	10	21.7	19.48	-11.43%
				0.495	97.55	10	21.7	19.71	
	->24 HRS @ 302 F								--> 302 F
NO/MY/NO A2	5.0134	5.0066	-0.14%	0.381	144.10	21	17.4	18.01	
				0.361	131.10	21	17.4	17.29	1.48%
				0.505	187.40	21	17.4	17.67	
DA/MY/DA B2	4.4380	4.4317	-0.14%	0.340	95.45	21	13.7	13.37	
				0.365	107.40	21	13.7	14.01	-0.53%
				0.420	119.10	21	13.7	13.50	
MYLAR MO C2	2.3016	2.3074	0.25%	0.392	79.60	10	21.7	20.31	
				0.530	107.50	10	21.7	20.28	-7.63%
				0.385	75.25	10	21.7	19.55	
NOMEX 410 D2	2.5629	2.5573	-0.22%	0.438	91.60	10	18.7	20.91	
				0.492	101.80	10	18.7	20.69	10.98%
				0.502	103.70	10	18.7	20.66	
NO/MI 418 E2	2.2461	2.2466	0.02%	0.527	29.50	9	7.5	6.22	
				0.480	25.45	9	7.5	5.89	-19.35%
				0.487	26.45	9	7.5	6.03	
MEL 228 F2	2.2656	2.2710	0.24%	0.474	78.55	10	21.7	16.57	
				0.436	83.40	10	21.7	19.13	-15.78%
				0.522	99.85	10	21.7	19.13	

After 500 hour exposure @ 140°F(60°C)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO	1.23	30.8%	20.0%		>18.97	>14.84		N/C
A1	0.96	24.0%	20.0%	38.8%	>18.97	>14.14	flash	
	1.26	31.5%	20.0%		>18.97	>14.40		
DA/MY/DA	0.62	31.0%	46.0%		>15.27	>12.47		N/C
B1	0.61	30.5%	46.0%	-33.3%	>15.27	>13.36	flash	
	0.61	30.5%	46.0%		>15.27	>12.93		
MYLAR MO	3.21	160.5%	131.0%		>14.91	>13.17		N/C
C1	3.09	154.5%	131.0%	21.9%	>14.91	>13.24	flash	
	3.28	164.0%	131.0%		>14.91	>13.34		
NO 410	0.74	18.5%	17.0%		10.67	11.17		N/C
D1	0.79	19.8%	17.0%	13.2%	10.67	11.20	3.3%	
	0.78	19.5%	17.0%		10.67	10.71		
NO MI 418	0.07	1.8%	4.0%		10.23	10.25		N/C
E1	0.07	1.8%	4.0%	-56.3%	10.23	8.50	-6.1%	
	0.07	1.8%	4.0%		10.23	10.07		
MEL 228	3.37	168.5%	160.0%		>14.22	>13.26		N/C
F1	3.49	174.5%	160.0%	9.7%	>14.22	>13.81	flash	
	3.67	183.5%	160.0%		>14.22	>12.20		
		After 500 hour exposure plus a 24 hour airbake at 302°F(150°C)						
NO/MY/NO	1.00	25.0%	20.0%		>18.97	>14.96		few bubbles
A2	0.93	23.3%	20.0%	20.4%	>18.97	>13.71	flash	between
	0.96	24.0%	20.0%		>18.97	>14.21		layer
DA/MY/DA	0.47	23.5%	46.0%		>15.27	>13.94		few bubbles
B2	0.56	28.0%	46.0%	-43.8%	>15.27	>13.21	flash	between
	0.52	26.0%	46.0%		>15.27	>14.24		layer
MYLAR MO	2.94	147.0%	131.0%		>14.91	>12.82		N/C
C2	3.17	158.5%	131.0%	10.1%	>14.91	>13.61	flash	
	2.54	127.0%	131.0%		>14.91	>12.42		
NOMEX 410	0.66	16.5%	17.0%		10.67	10.60		N/C
D2	0.61	15.3%	17.0%	-3.4%	10.67	11.07	6.0%	
	0.70	17.5%	17.0%		10.67	12.27		
NO/MI 418	0.08	2.0%	4.0%		10.23	10.95		N/C
E2	0.06	1.5%	4.0%	-58.3%	10.23	9.94	-4.1%	
	0.06	1.5%	4.0%		10.23	8.55		
MEL 228	3.14	157.0%	160.0%		>14.22	>14.23		Few
F2	3.09	154.5%	160.0%	-0.8%	>14.22	>12.39	flash	bubbles
	3.29	164.5%	160.0%		>14.22	>13.46		

	500 HRS IN R-32 @ 140 F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5460	0.5535	1.37%	Bubbles between layers
B1 MYLAR	0.4669	0.5056	8.29%	Bubbles between layers
C1 NO/MY	0.4051	0.4219	4.15%	N/C
	R-32 ---->24 hrs @ 302F			
A2 NOMEX	0.5508	0.5411	-1.76%	N/C
B2 MYLAR	0.4777	0.4740	-0.77%	Some delamination Pockets
C2 NO/MY	0.3517	0.3501	-0.45%	Pockects where mylar pulled away

TAPE

	500 HRS IN R-32 @ 140 F									
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS	
A1 Glass	1.4662	1.4682	0.14%	39.02	46.20		0.06	3.00%	N/C	
				39.02	41.95	15.75%	0.06	3.00%		
				39.02	47.35		0.06	3.00%		
B1 Polyester	0.6329	0.6543	3.38%	56.12	59.55		0.63	31.50%	N/C	
				56.12	51.15	2.52%	0.45	22.50%		
				56.12	61.90		0.75	37.50%		
C1 Permacel	1.3595	1.3650	0.40%	88.50	96.60		0.14	7.00%	N/C	
				88.50	83.70	-7.68%	0.14	7.00%		
				88.50	64.80		0.13	6.50%		
	500 HRS in R-32 -> 302 F 24 HRS									
A2 Glass	1.3560	1.3593	0.24%	39.02	41.20		0.05	2.50%	N/C	
				39.02	44.92	23.56%	0.07	3.50%		
				39.02	58.52		0.05	2.50%		
B2 Polyester	0.5705	0.5708	0.05%	56.12	59.10		0.71	35.50%	N/C	
				56.12	53.12	0.69%	0.51	25.50%		
				56.12	57.30		0.63	31.50%		
C2 Permacel	1.4109	1.3579	-3.76%	88.50	74.47		0.10	5.00%	N/C	
				88.50	58.77	-11.28%	0.06	3.00%		
				88.50	102.30		0.10	5.00%		

	500 HRS IN R-32 @ 140 F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1	0.2670	0.2721	1.91%	N/C	28.36	36.65		0.37	18.5%
					28.36	33.95	25.94%	0.34	17.0%
					28.36	36.55		0.34	17.0%
	500 HRS IN R-32 -> 24 HRS @ 302F								
A2	0.2680	0.2624	-2.09%	N/C	28.36	33.27		0.39	19.5%
					28.36	31.67	8.12%	0.38	19.0%
	-				28.36	27.05		0.35	17.5%

	500 HRS IN R-32 @ 140 F						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	4.0420	4.0576	0.39%	N/C	9.61	8.64	
A1					9.61	9.37	-4.13%
					9.61	9.63	
DTMD	4.3599	4.4126	1.21%	N/C	9.95	8.42	
B1					9.95	9.07	-9.41%
					9.95	9.55	
	R-32 - -> 24 HRS @ 302F						
DMD	4.1134	4.1122	-0.03%	N/C	9.61	8.90	
A2					9.61	9.14	-4.13%
					9.61	9.60	
DTMD	4.3652	4.3633	-0.04%	N/C	9.95	9.94	
B2					9.95	7.06	-4.25%
					9.95	11.58	

Appendix L

Experimental Data for HFC-143a Exposure at 60°C(140°F)

