DOE/CE/23810-63

COMPATIBILITY OF REFRIGERANTS AND LUBRICANTS WITH MOTOR MATERIALS UNDER RETROFIT CONDITIONS

Final Report

Volume II

DATA TABLES, HIGH PRESSURE REFRIGERANTS

Robert G. Doerr and Todd D. Waite

The Trane Company
3600 Pammel Creek Road
La Crosse, Wisconsin 54601-7599

October 1996

Prepared for
The Air-Conditioning and Refrigeration Technology Institute
Under
ARTI MCLR Project Number 655-50400

This research project is supported, in whole or in part, by U.S. Department of Energy grant DE-FG02-91CE23810: Materials Compatibility and Lubricants Research (MCLR) on CFC-Refrigerant Substitutes. Federal funding supporting this project constitutes 93.57% of allowable costs. Funding from non-government sources supporting this project consists of direct cost sharing of 6.43% of allowable costs; and in-kind contributions from the air-conditioning and refrigeration industry.

DISCLAIMER

The U.S. Department of Energy's and the air-conditioning industry's support for the Materials Compatibility and Lubricants Research (MCLR) program does not constitute an endorsement by the U.S Department of Energy, nor by the air-conditioning and refrigeration industry, of the views expressed herein.

NOTICE

This report was prepared as an account of work sponsored by the United States Government. Neither the United States nor the Department of Energy, nor the Air-Conditioning and Refrigeration Technology Institute, nor any of their employees, nor any of their contractors, subcontractors, or their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product or process disclosed or represents that its use would not infringe privately-owned rights.

COPYRIGHT NOTICE

(for journal publication submissions)

By acceptance of this article, the publisher and/or recipient acknowledges the rights of the U.S. Government and the Air-Conditioning and Refrigeration Technology Institute, Inc. (ARTI) rights to retain a non-exclusive, royalty-free license in and to any copyrights covering this paper.

FORMAT FOR THE FINAL REPORT

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

Volume I (148 pages) contains the abstract, introduction, significant results, conclusions, material identification, experimental procedures and summary data tables. This volume provides the results of the study and other information of interest to most readers. The other volumes are necessary only if the reader is interested in the individual data measurements rather than summaries or averages of the data sets.

Volume II (250 pages) contains the measurements from tests on the three high pressure refrigerant-lubricant combinations and their alternatives.

Original Refrigerant	Alternative Refrigerant	Exposure Temperature
R-12/Mineral Oil	R-134a/Polyol Ester	127°C (260°F)
R-22/Mineral Oil	R-407C/Polyol Ester	127°C (260°F)
R-502/Mineral Oil	R-404A/Polyol Ester	127°C (260°F)

Volume III (155 pages) contains the measurements from tests on the three low pressure refrigerant-lubricant combinations and their alternatives.

Original Refrigerant	Alternative Refrigerant	Exposure Temperature
R-11/Mineral Oil	R-123/Mineral Oil	100°C (212°F)
R-11/Mineral Oil	R-245ca/Polyol Ester	100°C (212°F)
R-123/Mineral Oil	R-245ca/Polyol Ester	100°C (212°F)

Volume IV (44 pages) contains the photographs of the motor materials after exposure to the six refrigerant-lubricant combinations and their alternatives.

TABLE OF CONTENTS

VOLUME II

DATA TABLES HIGH PRESSURE REFIGERANTS

COMPATIBILITY OF REFRIGERANTS AND LUBRICANTS WITH MOTOR MATERIALS UNDER RETROFIT CONDITIONS

Robert G. Doerr and Todd D. Waite
The Trane Company

ABSTRACT

Compatibility tests were conducted on motor materials to determine if exposure to the original refrigerant/mineral oil would affect compatibility of the motor materials after retrofit to the alternative refrigerant/lubricant. The motor materials were exposed at elevated temperature to the original refrigerant and mineral oil for 500 hours, followed by exposure to the alternative refrigerant and lubricant for 500 hours. Measurements were also taken after 168 and 336 hours. As a control, some samples were exposed to the original refrigerant/mineral oil for a total of 1000 hours. The original refrigerants and the alternatives tested for retrofit were as follows:

Original Refrigerant	**Alternative Refrigerant**	**Exposure Temperature**
R-12/Mineral Oil	R-134a/Polyol Ester	127°C (260°F)
R-22/Mineral Oil	R-407C/Polyol Ester	127°C (260°F)
R-502/Mineral Oil	R-404A/Polyol Ester	127°C (260°F)
R-11/Mineral Oil	R-123/Mineral Oil	100°C (212°F)
R-11/Mineral Oil	R-245ca/Polyol Ester	100°C (212°F)
R-123/Mineral Oil	R-245ca/Polyol Ester	100°C (212°F)

Most motor materials exposed to the alternative refrigerant and lubricant (after an initial exposure to the original refrigerant and mineral oil) were compatible with the alternative refrigerant and lubricant. The only concern was delamination and blistering of the sheet insulation containing Nomex, especially after removal of absorbed refrigerant. This was attributed to solution of the adhesive and not to the Nomex itself. Embrittlement of the polyethylene terephthalate (PET) found in Mylar and Melinex sheet and sleeving insulations was initially observed, but subsequent tests under dry conditions showed that embrittlement of the PET materials was caused by moisture present during the exposure.

Compatibility tests of elastomers with R-245ca, retrofitted from R-11 and R-123, showed that the nitrile was compatible with both R-11 and R-245ca, but not with R-123. The neoprene was unsatisfactory because of shrinkage in the R-245ca.

Data Tables
Part 1

R-12/Mineral Oil to R-134a/Polyolester

500 HRS IN R-12/MINERAL OIL @ 260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.7365	0.2407	0.7035	0.2440
2	0.6154	0.2012	0.5891	0.2033
3	0.6259	0.2049	0.5998	0.2075

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	% Change in Weight	% Change in Volume
1	0.6343	0.5878	-4.48%	-7.32%
2	0.5299	0.4935	-4.27%	-6.86%
3	0.5386	0.5019	-4.17%	-6.82%
		AVERAGE	-4.31%	-7.00%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.9572	0.3183	0.9692	0.3338
2	0.8450	0.2814	0.8564	0.2958
3	0.5789	0.1933	0.5903	0.2049

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	% Change in Weight	% Change in Volume
1	0.8173	0.8128	1.25%	-0.55%
2	0.7210	0.7172	1.35%	-0.53%
3	0.4933	0.4930	1.97%	-0.05%
		AVERAGE	1.52%	-0.38%

1000 HRS IN R-12/MINERAL OIL @ 260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.7365	0.2407	0.7109	0.2469
2	0.6154	0.2012	0.5969	0.2068
3	0.6259	0.2049	0.6067	0.2105

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	% Change in Weight	% Change in Volume
1	0.6343	0.5936	-3.48%	-6.41%
2	0.5299	0.4990	-3.01%	-5.82%
3	0.5386	0.5068	-3.07%	-5.89%
		AVERAGE	-3.18%	-6.04%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.9572	0.3183	0.9703	0.3346
2	0.8450	0.2814	0.8585	0.2965
3	0.5789	0.1933	0.5907	0.2048

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	% Change in Weight	% Change in Volume
1	0.8173	0.8132	1.37%	-0.50%
2	0.7210	0.7189	1.60%	-0.28%
3	0.4933	0.4937	2.04%	0.08%
		AVERAGE	1.67%	-0.24%

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.8992	0.2926	0.8340	0.2868
2	0.7703	0.2515	0.7242	0.2488
3	0.5135	0.1685	0.4930	0.1698

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	% Change in Weight	% Change in Volume
1	0.7760	0.7000	-7.25%	-9.79%
2	0.6637	0.6082	-5.98%	-8.37%
3	0.4413	0.4135	-3.99%	-6.32%
		AVERAGE	-5.74%	-8.16%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.5510	0.1836	0.5615	0.1940
2	0.8744	0.2905	0.8875	0.3059
3	0.9584	0.3189	0.9715	0.3347

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	% Change in Weight	% Change in Volume
1	0.4700	0.4701	1.91%	0.03%
2	0.7470	0.7440	1.50%	-0.39%
3	0.8181	0.8146	1.37%	-0.42%
		AVERAGE	1.59%	-0.26%

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.8992	0.2926	0.8324	0.2855
2	0.7703	0.2515	0.7235	0.2470
3	0.5135	0.1685	0.4926	0.1696

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	% Change in Weight	% Change in Volume
1	0.7760	0.6996	-7.43%	-9.84%
2	0.6637	0.6096	-6.08%	-8.15%
3	0.4413	0.4132	-4.07%	-6.38%
		AVERAGE	-5.86%	-8.12%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.5510	0.1836	0.5610	0.1939
2	0.8744	0.2905	0.8868	0.3062
3	0.9584	0.3189	0.9702	0.3347

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	% Change in Weight	% Change in Volume
1	0.4700	0.4696	1.81%	-0.08%
2	0.7470	0.7427	1.42%	-0.57%
3	0.8181	0.8130	1.23%	-0.63%
		AVERAGE	1.49%	-0.42%

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.8992	0.2926	0.8313	0.2855
2	0.7703	0.2515	0.7193	0.2473
3	0.5135	0.1685	0.4908	0.1690

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	% Change in Weight	% Change in Volume
1	0.7760	0.6982	-7.55%	-10.02%
2	0.6637	0.6038	-6.62%	-9.02%
3	0.4413	0.4117	-4.42%	-6.72%
		AVERAGE	-6.20%	-8.59%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.5510	0.1836	0.5605	0.1936
2	0.8744	0.2905	0.8854	0.3051
3	0.9584	0.3189	0.9696	0.3342

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	% Change in Weight	% Change in Volume
1	0.4700	0.4694	1.72%	-0.14%
2	0.7470	0.7424	1.26%	-0.62%
3	0.8181	0.8128	1.17%	-0.64%
		AVERAGE	1.38%	-0.46%