TWISTED PAIRS WITHOUT VARNISH

	500 HRS IN R-143a @ 140 F									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	24.6950	24.6989	0.016%	N/C	576	546		15.80	19.03	
					576	561	-6.5%	15.80	18.70	18.4%
					576	509		15.80	18.37	
B1	22.8557	22.8670	0.049%	N/C	736	735		11.62	12.02	
					736	733	-0.3%	11.62	12.31	1.5%
					736	733		11.62	11.04	
C1	24.7617	24.7638	0.008%	N/C	579	494		16.58	11.87	
					579	553	-10.1%	16.58	17.15	-12.8%
					579	514		16.58	14.36	
	R-143a-->24 HRS @ 302 F									
A2	24.5883	24.5695	-0.076%	N/C	576	599		15.80	12.16	
					576	581	0.6%	15.80	17.79	-0.1%
					576	558		15.80	17.42	
B2	22.5195	22.5155	-0.018%	N/C	736	730		11.62	10.83	
					736	730	-0.8%	11.62	10.09	-8.0%
					736	730		11.62	11.14	
C2	24.3511	24.3490	-0.009%	N/C	579	501		16.58	17.00	
					579	528	-16.5%	16.58	10.52	-12.4%
					579	422		16.58	16.06	

500 HOURS IN R-143a @ 140 F											
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	23.3173	23.3265	0.039%	N/C	16.24	20.00		430	371	
						16.24	20.00	12.58%	430	368	-22.25%
						16.24	14.85		430	264	
	Y-390 B1	22.6923	22.6999	0.033%	N/C	18.77	20.00		510	460	
						18.77	14.09	-23.92%	510	421	-7.78%
						18.77	8.75		510	530	
	ER-610 C1	22.5762	22.5798	0.016%	N/C	15.57	13.04		442	366	
						15.57	13.09	-9.51%	442	391	-14.48%
						15.57	16.14		442	377	
	Y-833 D1	21.2975	21.3001	0.012%	N/C	12.04	13.29		578	555	
						12.04	10.09	-7.34%	578	567	-4.27%
						12.04	10.09		578	538	
	923 E1	22.6822	22.6943	0.053%	N/C	16.76	broke		606	452	
						16.76	20.00	19.33%	606	405	-25.91%
						16.76	20.00		606	490	
	ISO-800 F1	21.5037	21.5047	0.005%	N/C	19.08	20.00		580	481	
						19.08	20.00	4.82%	580	511	-10.69%
						19.08	20.00		580	562	
		24 HOURS AT 302 F									
	U-475 A2	23.4289	23.4304	0.006%	N/C	16.24	20.00		430	369	
						16.24	20.00	23.15%	430	378	-19.84%
						16.24	20.00		430	287	
	Y-390 B2	21.7695	21.7706	0.005%	N/C	18.77	20.00		510	485	
						18.77	20.00	6.55%	510	449	-4.44%
						18.77	20.00		510	528	
	ER-610 C2	22.1502	22.1520	0.008%	N/C	15.57	15.94		442	384	
						15.57	15.50	-4.73%	442	380	-12.97%
						15.57	13.06		442	390	
	Y-833 D2	21.1923	21.1946	0.011%	N/C	12.04	11.01		578	528	
						12.04	11.89	-0.14%	578	494	-14.07%
						12.04	13.17		578	468	
	923 E2	22.5625	22.5659	0.015%	N/C	16.76	broke		606	472	
						16.76	20.00	19.33%	606	502	-19.80%
						16.76	20.00		606	484	
	ISO-800 F2	21.9676	21.9696	0.009%	N/C	19.08	14.45		580	534	
						19.08	16.01	-19.16%	580	460	-10.63%
						19.08	15.81		580	561	

500 HOURS IN R-143a @ 140 F											
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	22.4180	22.4280	0.04%	N/C	13.32	12.58		746	719	
						13.32	10.81	-13.11%	746	730	-4.83%
						13.32	11.33		746	681	
	Y-390 B1	24.4351	24.4480	0.05%	N/C	12.28	10.69		755	740	
						12.28	12.55	-5.37%	755	736	-2.56%
						12.28	broke		755	731	
	ER-610 C1	22.8381	22.8474	0.04%	N/C	12.73	10.80		734	642	
						12.73	13.04	-4.95%	734	728	-4.77%
						12.73	12.46		734	727	
	Y-833 D1	21.4211	21.4328	0.05%	N/C	12.49	11.95		734	706	
						12.49	11.38	-7.21%	734	698	-7.08%
						12.49	11.44		734	642	
	923 E1	22.3550	22.3653	0.05%	N/C	14.38	11.65		742	726	
						14.38	11.40	-19.82%	742	726	-2.25%
						14.38	11.54		742	724	
	ISO-800 F1	23.3855	23.3542	-0.13%	N/C	12.29	12.02		747	726	
						12.29	12.47	1.95%	747	730	-2.28%
						12.29	13.10		747	734	
		R-143a --> 24 hours @ 302 F									
	U-475 A2	22.4680	22.4703	0.01%	N/C	13.32	13.62		746	683	
						13.32	13.46	-0.38%	746	712	-5.54%
						13.32	12.73		746	719	
	Y-390 B2	22.7931	22.7973	0.02%	N/C	12.28	12.60		755	734	
						12.28	13.11	1.19%	755	738	-2.52%
						12.28	11.57		755	741	
	ER-610 C2	22.7974	22.8029	0.02%	N/C	12.73	11.32		734	732	
						12.73	10.47	-14.64%	734	730	-0.59%
						12.73	10.81		734	727	
	Y-833 D2	21.9966	21.9925	-0.02%	N/C	12.49	10.91		734	683	
						12.49	10.65	-10.73%	734	718	-5.59%
						12.49	11.89		734	678	
	923 E2	22.5370	22.5405	0.02%	N/C	14.38	11.92		742	725	
						14.38	12.18	-16.09%	742	730	-2.29%
						14.38	12.10		742	727	
	ISO-800 F2	23.6019	23.6012	0.00%		12.29	12.43		747	662	
					N/C	12.29	12.57	-1.44%	747	664	-11.24%
						12.29	11.34		747	651	

500 HOURS IN R-143a @ 140 F												
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE	U-475 A1	25.0103	25.0220	0.047%	N/C	15.10	13.52		469	371	
						15.10	11.54	-6.27%	469	368	-23.67%
						15.10	17.40		469	335	
	Y-390 B1	22.0759	22.0851	0.042%	N/C	18.24	15.20		473	403	
						18.24	20.00	-10.38%	473	547	2.68%
						18.24	13.84		473	507	
	ER-610 C1	21.6449	21.6517	0.031%	N/C	14.53	15.56		494	390	
						14.53	10.00	-6.03%	494	394	-21.93%
						14.53	15.40		494	373	
	Y-833 D1	20.9431	20.9442	0.005%	N/C	11.38	11.37		557	535	
						11.38	10.87	-1.55%	557	565	-6.28%
						11.38	11.37		557	466	
	923 E1	20.9033	20.9117	0.040%	N/C	15.85	broke		503	450	
						15.85	11.77	-29.75%	503	483	-10.40%
						15.85	10.50		503	419	
	ISO-800 F1	21.9538	21.9559	0.010%	N/C	14.75	13.75		632	594	
						14.75	20.00	21.47%	632	464	-13.77%
						14.75	20.00		632	577	
POLYAMIDE IMIDE		R-143a --> 24 hours @ 302 F									
	U-475 A2	21.7230	21.7256	0.012%	N/C	15.10	15.15		469	274	
						15.10	13.15	-10.26%	469	245	-41.36%
						15.10	12.35		469	306	
	Y-390 B2	21.9468	21.9493	0.011%	N/C	18.24	10.95		473	487	
						18.24	13.50	-30.98%	473	540	1.06%
						18.24	11.68		473	407	
	ER-610 C2	21.4988	21.5023	0.016%	N/C	14.53	15.68		494	364	
						14.53	14.05	-14.57%	494	402	-24.90%
						14.53	7.51		494	347	
	Y-833 D2	20.8780	20.8776	-0.002%	N/C	11.38	12.01		557	432	
						11.38	11.83	-2.78%	557	452	-16.40%
						11.38	9.35		557	513	
	923 E2	21.9751	21.9606	-0.066%	N/C	15.85	20.00		503	671	
						15.85	20.00	26.18%	503	520	12.06%
						15.85	20.00		503	500	
	ISO-800 F2	21.8620	21.8644	0.011%	N/C	14.75	16.30		632	585	
						14.75	18.96	8.43%	632	569	-8.81%
						14.75	12.72		632	575	

		500 HRS IN R-143a @ 140 F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	39.1065	39.1215	0.038%	N/C	73.73	53.82	
						73.73	75.45	-6.28%
						73.73	78.02	
	Y-390 B1	39.2553	39.2701	0.038%	N/C	43.78	51.92	
						43.78	69.60	43.27%
						43.78	66.65	
	ER-610 C1	38.0860	38.0971	0.029%	N/C	51.81	58.62	
						51.81	59.02	13.50%
						51.81	58.77	
	Y-833 D1	36.9522	36.9987	~0.018	N/C	9.85	13.72	
						9.85	13.27	8.26%
						9.85	5.00	
	923 E1	39.0071	39.0216	0.037%	N/C	41.28	45.60	
						41.28	40.70	6.91%
						41.28	46.10	
	ISO-800 F1	37.4284	37.4468	0.049%	N/C	45.01	57.55	
						45.01	44.37	13.22%
						45.01	47.95	
		R-143a -> 24 HRS 302 F						
	U-475 A2	38.6243	38.6222	-0.005%	N/C	73.73	77.32	
						73.73	81.65	4.69%
						73.73	72.72	
	Y-390 B2	39.6367	39.6364	-0.001%	N/C	43.78	52.70	
						43.78	58.10	22.33%
						43.78	49.87	
	ER-610 C2	38.3360	38.3327	-0.009%	N/C	51.81	59.67	
						51.81	56.42	12.49%
						51.81	58.75	
	Y-833 D2	37.7212	37.7033	-0.047%	N/C	9.85	13.00	
						9.85	3.00	13.43%
						9.85	17.52	
	923 E2	37.4689	37.4715	0.007%	N/C	41.28	43.37	
						41.28	51.55	20.09%
						41.28	53.80	
	ISO-800 F2	36.4542	36.4522	-0.005%	N/C	45.01	42.60	
						45.01	42.77	-3.29%
						45.01	45.22	

		500 HRS IN R-143a @ 140 F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE EPOXY GLASS	U-475 A1	36.9782	36.9946	0.044%	N/C	40.14	30.42	
						40.14	35.95	-15.35%
						40.14	35.57	
	Y-390 B1	37.8674	37.9066	0.104%	N/C	36.12	31.75	
						36.12	36.47	-2.28%
						36.12	37.67	
	ER-610 C1	36.6769	36.6698	-0.019%	N/C	35.96	35.87	
						35.96	33.85	-0.94%
						35.96	37.15	
	Y-833 D1	36.8205	36.8364	0.043%	N/C	33.14	*3	
						33.14	33.97	2.50%
						33.14	*2	
	923 E1	37.2599	37.2741	0.038%	N/C	40.52	33.25	
						40.52	33.45	-15.99%
						40.52	35.42	
	ISO-800 F1	35.9889	36.0120	0.064%	N/C	20.20	17.25	
						20.20	19.85	-7.06%
						20.20	19.22	
		R-143a -> 24 HRS 302 F						
	U-475 A2	37.4278	37.4299	0.006%	N/C	40.14	34.67	
						40.14	34.42	-12.69%
						40.14	36.05	
	Y-390 B2	37.0193	37.0215	0.006%	Varnish	36.12	33.80	
					Pockets	36.12	31.62	-11.18%
						36.12	30.82	
	ER-610 C2	37.8022	37.8032	0.003%	N/C	35.96	37.07	
						35.96	34.67	-1.69%
						35.96	34.32	
	Y-833 D2	36.9060	36.9001	-0.016%	N/C	33.14	34.55	
						33.14	40.25	12.85%
						33.14	*2	
	923 E2	37.2280	37.2297	0.005%	N/C	40.52	33.12	
						40.52	34.10	-15.91%
						40.52	35.00	
	ISO-800 F2	36.8279	36.8258	-0.006%	N/C	20.20	18.42	
						20.20	13.95	-25.30%
						20.20	12.90	

*Bond strength not included in average

		500 HRS IN R-143a @ 140 F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE	U-475 A1	38.4495	38.4639	0.037%	N/C	51.21	46.35	8.11%
						51.21	64.67	
						51.21	55.07	
	Y-390 B1	39.1847	39.2044	0.050%	N/C	50.72	41.52	-17.84%
						50.72	43.00	
						50.72	40.50	
	ER-610 C1	37.4345	37.4468	0.033%	N/C	58.33	49.80	-15.32%
						58.33	48.77	
						58.33	49.62	
	Y-833 D1	37.4125	37.4167	0.011%	N/C	5.84	8.83	51.20%
						5.84	broke	
						5.84	broke	
	923 E1	39.6007	39.6162	0.039%	N/C	49.26	36.45	-23.81%
						49.26	38.47	
						49.26	37.67	
	ISO-800 F1	38.4180	38.4298	0.031%	N/C	36.08	45.85	33.61%
						36.08	32.60	
						36.08	66.17	
POLYAMIDE IMIDE		R-143a-> 24 HRS 302 F						
	U-475 A2	38.1498	38.1509	0.003%	N/C	51.21	50.95	23.49%
						51.21	71.30	
						51.21	67.47	
	Y-390 B2	39.5508	39.5499	-0.002%	N/C	50.72	44.90	-10.36%
						50.72	44.97	
						50.72	46.52	
	ER-610 C2	37.4689	37.4684	-0.001%	N/C	58.33	57.30	-5.11%
						58.33	52.65	
						58.33	56.10	
	Y-833 D2	37.4496	37.4396	-0.027%	N/C	5.84	5.00	36.99%
						5.84	11.00	
						5.84	broke	
	923 E2	38.6940	38.6938	-0.001%	N/C	49.26	49.92	-15.95%
						49.26	32.82	
						49.26	41.47	
	ISO-800 F2	37.4176	37.4136	-0.011%	N/C	36.08	36.60	15.18%
						36.08	54.85	
						36.08	33.22	

	500 HRS IN R-143a @ 140 F				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	4.5234	4.5264	0.066%	N/C	YES
B1	5.3852	5.3919	0.124%	N/C	YES
C1	5.3552	5.3942	0.728%	N/C	YES
	R-143a -> 302F 24 HRS				
A2	4.5243	4.5259	0.035%	N/C	YES
B2	5.3884	5.3905	0.039%	N/C	YES
C2	5.4143	5.4141	-0.004%	N/C	YES

	500 hrs in R-143a at 140 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE	U-475 A1	5.4529	5.4560	0.057%	N/C	NO
	Y-390 B1	5.1271	5.1334	0.123%	N/C	NO
	ER-610 C1	4.6797	4.6815	0.038%	N/C	YES
	Y-833 D1	3.4945	3.4962	0.049%	N/C	YES
	923 E1	5.3251	5.3318	0.126%	N/C	NO
	ISO-800 F1	5.2872	5.2886	0.026%	N/C	YES
		R-143a-> 24 HRS @ 302F				
	U-475 A2	5.4147	5.4174	0.050%	N/C	NO
	Y-390 B2	5.0629	5.0638	0.018%	N/C	NO
	ER-610 C2	4.6809	4.6828	0.041%	N/C	YES
	Y-833 D2	5.1197	5.1222	0.049%	N/C	YES
	923 E2	5.4206	5.4230	0.044%	N/C	NO
	ISO-800 F2	5.2545	5.2575	0.057%	N/C	NO

	R-143a at 140 F					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	5.2250	5.2289	0.075%	N/C	NO
	Y-390 B1	5.4727	5.4768	0.075%	N/C	NO
	ER-610 C1	5.2696	5.2726	0.057%	N/C	YES
	Y-833 D1	5.1963	5.1985	0.042%	N/C	YES
	923 E1	5.5336	5.5378	0.076%	N/C	NO
	ISO-800 F1	5.7690	5.7717	0.047%	N/C	NO
		R-143a -> 24 HRS @ 302F				
	U-475 A2	5.1490	5.1502	0.024%	N/C	NO
	Y-390 B2	5.5616	5.5633	0.031%	N/C	NO
	ER-610 C2	5.2221	5.2254	0.063%	N/C	YES
	Y-833 D2	5.1738	5.1726	-0.023%	N/C	YES
	923 E2	5.4839	5.4874	0.064%	N/C	NO
	ISO-800 F2	5.8020	5.8043	0.040%	N/C	NO