500 HRS IN R-12/MINERAL OIL @ 260 F

Wire Type /Varnish		Unexposed Bond Strengths (Pounds[lbs.])	Experimental Bond Strengths (Pounds[lbs.])	% Change in Bond Strength From Unexposed
		57.95	50.95	
Wire Type A		51.25	49.50	
coated with		52.50	58.65	-5.78%
Iso-800		64.45	50.60	
		60.35	60.25	
	Average	57.30	53.99	
		95.90	29.05	
Wire Type A		59.60	29.95	
coated with		52.95	27.10	-58.18%
923		56.35	26.45	
		68.40	26.80	
	Average	66.64	27.87	
		58.25	48.20	
Wire Type B		53.35	48.55	
coated with		52.30	58.90	-4.82%
Iso-800		54.25	55.15	
		56.95	51.05	
	Average	55.02	52.37	
		72.40	52.85	
Wire Type B		69.20	38.95	
coated with		71.65	43.70	-29.36%
923		75.80	57.10	
		63.50	56.45	
	Average	70.51	49.81	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Wire Type /Varnish		Unexposed Bond Strengths (Pounds[lbs.])	Experimental Bond Strengths (Pounds[lbs.])	% Change in Bond Strength From Unexposed
		57.95	61.45	
Wire Type A		51.25	63.45	
coated with		52.50	58.40	4.22%
Iso-800		64.45	55.15	
		60.35	60.15	
	Average	57.30	59.72	
		95.90	33.20	
Wire Type A		59.60	31.25	
coated with		52.95	37.75	-51.13%
923		56.35	30.00	
		68.40	30.65	
	Average	66.64	32.57	
		58.25	48.35	
Wire Type B		53.35	43.95	
coated with		52.30	56.80	-4.67%
Iso-800		54.25	54.45	
		56.95	58.70	
	Average	55.02	52.45	
		72.40	67.05	
Wire Type B		69.20	69.70	
coated with		71.65	66.10	-7.13%
923		75.80	54.65	
		63.50	69.90	
	Average	70.51	65.48	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

1000 HRS IN R-12/MINERAL OIL @ 260 F

Wire Type /Varnish		Unexposed Bond Strengths (Pounds[lbs.])	Experimental Bond Strengths (Pounds[lbs.])	% Change in Bond Strength From Unexposed
		57.95	62.35	
Wire Type A		51.25	67.60	
coated with		52.50	65.90	10.38%
Iso-800		64.45	61.75	
		60.35	58.65	
	Average	57.30	63.25	
		95.90	25.70	
Wire Type A		59.60	37.95	
coated with		52.95	25.60	-57.59%
923		56.35	27.15	
		68.40	24.90	
	Average	66.64	28.26	
		58.25	56.95	
Wire Type B		53.35	48.70	
coated with		52.30	53.40	-4.03%
Iso-800		54.25	52.05	
		56.95	52.90	
	Average	55.02	52.80	
		72.40	27.40	
Wire Type B		69.20	30.20	
coated with		71.65	29.25	-56.70%
923		75.80	36.25	
		63.50	29.55	
	Average	70.51	30.53	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

1000 HRS IN R-12/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Wire Type /Varnish		Unexposed Bond Strengths (Pounds[lbs.])	Experimental Bond Strengths (Pounds[lbs.])	% Change in Bond Strength From Unexposed
		57.95	67.15	
Wire Type A		51.25	64.05	
coated with		52.50	54.55	8.87%
Iso-800		64.45	64.75	
		60.35	61.40	
	Average	57.30	62.38	
		95.90	50.65	
Wire Type A		59.60	37.20	
coated with		52.95	51.55	-28.39%
923		56.35	48.75	
		68.40	50.45	
	Average	66.64	47.72	
		58.25	59.15	
Wire Type B		53.35	67.30	
coated with		52.30	72.35	31.26%
Iso-800		54.25	68.20	
		56.95	94.10	
	Average	55.02	72.22	
		72.40	72.45	
Wire Type B		69.20	74.70	
coated with		71.65	61.45	1.52%
923		75.80	71.20	
		63.50	78.10	
	Average	70.51	71.58	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F

Wire Type /Varnish		Unexposed Bond Strengths (Pounds[lbs.])	Experimental Bond Strengths (Pounds[lbs.])	% Change in Bond Strength From Unexposed
		57.95	46.80	
Wire Type A		51.25	57.60	
coated with		52.50	51.50	-4.01%
Iso-800		64.45	63.60	
		60.35	55.50	
	Average	57.30	55.00	
		95.90	28.35	
Wire Type A		59.60	28.40	
coated with		52.95	28.05	-56.23%
923		56.35	29.55	
		68.40	31.50	
	Average	66.64	29.17	
		58.25	51.40	
Wire Type B		53.35	57.80	
coated with		52.30	48.45	-4.53%
Iso-800		54.25	45.10	
		56.95	59.90	
	Average	55.02	52.53	
		72.40	40.75	
Wire Type B		69.20	56.75	
coated with		71.65	60.35	-23.03%
923		75.80	68.05	
		63.50	45.45	
	Average	70.51	54.27	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F
24 HR BAKE @ 302 F

Wire Type /Varnish		Unexposed Bond Strengths (Pounds[lbs.])	Experimental Bond Strengths (Pounds[lbs.])	% Change in Bond Strength From Unexposed
		57.95	70.20	
Wire Type A		51.25	60.25	
coated with		52.50	96.90	30.33%
Iso-800		64.45	74.95	
		60.35	71.10	
	Average	57.30	74.68	
		95.90	47.45	
Wire Type A		59.60	35.40	
coated with		52.95	49.00	-34.33%
923		56.35	48.45	
		68.40	38.50	
	Average	66.64	43.76	
		58.25	57.50	
Wire Type B		53.35	56.95	
coated with		52.30	59.65	6.32%
Iso-800		54.25	61.10	
		56.95	57.30	
	Average	55.02	58.50	
		72.40	70.35	
Wire Type B		69.20	67.55	
coated with		71.65	61.35	0.94%
923		75.80	74.61	
		63.50	82.00	
	Average	70.51	71.17	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F

Wire Type /Varnish		Unexposed Bond Strengths (Pounds[lbs.])	Experimental Bond Strengths (Pounds[lbs.])	% Change in Bond Strength From Unexposed
		57.95	73.00	
Wire Type A		51.25	67.20	
coated with		52.50	58.25	19.28%
Iso-800		64.45	75.60	
		60.35	67.70	
	Average	57.30	68.35	
		95.90	29.25	
Wire Type A		59.60	37.80	
coated with		52.95	38.15	-53.77%
923		56.35	35.55	
		68.40	13.30	
	Average	66.64	30.81	
		58.25	63.65	
Wire Type B		53.35	91.90	
coated with		52.30	65.55	19.28%
Iso-800		54.25	56.00	
		56.95	51.05	
	Average	55.02	65.63	
		72.40	53.70	
Wire Type B		69.20	55.40	
coated with		71.65	67.85	-16.99%
923		75.80	67.40	
		63.50	48.30	
	Average	70.51	58.53	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Wire Type /Varnish		Unexposed Bond Strengths (Pounds[lbs.])	Experimental Bond Strengths (Pounds[lbs.])	% Change in Bond Strength From Unexposed
		57.95	49.85	
Wire Type A		51.25	60.90	
coated with		52.50	62.95	-13.56%
Iso-800		64.45	37.70	
		60.35	36.25	
	Average	57.30	49.53	
		95.90	32.55	
Wire Type A		59.60	28.05	
coated with		52.95	30.95	-57.35%
923		56.35	28.40	
		68.40	22.15	
	Average	66.64	28.42	
		58.25	46.60	
Wire Type B		53.35	32.30	
coated with		52.30	29.20	-32.33%
Iso-800		54.25	46.85	
		56.95	31.20	
	Average	55.02	37.23	
		72.40	63.05	
Wire Type B		69.20	74.50	
coated with		71.65	43.95	-21.19%
923		75.80	40.90	
		63.50	55.45	
	Average	70.51	55.57	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F

Wire Type /Varnish		Unexposed Bond Strengths (Pounds[lbs.])	Experimental Bond Strengths (Pounds[lbs.])	% Change in Bond Strength From Unexposed
		57.95	54.45	
Wire Type A		51.25	58.65	
coated with		52.50	68.40	3.49%
Iso-800		64.45	58.60	
		60.35	56.40	
	Average	57.30	59.30	
		95.90	36.20	
Wire Type A		59.60	36.40	
coated with		52.95	29.65	-50.45%
923		56.35	30.70	
		68.40	32.15	
	Average	66.64	33.02	
		58.25	49.75	
Wire Type B		53.35	49.60	
coated with		52.30	53.25	-11.87%
Iso-800		54.25	43.75	
		56.95	46.10	
	Average	55.02	48.49	
		72.40	36.50	
Wire Type B		69.20	23.95	
coated with		71.65	32.25	-48.67%
923		75.80	57.35	
		63.50	30.90	
	Average	70.51	36.19	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Wire Type /Varnish		Unexposed Bond Strengths (Pounds[lbs.])	Experimental Bond Strengths (Pounds[lbs.])	% Change in Bond Strength From Unexposed
		57.95	51.65	
Wire Type A		51.25	50.10	
coated with		52.50	54.25	2.93%
Iso-800		64.45	73.55	
		60.35	65.35	
	Average	57.30	58.98	
		95.90	44.05	
Wire Type A		59.60	33.25	
coated with		52.95	33.50	-44.66%
923		56.35	30.85	
		68.40	42.75	
	Average	66.64	36.88	
		58.25	52.50	
Wire Type B		53.35	63.35	
coated with		52.30	51.20	0.75%
Iso-800		54.25	57.20	
		56.95	52.90	
	Average	55.02	55.43	
		72.40	63.10	
Wire Type B		69.20	53.70	
coated with		71.65	76.40	-3.46%
923		75.80	67.00	
		63.50	80.15	
	Average	70.51	68.07	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F

Wire Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric % Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout % Change
	16.40	16.80		518	320	
	15.10	16.89		577	242	
Wire Type A	14.37	15.74	10.19%	569	335	-51.89%
	15.70	17.51		555	221	
	14.66	17.06		556	217	
Average	15.25	16.80		555	267	
	15.24	17.40		576	209	
	14.63	17.55		580	203	
Wire Type B	14.06	17.69	29.69%	595	181	-65.71%
	12.60	17.10		592	235	
	10.60	17.32		576	173	
Average	13.43	17.41		584	200	

1000 HRS IN R-12/MINERAL OIL @ 260 F

	16.40	16.72		518	358	
	15.10	17.08		577	309	
Wire Type A	14.37	15.97	7.31%	569	427	-44.97%
	15.70	16.52		555	330	
	14.66	15.51		556	103	
Average	15.25	16.36		555	305	
	15.24	17.00		576	278	
	14.63	17.33		580	235	
Wire Type B	14.06	16.74	29.76%	595	214	-59.23%
	12.60	17.84		592	259	
	10.60	18.20		576	204	
Average	13.43	17.42		584	238	

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F

	16.40	15.85		518	452	
	15.10	16.88		577	442	
Wire Type A	14.37	15.04	2.68%	569	287	-28.94%
	15.70	15.22		555	428	
	14.66	15.28		556	363	
Average	15.25	15.65		555	394	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F

Wire Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric % Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout % Change
	15.24	17.33		576	355	
	14.63	15.99		580	439	
Wire Type B	14.06	16.81	24.79%	595	444	-36.42%
	12.60	16.23		592	373	
	10.60	17.41		576	245	
Average	13.43	16.75		584	371	

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F

	16.40	15.92		518	557	
	15.10	17.40		577	428	
Wire Type A	14.37	16.95	9.56%	569	517	-11.60%
	15.70	16.70		555	496	
	14.66	16.55		556	455	
Average	15.25	16.70		555	491	
	15.24	16.60		576	384	
	14.63	16.86		580	476	
Wire Type B	14.06	15.66	21.06%	595	475	-22.23%
	12.60	15.40		592	462	
	10.60	16.75		576	473	
Average	13.43	16.25		584	454	

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F

	16.40	11.74		518	502	
	15.10	15.62		577	439	
Wire Type A	14.37	15.91	-2.61%	569	550	-10.02%
	15.70	13.93		555	556	
	14.66	17.04		556	450	
Average	15.25	14.85		555	499	
	15.24	16.26		576	522	
	14.63	16.72		580	554	
Wire Type B	14.06	17.08	26.23%	595	449	-16.68%
	12.60	17.18		592	542	
	10.60	17.50		576	365	
Average	13.43	16.95		584	486	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F

Wire Type Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	19.78		569	305	
Wire Type A	18.18	16.55		586	390	
coated with	17.00	18.70	16.11%	487	237	-40.12%
Iso-800	18.27	19.37		483	386	
	11.90	18.35		557	288	
Average	15.98	18.55		536	321	
	19.93	19.77		652	278	
Wire Type A	16.91	19.65		653	320	
coated with	16.82	19.63	14.85%	642	260	-51.05%
923	14.36	19.96		547	336	
	17.01	18.65		564	303	
Average	17.01	19.53		612	299	
	18.19	19.89		590	250	
Wire Type B	19.70	18.60		494	210	
coated with	18.41	18.33	-0.03%	457	199	-56.58%
Iso-800	19.73	19.99		594	298	
	18.35	17.54		578	221	
Average	18.88	18.87		543	236	
	19.76	19.99		631	253	
Wire Type B	19.71	19.99		423	248	
coated with	19.85	19.99	-0.14%	688	254	-55.47%
923	19.71	18.83		395	245	
	19.90	19.99		643	238	
Average	19.79	19.76		556	248	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

1000 HRS IN R-12 / MINERAL OIL @ 260 F

Wire Type Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	17.33		569	478	
Wire Type A	18.18	19.75		586	455	
coated with	17.00	15.18	15.21%	487	455	-15.18%
Iso-800	18.27	19.93		483	458	
	11.90	19.84		557	429	
Average	15.98	18.41		536	455	
	19.93	19.99		652	328	
Wire Type A	16.91	19.76		653	341	
coated with	16.82	19.99	17.09%	642	332	-43.07%
923	14.36	19.91		547	336	
	17.01	bad sample		564	404	
Average	17.01	19.91		612	348	
	18.19	19.48		590	268	
Wire Type B	19.70	19.69		494	289	
coated with	18.41	19.84	3.00%	457	240	-50.83%
Iso-800	19.73	18.21		594	255	
	18.35	19.99		578	282	
Average	18.88	19.44		543	267	
	19.76	19.98		631	346	
Wire Type B	19.71	19.83		423	273	
coated with	19.85	18.09	-1.22%	688	305	-45.11%
923	19.71	19.83		395	300	
	19.90	19.99		643	302	
Average	19.79	19.54		556	305	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F

Wire Type Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	17.54		569	489	
Wire Type A	18.18	19.90		586	347	
coated with	17.00	16.17	12.59%	487	399	-18.42%
Iso-800	18.27	16.87		483	498	
	11.90	19.46		557	455	
Average	15.98	17.99		536	438	
	19.93	18.59		652	324	
Wire Type A	16.91	19.99		653	400	
coated with	16.82	19.99	15.57%	642	583	-30.09%
923	14.36	19.88		547	412	
	17.01	19.82		564	419	
Average	17.01	19.65		612	428	
	18.19	19.99		590	503	
Wire Type B	19.70	19.95		494	478	
coated with	18.41	19.92	5.65%	457	376	-5.31%
Iso-800	19.73	19.99		594	605	
	18.35	19.86		578	607	
Average	18.88	19.94		543	514	
	19.76	19.99		631	233	
Wire Type B	19.71	19.99		423	311	
coated with	19.85	19.99	1.03%	688	260	-52.01%
923	19.71	19.99		395	286	
	19.90	19.99		643	244	
Average	19.79	19.99		556	267	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F

Wire Type Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	19.99		569	564	
Wire Type A	18.18	16.45		586	550	
coated with	17.00	14.85	14.23%	487	545	2.76%
Iso-800	18.27	19.99		483	600	
	11.90	19.97		557	497	
Average	15.98	18.25		536	551	
	19.93	16.30		652	482	
Wire Type A	16.91	19.93		653	468	
coated with	16.82	19.82	11.77%	642	471	-17.96%
923	14.36	19.98		547	586	
	17.01			564		
Average	17.01	19.01		612	502	
	18.19	19.99		590	409	
Wire Type B	19.70	17.02		494	331	
coated with	18.41	17.05	-2.20%	457	313	-38.70%
Iso-800	19.73	18.99		594	309	
	18.35	19.25		578	301	
Average	18.88	18.46		543	333	
	19.76	19.82		631	559	
Wire Type B	19.71	19.83		423	533	
coated with	19.85	19.77	-0.64%	688	549	-0.36%
923	19.71	19.99		395	572	
	19.90	18.89		643	557	
Average	19.79	19.66		556	554	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F

Wire Type Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	19.74		569	558	
Wire Type A	18.18	18.90		586	579	
coated with	17.00	19.72	13.86%	487	554	5.93%
Iso-800	18.27	16.49		483	578	
	11.90	16.10		557	572	
Average	15.98	18.19		536	568	
	19.93	19.91		652	573	
Wire Type A	16.91	19.99		653	574	
coated with	16.82	17.59	13.77%	642	592	-4.38%
923	14.36	19.90		547	592	
	17.01			564	593	
Average	17.01	19.35		612	585	
	18.19	19.93		590	578	
Wire Type B	19.70	19.99		494	562	
coated with	18.41	16.23	-6.40%	457	564	5.05%
Iso-800	19.73	19.10		594	568	
	18.35	13.09		578	578	
Average	18.88	17.67		543	570	
	19.76	19.99		631	618	
Wire Type B	19.71	19.93		423	673	
coated with	19.85	19.96	-2.96%	688	599	7.48%
923	19.71	16.14		395	516	
	19.90	19.98		643	582	
Average	19.79	19.20		556	598	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F

Lead Wire Insulation Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric % Change
Polyester Composite	10.87	7.59	
Dacron-Mylar-Dacron	10.82	8.77	-13.82%
	7.62	8.90	
Average	9.77	8.42	
Polyester, Fluorpolymer	10.78	11.00	
Composite	9.24	11.59	10.76%
Dacron-Teflon-Dacron	10.46	11.17	
Average	10.16	11.25	

1000 HRS IN R-12/MINERAL OIL @ 260 F

Polyester Composite	10.87	1.79	
Dacron-Mylar-Dacron	10.82	1.82	-81.85%
	7.62	1.71	
Average	9.77	1.77	
Polyester, Fluorpolymer	10.78	13.22	
Composite	9.24	14.04	25.89%
Dacron-Teflon-Dacron	10.46	11.11	
Average	10.16	12.79	

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F

Lead Wire Insulation Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric % Change
Polyester Composite	10.87	8.50	
Dacron-Mylar-Dacron	10.82	7.91	-14.88%
	7.62	8.54	
Average	9.77	8.32	
Polyester, Fluorpolymer	10.78	19.20	
Composite	9.24	15.17	69.85%
Dacron-Teflon-Dacron	10.46	17.40	
Average	10.16	17.26	

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F

Polyester Composite	10.87	3.21	
Dacron-Mylar-Dacron	10.82	2.44	-67.55%
	7.62	3.86	
Average	9.77	3.17	
Polyester, Fluorpolymer	10.78	13.12	
Composite	9.24	11.17	24.74%
Dacron-Teflon-Dacron	10.46	13.73	
Average	10.16	12.67	

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F

Polyester Composite	10.87	8.08	
Dacron-Mylar-Dacron	10.82	7.83	-31.22%
	7.62	4.25	
Average	9.77	6.72	
Polyester, Fluorpolymer	10.78	11.76	
Composite	9.24	12.52	24.97%
Dacron-Teflon-Dacron	10.46	13.81	
Average	10.16	12.70	

500 HRS IN R-12/MINERAL OIL @ 260 F

Sleeving Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric % Change
Polyester Film	>19.14		
	>17.05	brittle	
	>16.60		
Average	>17.60		
Aramid Fiber Mat	>11.83	6.27	
Polyester Film	>12.33	5.12	-53.75%
	>12.40	5.52	
Average	>12.19	5.64	

1000 HRS IN R-12/MINERAL OIL @ 260 F

Polyester Film	>19.14		
	>17.05	brittle	
	>16.60		
Average	>17.60		
Aramid Fiber Mat	>11.83	4.46	
Polyester Film	>12.33	4.45	-65.07%
	>12.40	3.86	
Average	>12.19	4.26	