		R-143a at 140 F				
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTERIMIDE	U-475 A1	5.2255	5.2255	0.000%	N/C	NO
	Y-390 B1	5.2319	5.2326	0.013%	N/C	NO
	ER-610 C1	5.2029	5.2001	-0.054%	N/C	YES
	Y-833 D1	4.8766	4.8772	0.012%	N/C	YES
	923 E1	5.1866	5.1876	0.019%	N/C	NO
	ISO-800 F1	5.3214	5.3218	0.008%	N/C	NO
POLYAMIDEIMIDE		R-143a -> 24 HRS @ 302F				
	U-475 A2	5.1590	5.1584	-0.012%	N/C	NO
	Y-390 B2	5.2589	5.2578	-0.021%	N/C	NO
	ER-610 C2	5.1857	5.1865	0.015%	N/C	YES
	Y-833 D2	5.0000	4.9939	-0.122%	N/C	YES
	923 E2	5.5360	5.5365	0.009%	N/C	NO
	ISO-800 F2	5.5454	5.5423	-0.056%	N/C	NO

500 HRS IN R-143a @ 140 F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	1.8987	1.9215	1.20%	Slightly Warped	N/C
Y-390 B1	1.7599	1.7748	0.85%	Warped	N/C
ER-610 C1	2.3821	2.3922	0.42%	N/C	N/C
Y-833 D1	2.0257	2.1295	5.12%	N/C	N/C
923 E1	1.5000	1.5250	1.67%	N/C	N/C
ISO-800 F1	1.7347	1.7368	0.12%	Slightly warped	N/C
	R-143a at ->302F 24 HRS				
U-475 A2	1.9587	1.9500	-0.44%	Darkened Slightly Warped	N/C
Y-390 B2	1.6945	1.6811	-0.79%	Warped	N/C
ER-610 C2	2.6742	2.6679	-0.24%	Darkened	N/C
Y-833 D2	2.4564	2.4614	0.20%	N/C	N/C
923 E2	1.8952	1.8950	-0.01%	N/C	N/C
ISO-800 F2	1.5616	1.5324	-1.87%	Warped	N/C

500 HR IN R-143a @ 140 F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS Mils	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	4.7438	4.8079	1.35%	0.490	150.50	21	17.4	14.63	
				0.387	141.50	21	17.4	17.41	-5.91%
				0.375	134.50	21	17.4	17.08	
DA/MY/DA B1	4.2047	4.2951	2.15%	0.356	101.20	21	13.7	13.54	
				0.429	118.30	21	13.7	13.13	-2.67%
				0.415	116.20	21	13.7	13.33	
MYLAR MO C1	2.2221	2.2309	0.40%	0.444	83.75	10	21.7	18.86	
				0.359	68.15	10	21.7	18.98	-15.42%
				0.377	64.90	10	21.7	17.21	
NO 410 D1	2.2843	2.3337	2.16%	0.527	102.60	11	18.7	17.70	
				0.426	82.25	11	18.7	17.55	-6.34%
				0.461	87.70	11	18.7	17.29	
NO MI 418 E1	2.0775	2.1075	1.44%	0.478	25.00	9	7.5	5.81	
				0.501	26.60	9	7.5	5.90	-22.59%
				0.478	24.55	9	7.5	5.71	
MEL 228 F1	2.4215	2.4332	0.48%	0.427	82.85	11	21.7	17.64	
				0.429	80.65	11	21.7	17.09	-20.89%
				0.422	77.85	11	21.7	16.77	
	500 HRS IN R-143a ->24 HRS @ 302 F								
NO/MY/NO A2	4.3650	4.3636	-0.03%	0.387	137.00	21	17.4	16.86	
				0.359	130.70	21	17.4	17.34	-0.40%
				0.449	167.80	21	17.4	17.80	
DA/MY/DA B2	4.2803	4.2778	-0.06%	0.434	121.40	21	13.7	13.32	
				0.453	133.90	21	13.7	14.08	-3.05%
				0.392	102.50	21	13.7	12.45	
MYLAR MO C2	2.1159	2.1171	0.06%	0.471	97.35	10	21.7	20.67	
				0.485	96.70	10	21.7	19.94	-6.76%
				0.488	98.05	10	21.7	20.09	
NOMEX 410 D2	2.6514	2.6510	-0.02%	0.522	106.60	11	18.7	18.56	
				0.509	91.70	11	18.7	16.38	-5.58%
				0.493	97.75	11	18.7	18.03	
NO/MI 418 E2	2.3856	2.3892	0.15%	0.499	25.85	9	7.5	5.76	
				0.488	25.65	9	7.5	5.84	-21.99%
				0.499	26.75	9	7.5	5.96	
MEL 228 F2	2.3440	2.3424	-0.07%	0.530	104.10	11	21.7	17.86	
				0.538	101.00	11	21.7	17.07	-18.44%
				0.484	96.75	11	21.7	18.17	

After 500 hour exposure @ 140°F(60°C)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO	*.26	#####	20.0%		>18.97	>14.23		N/C
A1	1.18	29.5%	20.0%	40.0%	>18.97	>14.66	flash	
	1.06	26.5%	20.0%		>18.97	>14.40		
DA/MY/DA	0.56	28.0%	46.0%		>15.27	>12.60		N/C
B1	0.49	24.5%	46.0%	-45.3%	>15.27	>13.49	flash	
	0.46	23.0%	46.0%		>15.27	>12.69		
MYLAR MO	2.74	137.0%	131.0%		>14.91	>1347		N/C
C1	2.96	148.0%	131.0%	-6.6%	>14.91	>11.90	flash	
	1.64	82.0%	131.0%		>14.91	>14.13		
NO 410	0.64	16.0%	17.0%		10.67	10.62		N/C
D1	0.58	14.5%	17.0%	-15.2%	10.67	9.46	-1.3%	
	0.51	12.8%	17.0%		10.67	11.50		
NO MI 418	0.09	2.3%	4.0%		10.23	9.90		N/C
E1	0.08	2.0%	4.0%	-47.9%	10.23	8.90	-9.7%	
	0.08	2.0%	4.0%		10.23	8.90		
MEL 228	3.32	166.0%	160.0%		>14.22	>13.31		N/C
F1	2.92	146.0%	160.0%	-2.6%	>14.22	>13.23	flash	
	3.11	155.5%	160.0%		>14.22	>14.49		
	After 500 hour exposure plus a 24 hour airbake at 302°F(150°C)							
NO/MY/NO	0.81	20.3%	20.0%		>18.97	>12.46		N/C
A2	0.76	19.0%	20.0%	6.7%	>18.97	>14.36	flash	
	0.99	24.8%	20.0%		>18.97	>14.34		
DA/MY/DA	0.52	26.0%	46.0%		>15.27	>13.61		N/C
B2	0.62	31.0%	46.0%	-42.0%	>15.27	>13.43	flash	
	0.46	23.0%	46.0%		>15.27	>13.53		
MYLAR MO	3.22	161.0%	131.0%		>14.91	>11.02		N/C
C2	2.81	140.5%	131.0%	16.4%	>14.91	>11.68	flash	
	3.12	156.0%	131.0%		>14.91	>13.25		
NOMEX 410	0.60	15.0%	17.0%		10.67	11.44		N/C
D2	0.36	9.0%	17.0%	-25.0%	10.67	11.05	5.0%	
	0.57	14.3%	17.0%		10.67	11.13		
NO/MI 418	0.08	2.0%	4.0%		10.23	9.15		N/C
E2	0.09	2.3%	4.0%	-43.8%	10.23	9.30	-10.3%	
	0.10	2.5%	4.0%		10.23	9.09		
MEL 228	2.98	149.0%	160.0%		>14.22	>14.14		N/C
F2	3.26	163.0%	160.0%	2.6%	>14.22	>13.55	flash	
	3.61	180.5%	160.0%		>14.22	>13.92		

*sample slipped in grips.