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F

Sleeving Type		Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric % Change
Polyester Film		>19.14		
		>17.05	brittle	
		>16.60		
	Average	>17.60		
Aramid Fiber Mat		>11.83	> 9.47	
Polyester Film		>12.33	> 9.94	-20.57%
		>12.40	> 9.63	
	Average	>12.19	> 9.68	

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F

Polyester Film		>19.14		
		>17.05	brittle	
		>16.60		
	Average	>17.60		
Aramid Fiber Mat		>11.83	4.60	
Polyester Film		>12.33	9.28	-34.68%
		>12.40	10.00	
	Average	>12.19	7.96	

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F

Sleeving Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric % Change
Polyester Film	>19.14		
	>17.05	brittle	
	>16.60		
Average	>17.60		
Aramid Fiber Mat	>11.83	6.01	
Polyester Film	>12.33	6.15	-47.87%
	>12.40	6.90	
Average	>12.19	6.35	

500 HRS IN R-12/MINERAL OIL @ 260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.483	86.3	17.87	22.48	-21.53%
2	0.010	0.514	90.0	17.51		
3	0.010	0.492	86.3	17.54		
Average				17.64		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	2.67	133.50%	134.83%	-10.63%	>14.10	> 14.72	0.12%
2	2.20	110.00%				> 13.61	
3	2.36	118.00%				> 14.02	
Average		120.50%				>14.12	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.450	71.2	15.81	19.06	-14.87%
2	0.010	0.505	83.6	16.54		
3	0.010	0.496	81.0	16.32		
Average				16.23		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	1.60	80.00%	142.83%	-26.60%	>14.60	>15.34	0.98%
2	2.62	131.00%				>14.39	
3	2.07	103.50%				>14.50	
Average		104.83%				>14.74	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.482	135.1	13.35	13.40	-1.92%
2	0.021	0.458	136.0	14.14		
3	0.021	0.483	121.1	11.94		
Average				13.14		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.51	25.60%	29.33%	-15.22%	>18.56	>18.07	-7.70%
2	0.49	24.50%				>17.37	
3	0.49	24.50%				>15.95	
Average		24.87%				>17.13	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.504	94.4	18.73	18.09	-6.99%
2	0.010	0.468	79.3	16.93		
3	0.010	0.503	74.5	14.81		
Average				16.83		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.66	16.50%	16.25%	-20.51%	10.29	13.95	34.34%
2	0.58	14.50%				13.88	
3	0.31	7.75%				13.64	
Average		12.92%				13.82	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.497	26.6	5.94	7.07	-19.78%
2	0.009	0.510	24.4	5.32		
3	0.009	0.483	25.1	5.76		
Average				5.67		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.10	2.50%	1.92%	30.21%	11.39	13.22	11.65%
2	0.11	2.75%				13.26	
3	0.09	2.25%				11.67	
Average		2.50%				12.72	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.526	165.9	15.02	17.05	-5.21%
2	0.021	0.450	156.1	16.52		
3	0.021	0.460	163.7	16.95		
Average				16.16		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.54	13.50%	25.50%	-22.22%	>17.76	> 18.17	4.47%
2	0.87	21.75%				> 18.96	
3	0.97	24.25%				> 18.53	
Average		19.83%				>18.55	

500 HRS IN R-12/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.10	>13.86	0.40%
2	BRITTLE	BRITTLE				>13.98	
3	BRITTLE	BRITTLE				>14.63	
Average		BRITTLE				>14.16	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	>14.22	-3.93%
2	BRITTLE	BRITTLE				>13.50	
3	BRITTLE	BRITTLE				>14.36	
Average		BRITTLE				>14.03	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.481	17.2	1.70	13.40	-86.87%
2	0.021	0.456	17.5	1.83		
3	0.021	0.492	18.0	1.74		
Average				1.76		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.03	1.50%	29.33%	-95.45%	>18.56	>19.00	-5.15%
2	0.02	1.00%				>19.82	
3	0.03	1.50%				>13.99	
Average		1.33%				>17.60	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.585	116.0	19.83	18.09	7.67%
2	0.010	0.516	101.8	19.73		
3	0.010	0.422	79.7	18.87		
Average				19.48		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.39	9.75%	16.25%	-41.03%	10.29	11.30	11.63%
2	0.42	10.50%				10.77	
3	0.34	8.50%				12.39	
Average		9.58%				11.49	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.506	34.5	7.58	7.07	2.80%
2	0.009	0.499	30.7	6.82		
3	0.009	0.511	34.1	7.40		
Average				7.27		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.02	0.50%	1.92%	-65.28%	11.39	11.39	-2.17%
2	0.03	0.75%				10.73	
3	0.03	0.75%				11.31	
Average		0.67%				11.14	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.525	101.9	9.24	17.05	-54.20%
2	0.021	0.498	51.0	4.87		
3	0.021	0.508	99.3	9.31		
Average				7.81		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.25	6.25%	25.50%	-76.47%	>17.76	>19.07	-6.89%
2	0.23	5.75%				11.14	
3	0.24	6.00%				>19.40	
Average		6.00%				>16.54	

1000 HRS IN R-12/MINERAL OIL @ 260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	14.10	> 14.50	1.89%
2	BRITTLE	BRITTLE				> 14.45	
3	BRITTLE	BRITTLE				> 14.15	
Average		BRITTLE				>14.37	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	> 14.28	-1.85%
2	BRITTLE	BRITTLE				> 14.04	
3	BRITTLE	BRITTLE				> 14.67	
Average		BRITTLE				>14.33	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>18.56	> 19.32	4.85%
2	BRITTLE	BRITTLE				> 19.38	
3	BRITTLE	BRITTLE				> 19.68	
Average		BRITTLE				>19.46	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.508	91.6	18.03	18.09	-7.86%
2	0.010	0.565	84.7	14.98		
3	0.010	0.510	86.7	16.99		
Average				16.67		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.65	16.25%	16.25%	-29.23%	10.29	13.40	29.58%
2	0.34	8.50%				13.29	
3	0.39	9.75%				13.31	
Average		11.50%				13.33	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.504	25.9	5.70	7.07	-20.73%
2	0.009	0.512	25.4	5.50		
3	0.009	0.488	24.7	5.61		
Average				5.60		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.11	2.75%	1.92%	30.21%	11.39	12.04	11.47%
2	0.09	2.25%				13.03	
3	0.10	2.50%				13.02	
Average		2.50%				12.70	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.505	87.2	8.22	17.05	-51.36%
2	0.021	0.489	86.3	8.40		
3	0.021	0.514	89.2	8.26		
Average				8.29		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.27	6.75%	25.50%	-72.22%	>17.76	> 16.34	-0.99%
2	0.27	6.75%				> 18.01	
3	0.31	7.75%				> 18.40	
Average		7.08%				>17.58	

1000 HRS IN R-12/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.10	>15.52	3.85%
2	BRITTLE	BRITTLE				>14.09	
3	BRITTLE	BRITTLE				>14.32	
Average		BRITTLE				>14.64	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	>14.00	-4.61%
2	BRITTLE	BRITTLE				>13.88	
3	BRITTLE	BRITTLE				>13.90	
Average		BRITTLE				>13.93	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>18.56	>15.63	-21.25%
2	BRITTLE	BRITTLE				>17.00	
3	BRITTLE	BRITTLE				11.22	
Average		BRITTLE				>14.62	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.515	96.3	18.70	18.09	6.39%
2	0.010	0.502	101.1	20.14		
3	0.010	0.496	93.8	18.90		
Average				19.25		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.44	11.00%	16.25%	-23.08%	10.29	9.34	-4.76%
2	0.56	14.00%				10.43	
3	0.50	12.50%				9.63	
Average		12.50%				9.80	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.497	32.0	7.15	7.07	3.54%
2	0.009	0.515	34.1	7.35		
3	0.009	0.488	32.8	7.46		
Average				7.32		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.05	1.25%	1.92%	-17.53%	11.39	11.52	2.90%
2	0.07	1.75%				11.47	
3	0.07	1.75%				12.17	
Average		1.58%				11.72	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>17.76	>18.55	-10.98%
2	BRITTLE	BRITTLE				>15.25	
3	BRITTLE	BRITTLE				13.63	
Average		BRITTLE				>15.81	

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.585	96.9	16.56	22.48	-25.35%
2	0.010	0.462	77.7	16.81		
3	0.010	0.505	85.7	16.97		
Average				16.78		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	1.79	89.50%	134.83%	-25.46%	>14.10	> 12.94	-1.89%
2	1.97	98.50%				> 14.59	
3	2.27	113.50%				> 13.97	
Average		100.50%				>13.83	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.568	91.1	16.04	19.06	-16.86%
2	0.010	0.499	78.5	15.72		
3	0.010	0.503	79.4	15.78		
Average				15.85		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	2.69	134.50%	142.83%	-25.32%	>14.60	>14.34	-0.96%
2	1.74	87.00%				>14.34	
3	1.97	98.50%				>14.70	
Average		106.67%				>14.46	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.492	128.4	12.43	13.40	-10.38%
2	0.021	0.441	116.3	12.56		
3	0.021	0.571	132.4	11.04		
Average				12.01		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.55	27.50%	29.33%	13.08%	>18.56	> 17.01	-4.97%
2	0.86	43.00%				> 18.90	
3	0.58	29.00%				> 17.00	
Average		33.17%				>17.64	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.515	95.9	18.62	18.09	2.80%
2	0.010	0.480	89.8	18.71		
3	0.010	0.494	91.2	18.46		
Average				18.60		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.58	14.50%	16.25%	-7.18%	10.29	13.50	33.98%
2	0.65	16.25%				13.73	
3	0.58	14.50%				14.13	
Average		15.08%				13.79	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.497	27.0	6.04	7.07	-15.26%
2	0.009	0.485	27.1	6.20		
3	0.009	0.512	26.5	5.74		
Average				5.99		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.12	3.00%	1.92%	64.93%	11.39	12.88	8.78%
2	0.14	3.50%				12.26	
3	0.12	3.00%				12.03	
Average		3.17%				12.39	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.513	184.5	17.13	17.05	3.22%
2	0.021	0.490	182.4	17.73		
3	0.021	0.530	199.7	17.94		
Average				17.60		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.46	11.50%	25.50%	-54.58%	>17.76	> 18.49	4.79%
2	0.44	11.00%				> 18.66	
3	0.49	12.25%				> 18.68	
Average		11.58%				>18.61	

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.10	> 14.05	3.76%
2	BRITTLE	BRITTLE				> 14.46	
3	BRITTLE	BRITTLE				> 15.38	
Average		BRITTLE				>14.63	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	> 15.32	4.25%
2	BRITTLE	BRITTLE				> 15.20	
3	BRITTLE	BRITTLE				> 15.14	
Average		BRITTLE				>15.22	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>18.56	> 15.85	-25.27%
2	BRITTLE	BRITTLE				12.97	
3	BRITTLE	BRITTLE				12.79	
Average		BRITTLE				>13.87	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.435	87.9	20.20	18.09	5.90%
2	0.010	0.501	91.5	18.26		
3	0.010	0.547	104.0	19.01		
Average				19.16		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.52	13.00%	16.25%	-38.97%	10.29	10.64	9.33%
2	0.33	8.25%				12.20	
3	0.34	8.50%				10.91	
Average		9.92%				11.25	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.498	37.0	8.26	7.07	-3.64%
2	0.009	0.492	19.9	4.49		
3	0.009	0.401	27.8	7.69		
Average				6.81		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.05	1.25%	1.92%	-47.92%	11.39	12.53	11.68%
2	0.03	0.75%				12.71	
3	0.04	1.00%				12.92	
Average		1.00%				12.72	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.481	62.1	6.14	17.05	-62.57%
2	0.021	0.515	72.0	6.65		
3	0.021	0.510	68.0	6.35		
Average				6.38		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.13	3.25%	25.50%	-84.97%	>17.76	>19.25	9.68%
2	0.19	4.75%				>19.50	
3	0.14	3.50%				>19.69	
Average		3.83%				>19.48	

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.488	76.8	15.73	22.48	-30.40%
2	0.010	0.508	79.3	15.60		
3	0.010	0.452	70.6	15.61		
Average				15.65		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.65	32.50%	134.83%	-75.65%	>14.10	>14.25	2.25%
2	0.67	33.50%				>14.73	
3	0.65	32.50%				>14.27	
Average		32.83%				>14.42	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.512	82.7	16.14	19.06	-15.10%
2	0.010	0.488	79.0	16.18		
3	0.010	0.462	75.0	16.22		
Average				16.18		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.13	6.50%	142.83%	-94.75%	>14.60	>14.71	0.50%
2	0.14	7.00%				>14.99	
3	0.18	9.00%				>14.32	
Average		7.50%				>14.67	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.451	103.8	10.96	13.40	-12.72%
2	0.021	0.555	138.7	11.90		
3	0.021	0.393	100.9	12.23		
Average				11.70		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.43	21.50%	29.33%	-20.45%	>18.56	> 17.33	-5.87%
2	0.48	24.00%				> 17.85	
3	0.49	24.50%				> 17.23	
Average		23.33%				>17.47	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.609	109.1	17.91	18.09	-0.04%
2	0.010	0.511	97.1	18.99		
3	0.010	0.451	78.2	17.34		
Average				18.08		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.35	8.75%	16.25%	-52.82%	10.29	13.93	35.70%
2	0.33	8.25%				14.12	
3	0.24	6.00%				13.84	
Average		7.67%				13.96	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.497	30.6	6.85	7.07	-3.25%
2	0.009	0.502	30.2	6.68		
3	0.009	0.505	31.8	7.00		
Average				6.84		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.12	3.00%	1.92%	56.25%	11.39	12.25	5.82%
2	0.12	3.00%				12.02	
3	0.12	3.00%				11.89	
Average		3.00%				12.05	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.414	147.7	16.99	17.05	2.47%
2	0.021	0.501	186.7	17.75		
3	0.021	0.508	188.6	17.68		
Average				17.47		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.35	8.75%	25.50%	-61.11%	>17.76	>18.02	7.32%
2	0.42	10.50%				>19.84	
3	0.42	10.50%				>19.32	
Average		9.92%				>19.06	

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.10	>13.23	-7.91%
2	BRITTLE	BRITTLE				>12.74	
3	BRITTLE	BRITTLE					
Average		BRITTLE				>12.99	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	>14.66	-0.09%
2	BRITTLE	BRITTLE				>14.70	
3	BRITTLE	BRITTLE				>14.40	
Average		BRITTLE				>14.59	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>18.56	>19.74	-17.40%
2	BRITTLE	BRITTLE				11.56	
3	BRITTLE	BRITTLE				14.69	
Average		BRITTLE				15.33	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.448	88.0	19.63	18.09	3.88%
2	0.010	0.497	90.7	18.25		
3	0.010	0.519	96.0	18.50		
Average				18.79		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.55	13.75%	16.25%	-20.51%	10.29	11.41	5.30%
2	0.50	12.50%				10.26	
3	0.50	12.50%					
Average		12.92%				10.84	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.490	30.3	6.86	7.07	4.63%
2	0.009	0.496	31.8	7.11		
3	0.009	0.497	36.8	8.22		
Average				7.40		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.04	1.00%	1.92%	-30.56%	11.39	12.20	-0.82%
2	0.05	1.25%				9.62	
3	0.07	1.75%				12.07	
Average		1.33%				11.30	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>17.05	>17.95	1.74%
2	BRITTLE	BRITTLE				>16.34	
3	BRITTLE	BRITTLE				>17.75	
Average		BRITTLE				>17.35	

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.688	90.7	13.18	22.48	-35.16%
2	0.010	0.497	76.0	15.29		
3	0.010	0.520	79.4	15.26		
Average				14.58		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.55	27.50%	134.83%	-81.83%	>14.10	>14.61	0.31%
2	0.47	23.50%				>13.54	
3	0.45	22.50%				>14.28	
Average		24.50%				>14.14	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.436	70.7	16.20	19.06	-16.00%
2	0.010	0.514	81.1	15.78		
3	0.010	0.471	75.6	16.05		
Average				16.01		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	142.83%	-93.82%	>14.60	>14.47	-2.24%
2	0.27	13.50%				>14.65	
3	0.12	6.00%				>13.70	
Average		8.83%				>14.27	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.497	125.4	12.01	13.40	-15.14%
2	0.021	0.428	92.6	10.30		
3	0.021	0.504	124.9	11.80		
Average				11.37		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.83	41.50%	29.33%	14.79%	>18.56	>19.67	5.62%
2	0.35	17.50%				>19.94	
3	0.84	42.00%				>19.20	
Average		33.67%				>19.60	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.448	84.9	18.94	18.09	-6.01%
2	0.010	0.464	77.0	16.58		
3	0.010	0.498	77.1	15.48		
Average				17.00		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.50	12.50%	16.25%	-25.64%	10.29	12.91	29.02%
2	0.44	11.00%				13.38	
3	0.51	12.75%				13.54	
Average		12.08%				13.28	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.503	25.3	5.58	7.07	-20.11%
2	0.009	0.490	24.6	5.57		
3	0.009	0.500	26.1	5.80		
Average				5.65		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.13	3.25%	1.92%	51.91%	11.39	11.73	1.87%
2	0.10	2.50%				11.55	
3	0.12	3.00%				11.53	
Average		2.92%				11.60	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.504	164.7	15.56	17.05	-6.69%
2	0.021	0.520	177.0	16.21		
3	0.021	0.509	170.6	15.96		
Average				15.91		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.29	7.25%	25.50%	-68.63%	>17.76	>19.85	11.11%
2	0.35	8.75%				>19.70	
3	0.32	8.00%				>19.65	
Average		8.00%				>19.73	

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.10	>14.86	2.58%
2	BRITTLE	BRITTLE				>14.40	
3	BRITTLE	BRITTLE				>14.13	
Average		BRITTLE				>14.46	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	>15.02	1.80%
2	BRITTLE	BRITTLE				>14.57	
3	BRITTLE	BRITTLE				>15.00	
Average		BRITTLE				>14.86	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>18.56	>15.68	-13.02%
2	BRITTLE	BRITTLE				>16.30	
3	BRITTLE	BRITTLE				>16.45	
Average		BRITTLE				>16.14	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.570	98.6	17.30	18.09	-3.23%
2	0.010	0.504	94.5	18.74		
3	0.010	0.521	85.9	16.48		
Average				17.51		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.34	8.50%	16.25%	-43.59%	10.29	10.93	0.52%
2	0.41	10.25%				10.09	
3	0.35	8.75%				10.01	
Average		9.17%				10.34	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.495	29.1	6.53	7.07	-0.70%
2	0.009	0.498	32.8	7.32		
3	0.009	0.493	32.0	7.21		
Average				7.02		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.06	1.50%	1.92%	-21.88%	11.39	12.23	4.39%
2	0.06	1.50%				11.83	
3	0.06	1.50%				11.61	
Average		1.50%				11.89	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>17.76	>18.65	7.13%
2	BRITTLE	BRITTLE				>19.73	
3	BRITTLE	BRITTLE				>18.70	
Average		BRITTLE				>19.03	

500 HRS IN R-12/MINERAL OIL @ 260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	35.30	
A	2	37.20	32.60	-18.14%
	3	29.70	36.60	
	Average	42.55	34.83	
Tape	1	441.60	485.00	
B	2	424.20	457.00	0.85%
	3	490.70	426.00	
	Average	452.17	456.00	
Cord	1	28.05	19.92	
C	2	34.85	23.17	-36.52%
	3	40.50	22.55	
	Average	34.47	21.88	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from Unexposed Elongation
Tape	1	0.64	32.00%	0.29	14.50%	
A	2	0.23	11.50%	0.24	12.00%	-38.58%
	3	0.40	20.00%	0.25	12.50%	
	Average	0.42	21.17%	0.26	13.00%	
Tape	1	0.11	5.50%	0.11	5.50%	
B	2	0.11	5.50%	0.18	9.00%	38.24%
	3	0.12	6.00%	0.18	9.00%	
	Average	0.11	5.67%	0.16	7.83%	
Cord	1	0.62	31.00%	0.35	17.50%	
C	2	0.18	9.00%	0.40	20.00%	12.00%
	3	0.20	10.00%	0.37	18.50%	
	Average	0.33	16.67%	0.37	18.67%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