	500 HRS IN R-143a @ 140 F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5480	0.5670	3.47%	N/C
B1 MYLAR	0.5110	0.5191	1.59%	N/C
C1 NO/MY	0.4000	0.4076	1.90%	N/C
	R-143a ---->24 hrs @ 302F			
A2 NOMEX	0.5548	0.5584	0.65%	N/C
B2 MYLAR	0.4442	0.4470	0.63%	Some delamination pockets *see photo
C2 NO/MY	0.3948	0.3968	0.51%	Pockects where mylar pulled away *see photo

	500 HRS IN R-143a @ 140 F								
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS
A1 Glass	1.4991	1.4993	0.01%	39.02	27.85		0.05	2.50%	N/C
				39.02	43.15	1.96%	0.04	2.00%	
				39.02	48.35		0.04	2.00%	
B1 Polyester	0.6328	0.6426	1.55%	56.12	59.55		0.56	28.00%	N/C
				56.12	55.10	4.75%	0.47	23.50%	
				56.12	61.70		0.61	30.50%	
C1 Permacel	1.4217	1.4627	2.88%	88.50	76.75		0.10	5.00%	N/C
				88.50	104.50	-6.80%	0.13	6.50%	
				88.50	66.20		0.12	6.00%	
	500 HRS in R-143a -> 302 F 24 HRS								
A2 Glass	1.3720	1.3684	-0.26%	39.02	33.15		0.04	2.00%	N/C
				39.02	45.45	-2.40%	0.04	2.00%	
				39.02	35.65		0.03	1.50%	
B2 Polyester	0.6218	0.6253	0.56%	56.12	52.80		0.47	23.50%	N/C
				56.12	53.80	-1.40%	0.49	24.50%	
				56.12	59.40		0.64	32.00%	
C2 Permacel	1.2716	1.2476	-1.89%	88.50	98.30		0.11	5.50%	N/C
				88.50	66.65	-13.33%	0.09	4.50%	
				88.50	65.15		0.10	5.00%	

	500 HRS IN R-143a @ 140 F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1	0.2283	0.2362	3.46%	N/C	28.36	28.80		0.26	13.0%
					28.36	38.15	12.83%	0.30	15.0%
					28.36	29.05		0.26	13.0%
	500 HRS IN R-143a -> 24 HRS @ 302F								
A2	0.2406	0.241	0.166%	N/C	28.36	33.65		0.45	22.5%
					28.36	33.10	14.19%	0.51	25.5%
					28.36	30.40		0.48	24.0%

	500 HRS IN R-143a @ 140 F						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	4.0528	4.0641	0.28%	N/C	9.61	7.59	
A1					9.61	9.10	-11.93%
					9.61	8.70	
DTMD	4.4995	4.5150	0.34%	N/C	9.95	9.96	
B1					9.95	7.70	-5.59%
					9.95	10.52	
	R-143a - -> 24 HRS @ 302F						
DMD	4.0372	4.0378	0.01%	N/C	9.61	9.30	
A2					9.61	8.91	-4.02%
					9.61	9.46	
DTMD	4.3000	4.3006	0.01%	N/C	9.95	9.72	
B2					9.95	10.13	-5.46%
					9.95	8.37	

Appendix M

Experimental Data for HFC-245ca Exposure at 121°C(250°F)

TWISTED PAIRS WITHOUT VARNISH-HFC-245ca @ 250°F(121°C)

	500 HRS IN R-245ca @ 250°F(121°C)									
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE BRN OUT (AVE)	EXP BRN OUT	BRN OUT % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE
A1	23.9544	23.9664	0.050%	N/C	576	434		15.80	13.49	
					576	403	-27.0%	15.80	14.04	-11.8%
					576	425		15.80	14.26	
B1	24.5981	24.6922	0.383%	N/C	736	725		11.62	11.63	
					736	728	-1.2%	11.62	12.55	3.6%
					736	728		11.62	11.93	
C1	23.0305	23.0417	0.049%	N/C	579	438		16.58	11.70	
					579	433	-17.6%	16.58	12.49	-24.2%
					579	561		16.58	13.50	
	500 hr in R-245ca plus 24 hr at 302F									
A2	23.7141	23.7230	0.038%	N/C	576	500		15.80	9.87	
					576	517	-13.5%	15.80	16.29	-18.2%
					576	477		15.80	12.63	
B2	24.8296	24.8501	0.083%	N/C	736	724		11.62	11.67	
					736	730	-1.2%	11.62	10.76	-5.7%
					736	727		11.62	10.43	
C2	22.8833	22.8906	0.032%	N/C	579	578		16.58	14.34	
					579	593	-2.7%	16.58	15.33	-15.7%
					579	519		16.58	12.27	

HOURS IN R-245ca @ 250°F(121°C)											
	VARN	TWISTED PAIR WT	Exp Pair weight	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	22.8170	22.8873	0.308%	N/C	16.24	14.18		430	545	
						16.24	12.67	-16.77%	430	368	-0.85%
						16.24	13.70		430	366	
	Y-390 B1	24.7034	24.7978	0.382%	N/C	18.77	19.99		510	414	
						18.77	17.45	1.99%	510	521	-6.86%
						18.77	19.99		510	490	
	ER-610 C1	22.0534	22.0842	0.140%	N/C	15.57	15.09		442	337	
						15.57	14.52	-13.40%	442	381	-20.89%
						15.57	10.84		442	331	
	Y-833 D1	23.2259	23.2277	0.008%	N/C	12.04	11.46		578	569	
						12.04	10.44	-16.75%	578	549	-3.29%
						12.04	8.17		578	559	
	923 E1	24.1274	24.2176	0.374%	N/C	16.76	17.74		606	538	
						16.76	19.15	2.98%	606	550	-10.01%
						16.76	14.89		606	548	
	ISO-800 F1	23.8215	23.8599	0.161%	N/C	19.08	13.89		580	574	
						19.08	19.73	-21.91%	580	514	-3.22%
						19.08	11.08		580	596	
		24 HOURS AT 302 F									
	U-475 A2	22.7834	22.8114	0.123%	N/C	16.24	13.42		430	374	
						16.24	14.43	-16.15%	430	568	16.20%
						16.24	13.00		430	557	
	Y-390 B2	24.0036	24.0449	0.172%	N/C	18.77	12.25		510	445	
						18.77	12.89	-30.85%	510	392	-18.95%
						18.77	13.80		510	403	
	ER-610 C2	21.6249	21.6387	0.064%	N/C	15.57	12.60		442	334	
						15.57	13.45	-18.75%	442	369	-22.02%
						15.57	11.90		442	331	
	Y-833 D2	23.3424	23.3301	-0.053%	N/C	12.04	9.61		578	499	
						12.04	11.94	-12.15%	578	492	-9.86%
						12.04	10.18		578	572	
	923 E2	23.7579	23.8077	0.210%	N/C	16.76	18.70		606	467	
						16.76	11.90	-5.99%	606	582	-11.06%
						16.76	16.67		606	568	
	ISO-800 F2	22.2331	22.2484	0.069%	N/C	19.08	12.66		580	552	
						19.08	17.17	-29.19%	580	576	-0.06%
						19.08	10.70		580	611	

	HOURS IN R-245ca @ 250°F(121°C)										
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475	26.3285	26.5326	0.78%	N/C	13.32	16.09		746	739	
	A1					13.32	18.61	19.64%	746	741	-0.98%
						13.32	13.11		746	736	
	Y-390	26.4158	26.5817	0.63%	N/C	12.28	11.47		755	740	
	B1					12.28	7.67	-29.70%	755	742	-1.81%
						12.28	6.76		755	742	
	ER-610	26.3762	26.5056	0.49%	N/C	12.73	14.26		734	731	
	C1					12.73	13.69	13.56%	734	729	-0.59%
						12.73	15.42		734	729	
	Y-833	24.2096	24.3013	0.38%	N/C	12.49	10.99		734	728	
	D1					12.49	12.10	-2.43%	734	728	-0.59%
						12.49	13.47		734	733	
	923	27.0503	27.2093	0.59%	N/C	14.38	19.73		742	753	
	E1					14.38	15.69	28.07%	742	749	0.99%
						14.38	19.83		742	746	
	ISO-800	25.3057	25.4436	0.54%	N/C	12.29	12.21		747	737	
	F1					12.29	13.31	8.60%	747	734	-1.65%
						12.29	14.52		747	733	
		R-245ca --> 24 hours @ 302 F									
	U-475	25.0593	25.0915	0.13%	N/C	13.32	11.79		746	725	
	A2					13.32	12.10	-11.24%	746	720	-2.59%
						13.32	11.58		746	735	
	Y-390	25.7646	25.8467	0.32%	N/C	12.28	11.63		755	752	
	B2					12.28	16.08	12.65%	755	746	-0.79%
						12.28	13.79		755	755	
	ER-610	26.3366	26.3556	0.07%	N/C	12.73	12.06		734	730	
	C2					12.73	12.16	-8.04%	734	725	-0.77%
						12.73	10.90		734	730	
	Y-833	24.5875	24.5805	-0.03%	N/C	12.49	12.17		734	739	
	D2					12.49	10.46	-5.98%	734	738	-1.04%
						12.49	12.60		734	702	
	923	26.4211	26.4948	0.28%	N/C	14.38	12.45		742	748	
	E2					14.38	13.31	-14.39%	742	735	0.81%
						14.38	11.17		742	728	
	ISO-800	25.4682	25.5096	0.16%		12.29	10.40		747	743	
	F2				N/C	12.29	12.34	-3.17%	747	739	-0.80%
						12.29	12.96		747	739	

HOURS IN R-245ca @ 250°F(121°C)												
	VARN	TWISTED PAIR WT	EXP T PAIR WT	WT % CHANGE	EXP VIS	BASE DIE	EXP DIE	DIE % CHANGE	BASE BURN OUT	EXP BURN OUT	BRNOUT % CHANGE
POLYESTER IMIDE POLYAMIDE IMIDE	U-475 A1	23.2373	23.3192	0.352%	N/C	15.10	14.90		469	500	
						15.10	14.34	-3.77%	469	290	-17.56%
						15.10	14.35		469	370	
	Y-390 B1	24.5239	24.6104	0.353%	N/C	18.24	14.35		473	619	
						18.24	19.94	-3.23%	473	585	25.93%
						18.24	18.66		473	583	
	ER-610 C1	21.3455	21.3740	0.134%	N/C	14.53	10.44		494	407	
						14.53	11.09	-24.68%	494	338	-29.49%
						14.53	11.30		494	300	
	Y-833 D1	23.1436	23.1455	0.008%	N/C	11.38	10.00		557	461	
						11.38	10.78	-8.93%	557	594	-9.87%
						11.38	10.31		557	451	
	923 E1	23.5125	23.5899	0.329%	N/C	15.85	14.26		503	552	
						15.85	15.37	3.64%	503	425	-3.91%
						15.85	19.65		503	473	
	ISO-800 F1	22.4032.	22.4405	#VALUE!	N/C	14.75	16.02		632	578	
						14.75	15.93	13.92%	632	537	-12.13%
						14.75	18.46		632	551	
		R-245ca --> 24 hours @ 302 F									
	U-475 A2	23.4377	23.4685	0.131%	N/C	15.10	11.57		469	394	
						15.10	14.29	-12.85%	469	342	-15.14%
						15.10	13.62		469	458	
	Y-390 B2	24.2281	24.2701	0.173%	N/C	18.24	19.24		473	590	
						18.24	17.97	-0.90%	473	515	19.66%
						18.24	18.18		473	593	
	ER-610 C2	21.3143	21.3240	0.046%	N/C	14.53	14.05		494	415	
						14.53	13.58	-10.85%	494	441	-17.61%
						14.53	11.23		494	365	
	Y-833 D2	23.2352	23.2275	-0.033%	N/C	11.38	11.46		557	435	
						11.38	11.49	0.91%	557	602	-5.98%
						11.38	11.50		557	534	
	923 E2	23.0656	23.1038	0.166%	N/C	15.85	19.92		503	508	
						15.85	19.73	23.66%	503	538	9.01%
						15.85	19.15		503	599	
	ISO-800 F2	21.6721	21.6843	0.056%	N/C	14.75	14.40		632	579	
						14.75	13.30	0.97%	632	571	-8.97%
						14.75	16.98		632	576	

		500 HRS IN R-245ca @ 250°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE	U-475 A1	39.2650	39.4652	0.510%	N/C	73.73	36.45	
						73.73	50.85	-38.62%
						73.73	48.47	
	Y-390 B1	39.3086	39.6237	0.802%	N/C	43.78	29.17	
						43.78	32.25	-34.30%
						43.78	24.87	
	ER-610 C1	39.8724	40.0223	0.376%	N/C	51.81	56.80	
						51.81	40.52	-4.34%
						51.81	51.37	
	Y-833 D1	38.7581	38.7610	0.007%	N/C	9.85	21.72	
						9.85	17.42	87.17%
						9.85	16.17	
	923 E1	38.6896	38.8100	0.311%	N/C	41.28	34.27	
						41.28	37.16	-15.31%
						41.28	33.45	
	ISO-800 F1	38.7546	38.8375	0.214%	N/C	45.01	40.25	
						45.01	31.77	-20.00%
						45.01	24.02	
		R-245ca -> 24 HRS 302°F						
	U-475 A2	38.6996	38.7320	0.084%	N/C	73.73	67.50	
						73.73	43.67	-40.77%
						73.73	broke	
	Y-390 B2	38.8466	38.8971	0.130%	N/C	43.78	46.25	
						43.78	41.50	13.41%
						43.78	61.20	
	ER-610 C2	38.2185	38.2375	0.050%	N/C	51.81	45.25	
						51.81	37.32	-7.81%
						51.81	60.72	
	Y-833 D2	38.0159	37.9339	-0.216%	N/C	9.85	22.57	
						9.85	34.87	177.02%
						9.85	24.42	
	923 E2	39.9628	40.0198	0.143%	N/C	41.28	37.55	
						41.28	48.95	3.78%
						41.28	42.02	
	ISO-800 F2	37.9216	37.9401	0.049%	N/C	45.01	37.17	
						45.01	58.35	10.10%
						45.01	53.15	

		500 HRS IN R-245ca @ 250°F						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER POLYAMIDE IMIDE EPOXY GLASS	U-475 A1	36.5423	36.7338	0.524%	N/C	40.14	42.85	4.57%
						40.14	44.35	
						40.14	38.72	
	Y-390 B1	38.2599	38.2702	0.027%	N/C	36.12	40.60	3.70%
						36.12	33.17	
						36.12	38.60	
	ER-610 C1	37.3413	37.4752	0.359%	N/C	35.96	37.55	-6.73%
						35.96	29.77	
						35.96	33.30	
	Y-833 D1	37.8417	37.8724	0.081%	N/C	33.14	40.60	27.76%
						33.14	43.77	
						33.14	42.65	
	923 E1	38.5834	38.6841	0.261%	N/C	40.52	36.15	-3.61%
						40.52	37.55	
						40.52	43.47	
	ISO-800 F1	38.5317	38.6353	0.269%	N/C	20.20	24.02	9.03%
						20.20	22.35	
						20.20	19.70	
		R-245ca-> 24 HRS 302°F						
	U-475 A2	35.7003	35.7459	0.128%	N/C	40.14	30.47	-6.27%
						40.14	37.40	
						40.14	45.00	
	Y-390 B2	38.8799	38.9132	0.086%	N/C	36.12	36.90	-6.08%
						36.12	32.57	
						36.12	32.30	
	ER-610 C2	37.2912	37.3114	0.054%	N/C	35.96	32.57	-9.43%
						35.96	broken	
						35.96	broken	
	Y-833 D2	38.8639	38.7674	-0.248%	N/C	33.14	18.95	-36.76%
						33.14	19.62	
						33.14	24.30	
	923 E2	38.9499	38.9958	0.118%	N/C	40.52	33.70	-18.73%
						40.52	34.27	
						40.52	30.82	
	ISO-800 F2	38.7774	38.7929	0.040%	N/C	20.20	18.82	-21.20%
						20.20	9.58	
						20.20	19.35	