1000 HRS IN R-12/MINERAL OIL @ 260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	<10	
A	2	37.20	14.38	<-88.73%
	3	29.70	<10	
	Average	42.55	<4.79	
Tape	1	441.60	433.20	
B	2	424.20	359.20	-13.39%
	3	490.70	382.50	
	Average	452.17	391.63	
Cord	1	28.05	10.07	
C	2	34.85	9.60	-72.66%
	3	40.50	8.60	
	Average	34.47	9.42	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from Unexposed Elongation
Tape	1	0.64	32.00%			
A	2	0.23	11.50%	0.09	4.50%	-78.74%
	3	0.40	20.00%			
	Average	0.42	21.17%	0.09	4.50%	
Tape	1	0.11	5.50%	0.09	4.50%	
B	2	0.11	5.50%	0.14	7.00%	-2.94%
	3	0.12	6.00%	0.10	5.00%	
	Average	0.11	5.67%	0.11	5.50%	
Cord	1	0.62	31.00%	0.11	5.50%	
C	2	0.18	9.00%	0.11	5.50%	-69.00%
	3	0.20	10.00%	0.09	4.50%	
	Average	0.33	16.67%	0.10	5.17%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	32.30	
A	2	37.20	35.25	-19.86%
	3	29.70	34.75	
	Average	42.55	34.10	
Tape	1	441.60	455.00	
B	2	424.20	429.50	-16.39%
	3	490.70	249.70	
	Average	452.17	378.07	
Cord	1	28.05	19.47	
C	2	34.85	18.77	-41.79%
	3	40.50	21.95	
	Average	34.47	20.06	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from Unexposed Elongation
Tape	1	0.64	32.00%	0.24	12.00%	
A	2	0.23	11.50%	0.31	15.50%	-31.50%
	3	0.40	20.00%	0.32	16.00%	
	Average	0.42	21.17%	0.29	14.50%	
Tape	1	0.11	5.50%	0.11	5.50%	
B	2	0.11	5.50%	0.11	5.50%	-17.65%
	3	0.12	6.00%	0.06	3.00%	
	Average	0.11	5.67%	0.09	4.67%	
Cord	1	0.62	31.00%	0.32	16.00%	
C	2	0.18	9.00%	0.32	16.00%	1.00%
	3	0.20	10.00%	0.37	18.50%	
	Average	0.33	16.67%	0.34	16.83%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	33.57	
A	2	37.20	33.17	-20.77%
	3	29.70	34.40	
	Average	42.55	33.71	
Tape	1	441.60	384.50	
B	2	424.20	378.00	-12.61%
	3	490.70	423.00	
	Average	452.17	395.17	
Cord	1	28.05	15.50	
C	2	34.85	18.12	-49.53%
	3	40.50	18.57	
	Average	34.47	17.40	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from Unexposed Elongation
Tape	1	0.64	32.00%	0.21	10.50%	
A	2	0.23	11.50%	0.19	9.50%	-49.61%
	3	0.40	20.00%	0.24	12.00%	
	Average	0.42	21.17%	0.21	10.67%	
Tape	1	0.11	5.50%	0.10	5.00%	
B	2	0.11	5.50%	0.09	4.50%	-11.76%
	3	0.12	6.00%	0.11	5.50%	
	Average	0.11	5.67%	0.10	5.00%	
Cord	1	0.62	31.00%	0.23	11.50%	
C	2	0.18	9.00%	0.27	13.50%	-21.00%
	3	0.20	10.00%	0.29	14.50%	
	Average	0.33	16.67%	0.26	13.17%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	28.10	
A	2	37.20	31.20	-29.14%
	3	29.70	31.15	
	Average	42.55	30.15	
Tape	1	441.60	426.70	
B	2	424.20	430.20	-8.43%
	3	490.70	385.20	
	Average	452.17	414.03	
Cord	1	28.05		
C	2	34.85	15.00	-55.75%
	3	40.50	15.50	
	Average	34.47	15.25	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from Unexposed Elongation
Tape	1	0.64	32.00%	0.17	8.50%	
A	2	0.23	11.50%	0.19	9.50%	-56.69%
	3	0.40	20.00%	0.19	9.50%	
	Average	0.42	21.17%	0.18	9.17%	
Tape	1	0.11	5.50%	0.11	5.50%	
B	2	0.11	5.50%	0.11	5.50%	-5.88%
	3	0.12	6.00%	0.10	5.00%	
	Average	0.11	5.67%	0.11	5.33%	
Cord	1	0.62	31.00%			
C	2	0.18	9.00%	0.27	13.50%	-17.50%
	3	0.20	10.00%	0.28	14.00%	
	Average	0.33	16.67%	0.28	13.75%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

500 HRS IN R-12/MINERAL OIL @ 260 F

Magnet Wire Type	Unexposed Voltage Withstand	Experimental Voltage Withstand
Wire Type A	Pass	Pass
Wire Type B	Pass	Pass

1000 HRS IN R-12/MINERAL OIL @ 260 F

Wire Type A	Pass	Pass
Wire Type B	Pass	Pass

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F

Wire Type A	Pass	Pass
Wire Type B	Pass	Pass

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F

Wire Type A	Pass	Pass
Wire Type B	Pass	Pass

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F

Wire Type A	Pass	Pass
Wire Type B	Pass	Pass

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-12/MINERAL OIL @ 260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.500	88.0	17.60	22.48	-24.42%
2	0.010	0.474	83.0	17.51		
3	0.010	0.498	79.0	15.86		
Average				16.99		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	134.83%	-95.30%	>14.10	> 14.06	2.55%
2	0.15	7.50%				> 14.76	
3	0.09	4.50%				> 14.56	
Average		6.33%				>14.46	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.495	91.8	18.55	19.06	-3.03%
2	0.010	0.488	90.8	18.61		
3	0.010	0.475	86.9	18.29		
Average				18.48		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.13	6.50%	142.83%	-95.10%	>14.60	>14.06	-0.96%
2	0.14	7.00%				>14.76	
3	0.15	7.50%				>14.56	
Average		7.00%				>14.46	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.510	151.7	14.16	13.40	3.50%
2	0.021	0.511	154.1	14.36		
3	0.021	0.475	130.5	13.08		
Average				13.87		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.52	26.00%	29.33%	-15.33%	>18.56	>17.07	-7.02%
2	0.52	26.00%				>17.18	
3	0.45	22.50%				>17.52	
Average		24.83%				>17.26	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.500	79.3	15.86	18.09	-6.28%
2	0.010	0.510	86.0	16.86		
3	0.010	0.510	92.5	18.14		
Average				16.95		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.20	5.00%	16.25%	-61.54%	10.29	> 13.34	33.88%
2	0.25	6.25%				> 13.85	
3	0.30	7.50%				> 14.14	
Average		6.25%				> 13.78	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.495	28.3	6.35	7.07	-2.56%
2	0.009	0.510	33.2	7.23		
3	0.009	0.510	32.5	7.08		
Average				6.89		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.05	1.25%	1.92%	-34.90%	11.39	> 13.98	24.50%
2	0.05	1.25%				> 14.18	
3	0.05	1.25%				> 14.38	
Average		1.25%				> 14.18	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.506	184.6	17.37	17.05	2.95%
2	0.021	0.475	175.5	17.59		
3	0.021	0.495	183.9	17.69		
Average				17.55		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.46	11.50%	25.50%	-48.69%	>17.76	> 18.70	6.29%
2	0.49	12.25%				> 18.91	
3	0.62	15.50%				> 19.02	
Average		13.08%				>18.88	

500 HRS IN R-12/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.492	83.8	17.03	22.48	-24.97%
2	0.010	0.510	86.1	16.88		
3	0.010	0.507	84.6	16.69		
Average				16.87		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.15	7.50%	142.83%	-94.52%	>14.10	>14.91	3.95%
2	0.17	8.50%				>14.40	
3	0.15	7.50%				>14.66	
Average		7.83%				>14.66	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.509	94.9	18.64	19.06	-4.61%
2	0.010	0.505	87.9	17.41		
3	0.010	0.485	89.7	18.49		
Average				18.18		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.68	34.00%	142.83%	-80.40%	>14.60	>13.68	-3.95%
2	0.16	8.00%				>13.99	
3	0.84	42.00%				>14.40	
Average		28.00%				>14.02	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.485	139.9	13.74	13.40	3.14%
2	0.021	0.500	155.3	14.79		
3	0.021	0.525	142.6	12.93		
Average				13.82		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.50	25.00%	29.33%	-17.04%	>18.56	>17.00	-8.35%
2	0.53	26.50%				>16.14	
3	0.43	21.50%				>17.89	
Average		24.33%				>17.01	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.475	86.3	18.16	18.09	-4.04%
2	0.010	0.498	92.2	18.50		
3	0.010	0.500	77.1	15.42		
Average				17.36		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.28	7.00%	16.25%	-57.95%	10.29	10.89	1.68%
2	0.30	7.50%				9.07	
3	0.24	6.00%				11.43	
Average		6.83%				10.46	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.498	28.1	6.27	7.07	-15.37%
2	0.009	0.500	25.9	5.76		
3	0.009	0.495	26.4	5.93		
Average				5.98		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.04	1.00%	1.92%	-39.24%	11.39	10.44	-5.91%
2	0.04	1.00%				10.86	
3	0.06	1.50%				10.85	
Average		1.17%				10.72	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.518	190.7	17.53	17.05	2.66%
2	0.021	0.510	191.3	17.86		
3	0.021	0.518	186.2	17.12		
Average				17.50		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.48	12.00%	25.50%	-51.96%	>17.76	>17.06	-1.84%
2	0.55	13.75%				17.23	
3	0.44	11.00%				>18.01	
Average		12.25%				>17.43	

1000 HRS IN R-12/MINERAL OIL @ 260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.487	73.4	15.07	22.48	-26.52%
2	0.010	0.487	84.0	17.25		
3	0.010	0.492	84.8	17.24		
Average				16.52		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.13	6.50%	142.83%	-95.45%	>14.10	>13.58	0.07%
2	0.13	6.50%				>14.75	
3	0.13	6.50%				>14.00	
Average		6.50%				>14.11	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.528	88.6	16.78	19.06	-14.97%
2	0.010	0.475	76.5	16.11		
3	0.010	0.478	75.2	15.73		
Average				16.21		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.64	32.00%	142.83%	-89.50%	>14.60	>14.54	1.42%
2	0.13	6.50%				>14.93	
3	0.13	6.50%				>14.95	
Average		15.00%				>14.81	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.491	197.3	19.13	13.40	47.37%
2	0.021	0.451	181.5	19.16		
3	0.021	0.407	179.0	20.94		
Average				19.75		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.44	22.00%	29.33%	-26.70%	>18.56	>16.46	-7.54%
2	0.34	17.00%				>17.75	
3	0.51	25.50%				>17.27	
Average		21.50%				>17.16	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.491	89.1	18.16	18.09	2.03%
2	0.010	0.537	93.5	18.50		
3	0.010	0.497	93.0	18.71		
Average				18.46		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.29	7.25%	16.25%	-55.90%	10.29	> 13.79	36.05%
2	0.28	7.00%				> 13.44	
3	0.29	7.25%				> 14.77	
Average		7.17%				> 14.00	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.429	26.5	6.86	7.07	-25.03%
2	0.009	0.544	22.9	4.68		
3	0.009	0.535	21.0	4.36		
Average				5.30		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.03	0.75%	1.92%	-43.58%	11.39	> 13.48	13.23%
2	0.05	1.25%				> 12.08	
3	0.05	1.25%				> 13.13	
Average		1.08%				> 12.90	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.478	182.2	18.15	17.05	-1.34%
2	0.021	0.494	171.7	16.55		
3	0.021	0.525	173.8	15.76		
Average				16.82		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.36	9.00%	25.50%	-58.50%	>17.76	>18.93	6.89%
2	0.51	12.75%				> 19.30	
3	0.40	10.00%				>18.72	
Average		10.58%				>18.98	

1000 HRS IN R-12/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.491	82.9	16.88	22.48	-24.88%
2	0.010	0.483	81.1	16.79		
3	0.010	0.491	83.4	16.99		
Average				16.89		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.13	6.50%	134.83%	-95.06%	>14.10	>13.64	-2.53%
2	0.14	7.00%				>13.52	
3	0.13	6.50%				>14.07	
Average		6.67%				>13.74	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.492	90.1	18.31	19.06	-7.36%
2	0.010	0.492	85.2	17.32		
3	0.010	0.481	83.4	17.34		
Average				17.66		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.51	25.50%	142.83%	-90.43%	>14.60	>15.03	0.39%
2	0.16	8.00%				>14.42	
3	0.15	7.50%				>14.52	
Average		13.67%				>14.66	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.523	147.2	13.40	13.40	-2.46%
2	0.021	0.465	128.4	13.15		
3	0.021	0.498	132.4	12.66		
Average				13.07		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.44	22.00%	29.33%	-27.83%	>18.56	>16.57	-7.36%
2	0.46	23.00%				>17.87	
3	0.37	18.50%				>17.14	
Average		21.17%				>17.19	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.490	76.4	15.59	18.09	-8.92%
2	0.010	0.486	79.1	16.28		
3	0.010	0.483	84.8	17.56		
Average				16.48		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.27	6.75%	16.25%	-45.13%	10.29	9.20	7.77%
2	0.38	9.50%				12.67	
3	0.42	10.50%				11.40	
Average		8.92%				11.09	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.515	25.9	5.59	7.07	-19.27%
2	0.009	0.486	23.5	5.37		
3	0.009	0.494	27.4	6.16		
Average				5.71		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.04	1.00%	1.92%	-39.24%	11.39	10.40	-14.11%
2	0.04	1.00%				10.50	
3	0.06	1.50%				8.45	
Average		1.17%				9.78	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.505	175.1	16.51	17.05	-4.21%
2	0.021	0.519	181.3	16.63		
3	0.021	0.514	171.1	15.85		
Average				16.33		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.73	18.25%	25.50%	-37.25%	>17.76	>17.61	1.01%
2	0.57	14.25%				> 18.00	
3	0.62	15.50%				>18.21	
Average		16.00%				>17.94	

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.490	81.9	16.70	22.48	-25.98%
2	0.010	0.492	83.3	16.92		
3	0.010	0.472	77.0	16.30		
Average				16.64		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	134.83%	-94.68%	>14.10	>14.53	1.77%
2	0.15	7.50%				>14.10	
3	0.14	7.00%				>14.42	
Average		7.17%				>14.35	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.487	83.4	17.13	19.06	-9.36%
2	0.010	0.500	85.0	17.00		
3	0.010	0.488	86.4	17.70		
Average				17.28		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	142.83%	-95.57%	>14.60	>15.68	3.26%
2	0.12	6.00%				>14.70	
3	0.12	6.00%				>14.85	
Average		6.33%				>15.08	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.519	152.5	13.99	13.40	4.88%
2	0.021	0.522	154.4	14.09		
3	0.021	0.452	133.7	14.09		
Average				14.05		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.50	25.00%	29.33%	-11.92%	>18.56	>15.38	-14.35%
2	0.50	25.00%				>17.17	
3	0.55	27.50%				>15.14	
Average		25.83%				>15.90	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.510	83.8	16.43	18.09	-10.71%
2	0.010	0.490	71.7	14.63		
3	0.010	0.493	85.8	17.40		
Average				16.15		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.27	6.75%	16.25%	-55.38%	10.29	> 13.42	29.02%
2	0.30	7.50%				> 13.25	
3	0.30	7.50%				> 13.16	
Average		7.25%				> 13.28	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.512	30.0	6.51	7.07	-7.04%
2	0.009	0.494	29.5	6.64		
3	0.009	0.509	30.1	6.57		
Average				6.57		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.05	1.25%	1.92%	-39.24%	11.39	12.59	14.90%
2	0.05	1.25%				13.65	
3	0.04	1.00%				13.02	
Average		1.17%				13.09	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.512	165.1	15.36	17.05	-3.76%
2	0.021	0.498	178.6	17.08		
3	0.021	0.488	172.1	16.79		
Average				16.41		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.42	10.50%	25.50%	-51.96%	>17.76	>18.16	1.58%
2	0.53	13.25%				18.08	
3	0.52	13.00%				>17.88	
Average		12.25%				>18.04	

500 HRS IN R-12/MINERAL OIL @ 260 F
168 HRS IN R-134a/POLYOLESTER @ 260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.481	83.4	17.34	22.48	-23.46%
2	0.010	0.425	72.3	17.01		
3	0.010	0.487	84.1	17.27		
Average				17.21		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.15	7.50%	134.83%	-94.31%	>14.10	>13.74	-1.37%
2	0.16	8.00%				>14.17	
3	0.15	7.50%				>13.81	
Average		7.67%				>13.91	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.501	89.9	17.94	19.06	-6.21%
2	0.010	0.503	90.8	18.05		
3	0.010	0.486	85.7	17.63		
Average				17.88		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.16	8.00%	142.83%	-94.52%	>14.60	>14.57	-0.80%
2	0.16	8.00%				>14.20	
3	0.15	7.50%				>14.68	
Average		7.83%				>14.48	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.513	150.6	13.98	13.40	5.36%
2	0.021	0.440	131.4	14.22		
3	0.021	0.509	151.3	14.15		
Average				14.12		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.50	25.00%	29.33%	-17.60%	>18.56	>15.83	-14.51%
2	0.47	23.50%				>15.75	
3	0.48	24.00%				>16.02	
Average		24.17%				>15.87	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.488	0.475	81.3	16.65	18.09	-1.10%
2	0.520	0.498	101.5	19.52		
3	0.525	0.500	92.0	17.51		
Average				17.89		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.19	4.75%	16.25%	-58.46%	10.29	11.25	11.11%
2	0.35	8.75%				11.14	
3	0.27	6.75%				11.91	
Average		6.75%				11.43	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.502	25.3	5.60	7.07	-13.99%
2	0.009	0.520	25.8	5.51		
3	0.009	0.480	30.8	7.13		
Average				6.08		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.06	1.50%	1.92%	-34.90%	11.39	12.54	8.11%
2	0.05	1.25%				12.49	
3	0.04	1.00%				11.91	
Average		1.25%				12.31	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.500	173.5	16.52	17.05	-0.30%
2	0.021	0.481	177.1	17.53		
3	0.021	0.493	175.4	16.94		
Average				17.00		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.30	7.50%	25.50%	-65.69%	>17.76	>17.40	-0.90%
2	0.45	11.25%				17.63	
3	0.30	7.50%				>17.77	
Average		8.75%				>17.60	

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.498	82.2	16.51	22.48	-26.60%
2	0.010	0.478	78.5	16.42		
3	0.010	0.476	78.9	16.58		
Average				16.50		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.18	9.00%	134.83%	-93.70%	>14.10	>14.50	4.52%
2	0.15	7.50%				>15.21	
3	0.18	9.00%				>14.50	
Average		8.50%				>14.74	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.502	85.0	16.93	19.06	-8.38%
2	0.010	0.507	95.1	18.76		
3	0.010	0.515	86.0	16.70		
Average				17.46		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.17	8.50%	142.83%	-86.70%	>14.60	>15.45	3.31%
2	0.80	40.00%				>14.86	
3	0.17	8.50%				>14.94	
Average		19.00%				>15.08	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.489	138.5	13.49	13.40	3.55%
2	0.021	0.489	145.1	14.13		
3	0.021	0.520	153.0	14.01		
Average				13.88		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.45	22.50%	29.33%	-13.06%	>18.56	>15.90	-10.49%
2	0.55	27.50%				>16.93	
3	0.53	26.50%				>17.01	
Average		25.50%				>16.61	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.535	93.9	17.54	18.09	-10.48%
2	0.010	0.481	73.9	15.35		
3	0.010	0.497	78.0	15.69		
Average				16.19		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.37	9.25%	16.25%	-59.49%	10.29	13.70	29.48%
2	0.21	5.25%				12.98	
3	0.21	5.25%				13.29	
Average		6.58%				13.32	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.493	28.6	5.80	7.07	-19.56%
2	0.010	0.505	27.1	5.37		
3	0.010	0.487	28.7	5.89		
Average				5.69		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.04	1.00%	1.92%	-39.24%	11.39	> 12.93	15.42%
2	0.05	1.25%				13.20	
3	0.05	1.25%				> 13.31	
Average		1.17%				> 13.15	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.480	166.2	16.49	17.05	-3.62%
2	0.021	0.512	176.8	16.44		
3	0.021	0.496	170.5	16.37		
Average				16.43		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.55	13.75%	25.50%	-50.00%	>17.76	>19.40	6.38%
2	0.56	14.00%				> 18.18	
3	0.42	10.50%				>19.10	
Average		12.75%				>18.89	