		500 HRS IN R-245ca						
	VARN	COIL WT	EXP COIL WT	WT % CHANGE	EXP VIS	BASE BND STR (AVE)	EXP BND STR	BND STR % CHANGE
POLYESTER IMIDE	U-475 A1	38.4652	38.7920	0.850%	N/C	51.21	30.72	
						51.21	44.10	-17.83%
						51.21	51.42	
	Y-390 B1	34.7940	35.0133	0.630%	N/C	50.72	39.40	
						50.72	40.72	-20.16%
						50.72	41.37	
	ER-610 C1	36.3866	36.5954	0.574%	N/C	58.33	40.37	
						58.33	46.65	-22.44%
						58.33	48.70	
	Y-833 D1	37.4270	37.4927	0.176%	N/C	5.84	21.52	
						5.84	23.90	265.24%
						5.84	18.57	
	923 E1	37.7071	37.9050	0.525%	N/C	49.26	28.07	
						49.26	25.12	-47.50%
						49.26	24.40	
	ISO-800 F1	36.6583	36.8059	0.403%	N/C	36.08	38.25	
						36.08	36.55	-8.70%
						36.08	24.02	
POLYAMIDE IMIDE		R-245ca-> 24 HRS 302°F						
	U-475 A2	37.2156	37.2517	0.097%	N/C	51.21	57.65	
						51.21	62.72	16.07%
						51.21	57.95	
	Y-390 B2	38.8026	38.9150	0.290%	N/C	50.72	55.25	
						50.72	56.30	9.80%
						50.72	55.52	
	ER-610 C2	36.2550	36.2977	0.118%	N/C	58.33	62.67	
						58.33	64.90	8.89%
						58.33	62.97	
	Y-833 D2	35.7196	35.7312	0.032%	N/C	5.84	31.92	
						5.84	26.00	405.82%
						5.84	30.70	
	923 E2	36.3856	36.4428	0.157%	N/C	49.26	43.67	
						49.26	35.27	-19.20%
						49.26	40.47	
	ISO-800 F2	35.0529	35.0004	-0.150%	N/C	36.08	57.05	
						36.08	45.57	20.12%
						36.08	27.40	

	500 HRS IN R-245 @ 250°F(121°C)				
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
A1	4.0839	4.0853	0.034%	N/C	YES
B1	4.1603	4.174	0.329%	N/C	NO
C1	4.1346	4.1365	0.046%	N/C	YES
	R-245 -> 302°F for 24 HRS				
A2	3.8376	3.8387	0.029%	N/C	YES
B2	4.1982	4.2005	0.055%	N/C	YES
C2	4.1817	4.1835	0.043%	N/C	YES

500 HRS IN R-245ca @250°F(121°C)							
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX	
POLYESTER POLYAMIDE IMIDE	U-475 A1	4.1939	4.2077	0.329%	N/C	YES	
	Y-390 B1	4.1033	4.1164	0.319%	N/C	NO	
	ER-610 C1	3.7860	3.7863	0.008%	N/C	NO	
	Y-833 D1	3.9301	3.9311	0.025%	N/C	YES	
	923 E1	4.4956	4.5120	0.365%	N/C	NO	
	ISO-800 F1	4.0925	4.0353	-1.398%	N/C	NO	
		R-245ca->24 HRS @ 302°F					
	U-475 A2	4.1242	4.1277	0.085%	N/C	YES	
	Y-390 B2	3.9398	3.9455	0.145%	N/C	NO	
	ER-610 C2	3.7596	3.7593	-0.008%	N/C	NO	
	Y-833 D2	3.8935	3.8933	-0.005%	N/C	YES	
	923 E2	4.4580	4.4663	0.186%	N/C	NO	
	ISO-800 F2	4.0390	4.0408	0.045%	N/C	NO	

	R-245 @ 250° F(121°C)					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER POLYAMIDE	U-475 A1	4.3489	4.3772	0.651%	N/C	NO
	Y-390 B1	4.4861	4.5076	0.479%	N/C	NO
	ER-610 C1	4.2240	4.2406	0.393%	N/C	NO
	Y-833 D1	4.2130	4.2282	0.361%	N/C	NO
	923 E1	3.7283	3.7457	0.467%	N/C	NO
	ISO-800 F1	4.3417	4.3622	0.472%	N/C	NO
		R-245ca -> 24 HRS @ 302F				
IMIDE EPOXY GLASS	U-475 A2	4.3890	4.3919	0.066%	N/C	NO
	Y-390 B2	4.5147	4.5276	0.286%	N/C	NO
	ER-610 C2	3.7492	3.7497	0.013%	N/C	NO
	Y-833 D2	4.2416	4.2412	-0.009%	N/C	NO
	923 E2	4.0341	4.0419	0.193%	N/C	NO
	ISO-800 F2	4.2837	4.2861	0.056%	N/C	NO

	R-245ca at 250°F(121°C)					
	VARN	WIRE WT	EXP WIRE WT	WT % CHANGE	EXP VIS	EXP FLEX
POLYESTER IMIDE	U-475 A1	4.3866	4.3996	0.296%	N/C	YES
	Y-390 B1	4.1276	4.1436	0.388%	N/C	NO
	ER-610 C1	3.5573	3.5618	0.127%	N/C	NO
	Y-833 D1	4.0058	4.0065	0.017%	N/C	NO
	923 E1	4.4166	4.4321	0.351%	N/C	NO
	ISO-800 F1	4.2401	4.2455	0.127%	N/C	NO
POLYAMIDE IMIDE		R-245ca -> 24 HRS @ 302F				
	U-475 A2	4.2965	4.2982	0.040%	N/C	NO
	Y-390 B2	4.0280	4.0354	0.184%	N/C	NO
	ER-610 C2	3.8953	3.8965	0.031%	N/C	YES
	Y-833 D2	3.8803	3.8804	0.003%	N/C	YES
	923 E2	4.4231	4.4323	0.208%	N/C	NO
	ISO-800 F2	4.2581	4.2600	0.045%	N/C	NO

500 HR IN R-245ca @ 250°F									
ID	WT	EXP WT	WT % CHANGE	SAMPLE WIDTH	BREAK LOAD	SAMPLE THICKNESS Mils	TENSILE STR BASE	TENSILE STR EXP	% CHANGE TENSILE
NO/MY/NO A1	6.1323	7.0830	15.50%	0.384	128.40	21	17.4	15.92	
				0.448	152.10	21	17.4	16.17	-7.66%
				0.475	160.70	21	17.4	16.11	
DA/MY/DA B1	4.3157	4.4206	2.43%	0.396	101.20	21	13.7	12.17	
				0.398	105.90	21	13.7	12.67	-11.20%
				0.482	118.00	21	13.7	11.66	
MYLAR MO C1	2.2516	2.3441	4.11%	0.417	79.25	10	21.7	19.00	
				0.515	102.50	10	21.7	19.90	-13.83%
				0.461	79.25	10	21.7	17.19	
NO 410 D1	2.1666	2.5562	17.98%	0.525	102.50	10	18.7	19.52	
				0.442	84.70	10	18.7	19.16	3.92%
				0.505	99.05	10	18.7	19.61	
NO MI 418 E1	2.3018	2.3378	1.56%	0.468	23.35	10	7.5	4.99	
				0.495	25.90	10	7.5	5.23	-31.28%
				0.478	25.05	10	7.5	5.24	
MEL 228 F1	2.3996	2.4931	3.90%	0.454	88.80	11	21.7	17.78	
				0.496	101.40	11	21.7	18.59	-18.03%
				0.468	87.50	11	21.7	17.00	
	500 HRS IN R-245ca @ 250°F ->24 HRS @ 302°F								
NO/MY/NO A2	5.1528	5.1479	-0.10%	0.400	137.60	21	17.4	16.38	
				0.455	146.40	21	17.4	15.32	-6.53%
				0.460	165.10	21	17.4	17.09	
DA/MY/DA B2	4.5752	4.4454	-2.84%	0.418	117.40	21	13.7	13.37	
				0.458	130.70	21	13.7	13.59	-1.42%
				0.488	138.90	21	13.7	13.55	
MYLAR MO C2	2.1640	2.1447	-0.89%	0.350	70.35	10	21.7	20.10	
				0.433	85.05	10	21.7	19.64	-8.65%
				0.406	80.10	10	21.7	19.73	
NOMEX 410 D2	2.3839	2.4154	1.32%	0.479	102.10	10	18.7	21.32	
				0.412	83.70	10	18.7	20.32	11.24%
				0.503	104.50	10	18.7	20.78	
NO/MI 418 E2	2.4346	2.4522	0.72%	0.485	27.50	10	7.5	5.67	
				0.510	29.10	10	7.5	5.71	-24.10%
				0.490	27.95	10	7.5	5.70	
MEL 228 F2	2.4680	2.4631	-0.20%	0.463	92.25	10	21.7	19.92	
				0.508	97.75	10	21.7	19.24	-10.17%
				0.480	92.70	10	21.7	19.31	

SHEET INSULATION---HFC-245ca @ 121°C(250°F)

After 500 hour exposure @ 121°C(250°F)								
ID	STRETCH (inch)	% ELONG	BASE ELONG (AVE)	ELONG % CHANGE	BASE DIE (AVE)	EXP DIE	DIE % CHANGE	VISUAL EXP
NO/MY/NO A1	0.62	15.5%	20.0%		>18.97	flash		N/C
	0.25	6.3%	20.0%	-37.5%	>18.97	flash	flash	
	0.63	15.8%	20.0%		>18.97	flash		
DA/MY/DA B1	0.59	29.5%	46.0%		>15.27	flash		slighlty
	0.45	22.5%	46.0%	-41.7%	>15.27	flash	flash	warped
	0.57	28.5%	46.0%		>15.27	flash		yellowed
MYLAR MO C1	2.12	106.0%	131.0%		>14.91	flash		N/C
	1.89	94.5%	131.0%	-21.8%	>14.91	flash	flash	
	2.14	107.0%	131.0%		>14.91	flash		
NO 410 D1	0.38	9.5%	17.0%		10.67	9.34		N/C
	0.13	3.3%	17.0%	-60.8%	10.67	10.96	-4.3%	
	0.29	7.3%	17.0%		10.67	10.34		
NO MI 418 E1	0.04	1.0%	4.0%		10.23	10.28		N/C
	0.04	1.0%	4.0%	-75.0%	10.23	10.46	-2.1%	
	0.04	1.0%	4.0%		10.23	9.31		
MEL 228 F1	2.99	149.5%	160.0%		>14.22	flash		N/C
	3.71	185.5%	160.0%	5.9%	>14.22	flash	flash	
	3.47	173.5%	160.0%		>14.22	flash		
	After 500 hour exposure plus a 24 airbake at 150°C(302°F)							
NO/MY/NO A2	0.39	9.8%	20.0%		>18.97	flash		N/C
	0.30	7.5%	20.0%	-51.7%	>18.97	flash	flash	
	0.47	11.8%	20.0%		>18.97	flash		
DA/MY/DA B2	0.47	23.5%	46.0%		>15.27	flash		slighlty
	0.42	21.0%	46.0%	-50.7%	>15.27	flash	flash	warped
	0.47	23.5%	46.0%		>15.27	flash		yellowed
MYLAR MO C2	1.66	83.0%	131.0%		>14.91	flash		N/C
	1.46	73.0%	131.0%	-41.0%	>14.91	flash	flash	
	1.52	76.0%	131.0%		>14.91	flash		
NOMEX 410 D2	0.43	10.8%	17.0%		10.67	10.52		N/C
	0.41	10.3%	17.0%	-39.2%	10.67	9.60	-3.3%	
	0.40	10.0%	17.0%		10.67	10.83		
NO/MI 418 E2	0.03	0.8%	4.0%		10.23	9.75		N/C
	0.05	1.3%	4.0%	-75.0%	10.23	8.19	-10.1%	
	0.04	1.0%	4.0%		10.23	9.66		
MEL 228 F2	1.51	75.5%	160.0%		>14.22	flash		N/C
	1.73	86.5%	160.0%	-50.5%	>14.22	flash	flash	
	1.51	75.5%	160.0%		>14.22	flash		

500 HRS IN R-245ca @ 250° F					
ID	WT	EXP WT	WT % CHANGE	EXP VIS	EXP FLEX
U-475 A1	2.6637	2.8546	7.17%	N/C	N/C
Y-390 B1	2.0726	2.1681	4.61%	N/C	N/C
ER-610 C1	2.4971	2.7365	9.59%	slightly darkened	N/C
Y-833 D1	2.7800	3.0132	8.39%	light green color	N/C
923 E1	2.0604	2.1257	3.17%	slightly warped	N/C
ISO-800 F1	2.2249	2.2750	2.25%	slightly warped	N/C
	R-245ca --->24 hour at 302°F.				
U-475 A2	2.1442	2.1805	1.69%	Darkened	N/C
Y-390 B2	1.7675	1.8033	2.03%	darkened	N/C
ER-610 C2	2.3400	2.3934	2.28%	darkened	N/C
Y-833 D2	3.4539	3.6606	5.98%	slightly orange	N/C
923 E2	1.8354	1.8738	2.09%	darkened warped	N/C
ISO-800 F2	2.3839	2.3604	-0.99%	slightly warped	N/C

	500 HRS IN R-245ca @ 250°F			
	WT	EXP WT	% CHANGE	EXP VIS
A1 NOMEX	0.5549	0.6767	21.95%	Darkened
B1 MYLAR	0.4522	0.4809	6.35%	N/C
C1 NO/MY	0.4013	0.4354	8.50%	N/C
	R-245ca @ 250°F---->24 hrs @ 302°F			
A2 NOMEX	0.5572	0.5546	-0.47%	N/C
B2 MYLAR	0.4999	0.4952	-0.94%	Some small pockets distorsions
C2 NO/MY	0.3989	0.3938	-1.28%	Pockects where mylar pulled away

	500 HRS IN R-245ca								
ID	WT	EXP WT	WT % CHANGE	BREAK LOAD (AVE)	BREAK LOAD EXP	% CHANGE BRK LOAD	STRETCH (INCH)	%ELONG	EXP VIS
A1 Glass	1.4628	1.4717	0.61%	39.02	77.15		0.07	3.50%	N/C
				39.02	50.60	45.35%	0.07	3.50%	
				39.02	42.40		0.08	4.00%	
B1 Polyester	0.7395	0.7693	4.03%	56.12	58.65		0.67	33.50%	N/C
				56.12	52.60	0.35%	0.51	25.50%	
				56.12	57.70		0.66	33.00%	
C1 Permacel	1.3366	1.3678	2.33%	88.50	65.40		0.09	4.50%	Darkened
				88.50	104.90	-5.01%	0.14	7.00%	
				88.50	81.90		0.11	5.50%	
	500 HRS in R-245ca -> 302°F 24 HRS								
A2 Glass	1.8105	1.8127	0.12%	39.02	41.80		0.05	2.50%	N/C
				39.02	59.00	30.76%	0.05	2.50%	
				39.02	52.27		0.05	2.50%	
B2 Polyester	0.6814	0.6794	-0.29%	56.12	54.30		0.55	27.50%	N/C
				56.12	55.40	-2.82%	0.66	33.00%	
				56.12	53.92		0.50	25.00%	
C2 Permacel	1.8628	1.8678	0.27%	88.50	135.10		0.15	7.50%	N/C
				88.50	98.40	12.77%	0.10	5.00%	
				88.50	65.90		0.08	4.00%	

TIE CORD----HFC-245ca @ 121°C(250°F)

	500 HRS IN R-245ca @ 250° F								
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BREAK LOAD (AVE)	BREAK LOAD EXP (ave)	% CHANGE BRK LOAD	STRETCH (Inch)	% ELONG
A1	0.3348	0.3428	2.39%	N/C	28.36	32.20		0.49	24.5%
					28.36	31.35	8.19%	0.46	23.0%
					28.36	28.50		0.42	21.0%
	500 HRS IN R-245ca -> 24 HRS @ 302°F								
A2	0.3348	0.3315	-0.986%	N/C	28.36	34.62		0.49	24.5%
					28.36	22.87	2.56%	0.38	19.0%
					28.36	29.77		0.44	22.0%

	500 HRS IN R-245ca @ 250°F(121°C)						
ID	WT	EXP WT	WT % CHANGE	EXP VIS	BASE DIE (AVE)	EXP DIE	DIE% CHANGE
DMD	3.9876	4.0470	1.49%	N/C	9.61	7.93	
A1					9.61	9.29	-10.58%
					9.61	8.56	
DTMD	4.3524	4.4402	2.02%	N/C	9.95	9.01	
B1					9.95	7.82	-15.08%
					9.95	8.52	
	R-245ca -> 24 HRS @ 302°F						
DMD	4.0289	4.0205	-0.21%	N/C	9.61	9.64	
A2					9.61	8.29	-8.67%
					9.61	8.40	
DTMD	4.2809	4.2721	-0.21%	N/C	9.95	6.50	
B2					9.95	9.54	-17.96%
					9.95	8.45	