500 HRS IN R-12/MINERAL OIL @ 260 F
336 HRS IN R-134a/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.499	85.1	17.05	22.48	-24.08%
2	0.010	0.482	80.7	16.74		
3	0.010	0.512	89.1	17.40		
Average				17.07		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.16	8.00%	134.83%	-94.31%	>14.10	>14.80	5.96%
2	0.16	8.00%				>15.01	
3	0.14	7.00%				>15.01	
Average		7.67%				>14.94	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.492	87.6	17.80	19.06	-7.09%
2	0.010	0.509	90.3	17.74		
3	0.010	0.496	87.2	17.58		
Average				17.71		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	142.83%	-94.87%	>14.60	>15.14	3.36%
2	0.16	8.00%				>15.10	
3	0.14	7.00%				>15.03	
Average		7.33%				>15.09	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.509	146.8	13.73	13.40	3.53%
2	0.021	0.531	155.4	13.94		
3	0.021	0.481	140.9	13.95		
Average				13.87		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.57	28.50%	29.33%	-5.67%	>18.56	>16.11	-12.55%
2	0.52	26.00%				>16.37	
3	0.57	28.50%				>16.21	
Average		27.67%				>16.23	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.498	93.4	18.76	18.09	0.43%
2	0.010	0.508	93.8	18.46		
3	0.010	0.512	88.5	17.29		
Average				18.17		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.29	7.25%	16.25%	-56.92%	10.29	11.90	12.44%
2	0.29	7.25%				11.57	
3	0.26	6.50%				11.24	
Average		7.00%				11.57	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.498	28.3	6.31	7.07	-14.43%
2	0.009	0.509	26.3	5.74		
3	0.009	0.474	26.0	6.09		
Average				6.05		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.05	1.25%	1.92%	-43.58%	11.39	13.50	16.77%
2	0.04	1.00%				13.56	
3	0.04	1.00%				12.84	
Average		1.08%				13.30	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.463	166.6	17.13	17.05	0.59%
2	0.021	0.512	188.4	17.52		
3	0.021	0.507	178.8	16.79		
Average				17.15		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.43	10.75%	25.50%	-52.94%	>17.76	>19.21	7.70%
2	0.56	14.00%				> 19.19	
3	0.45	11.25%				>18.98	
Average		12.00%				>19.13	

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.500	80.8	16.16	22.48	-27.87%
2	0.010	0.473	78.3	16.55		
3	0.010	0.472	75.2	15.93		
Average				16.21		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.16	8.00%	134.83%	-90.98%	>14.10	>14.01	-1.63%
2	0.41	20.50%				>13.74	
3	0.16	8.00%				>13.86	
Average		12.17%				>13.87	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.500	85.9	17.17	19.06	-10.13%
2	0.010	0.485	82.8	17.07		
3	0.010	0.501	85.9	17.15		
Average				17.13		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.13	6.50%	142.83%	-95.45%	>14.60	>14.46	1.23%
2	0.13	6.50%				>14.86	
3	0.13	6.50%				>15.02	
Average		6.50%				>14.78	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.445	128.8	13.78	13.40	2.26%
2	0.021	0.432	121.1	13.35		
3	0.021	0.510	149.7	13.98		
Average				13.70		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.49	24.50%	29.33%	-18.17%	>18.56	>15.90	-10.49%
2	0.46	23.00%				>16.93	
3	0.49	24.50%				>17.01	
Average		24.00%				>16.61	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.489	84.2	17.22	18.09	-6.39%
2	0.010	0.491	81.8	16.66		
3	0.010	0.510	86.3	16.92		
Average				16.93		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.31	7.75%	16.25%	-54.87%	10.29	> 13.49	33.72%
2	0.26	6.50%				> 13.49	
3	0.31	7.75%				> 14.30	
Average		7.33%				> 13.76	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.500	26.6	5.91	7.07	-11.41%
2	0.009	0.504	28.3	6.24		
3	0.009	0.502	30.0	6.64		
Average				6.26		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.04	1.00%	1.92%	-43.58%	11.39	13.35	14.78%
2	0.04	1.00%				13.02	
3	0.05	1.25%				12.85	
Average		1.08%				13.07	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.495	177.5	17.08	17.05	-0.89%
2	0.021	0.501	174.7	16.60		
3	0.021	0.485	173.3	17.02		
Average				16.90		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.47	11.75%	25.50%	-48.37%	>17.76	>18.86	4.07%
2	0.56	14.00%				18.24	
3	0.55	13.75%				>18.35	
Average		13.17%				>18.48	

500 HRS IN R-12/MINERAL OIL @ 260 F
500 HRS IN R-134a/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.424	71.0	16.75	22.48	-26.08%
2	0.010	0.484	80.2	16.57		
3	0.010	0.502	83.0	16.53		
Average				16.62		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.16	8.00%	134.83%	-94.31%	>14.10	>14.10	-0.90%
2	0.15	7.50%				>13.96	
3	0.15	7.50%				>13.86	
Average		7.67%				>13.97	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.487	84.9	17.43	19.06	-7.67%
2	0.010	0.512	87.4	17.07		
3	0.010	0.520	95.1	18.29		
Average				17.60		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.15	7.50%	142.83%	-89.50%	>14.60	>14.87	0.30%
2	0.14	7.00%				>14.51	
3	0.61	30.50%				>14.55	
Average		15.00%				>14.64	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.497	142.5	13.65	13.40	0.66%
2	0.021	0.485	138.7	13.62		
3	0.021	0.479	132.7	13.19		
Average				13.49		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.54	27.00%	29.33%	-21.58%	>18.56	>18.83	-3.16%
2	0.47	23.50%				>17.20	
3	0.37	18.50%				>17.89	
Average		23.00%				>17.97	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.500	78.8	15.76	18.09	-12.24%
2	0.010	0.486	78.6	16.17		
3	0.010	0.497	78.0	15.69		
Average				15.88		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.37	9.25%	16.25%	-54.36%	10.29	11.72	6.06%
2	0.31	7.75%				9.36	
3	0.21	5.25%				11.66	
Average		7.42%				10.91	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.500	25.8	5.73	7.07	-17.95%
2	0.009	0.500	25.2	5.60		
3	0.009	0.465	25.4	6.07		
Average				5.80		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.06	1.50%	1.92%	-26.22%	11.39	11.56	-2.55%
2	0.05	1.25%				9.84	
3	0.06	1.50%				11.90	
Average		1.42%				11.10	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.486	174.1	17.06	17.05	-3.53%
2	0.021	0.506	175.3	16.50		
3	0.021	0.530	175.7	15.79		
Average				16.45		

	Stretch (Inches)	Experimental Elongation	Average Elongations (unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.79	19.75%	25.50%	-29.08%	>17.76	>19.22	6.79%
2	0.78	19.50%				> 19.25	
3	0.60	15.00%				>18.43	
Average		18.08%				>18.97	

Data Tables
Part 2

R-22/Mineral Oil to R-407C/Polyolester

500 HRS IN R-22/MINERAL OIL @ 260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.9436	0.3143	0.9797	0.3408
2	0.7540	0.2217	0.7887	0.2536
3	0.7993	0.2633	0.8431	0.3016

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.8050	0.8173	3.83%	1.53%
2	0.6810	0.6845	4.60%	0.53%
3	0.6857	0.6927	5.48%	1.03%
		AVERAGE	4.64%	1.03%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.4447	0.1509	0.4713	0.1673
2	0.3596	0.1216	0.3804	0.1339
3	0.6986	0.2350	0.7303	0.2573

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.3758	0.3889	5.98%	3.47%
2	0.3045	0.3153	5.78%	3.57%
3	0.5931	0.6051	4.54%	2.03%
		AVERAGE	5.43%	3.02%

1000 HRS IN R-22/MINERAL OIL @ 260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.7216	0.2378	0.7821	0.2800
2	0.9462	0.3111	0.9820	0.3496
3	0.8294	0.2699	0.8730	0.3120

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.6189	0.6423	8.38%	3.78%
2	0.8125	0.8090	3.78%	-0.43%
3	0.7157	0.7177	5.26%	0.27%
		AVERAGE	5.81%	1.21%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.7681	0.2583	0.8120	0.2862
2	0.5386	0.1823	0.5793	0.2043
3	0.6634	0.2240	0.7026	0.2467

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.6522	0.6726	5.72%	3.14%
2	0.4558	0.4797	7.56%	5.25%
3	0.5621	0.5832	5.91%	3.76%
		AVERAGE	6.39%	4.05%

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.9436	0.3143	0.9262	0.3179
2	0.7540	0.2217	0.7512	0.2321
3	0.7993	0.2633	0.7987	0.2752

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.8050	0.7782	-1.84%	-3.34%
2	0.6810	0.6641	-0.37%	-2.48%
3	0.6857	0.6697	-0.08%	-2.33%
		AVERAGE	-0.76%	-2.72%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.4447	0.1509	0.4551	0.1572
2	0.3596	0.1216	0.3668	0.1254
3	0.6986	0.2350	0.7046	0.2418

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.3758	0.3811	2.34%	1.40%
2	0.3045	0.3088	2.00%	1.43%
3	0.5931	0.5920	0.86%	-0.17%
		AVERAGE	1.73%	0.88%

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.9436	0.3143	0.9204	0.3124
2	0.7540	0.2217	0.7438	0.2302
3	0.7993	0.2633	0.7965	0.2712

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.8050	0.7778	-2.46%	-3.38%
2	0.6810	0.6570	-1.35%	-3.51%
3	0.6857	0.6720	-0.35%	-2.00%
		AVERAGE	-1.39%	-2.96%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.4447	0.1509	0.4531	0.1558
2	0.3596	0.1216	0.3640	0.1240
3	0.6986	0.2350	0.7012	0.2402

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.3758	0.3803	1.89%	1.19%
2	0.3045	0.3070	1.22%	0.84%
3	0.5931	0.5897	0.37%	-0.56%
		AVERAGE	1.16%	0.49%

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.9436	0.3143	0.9172	0.3150
2	0.7540	0.2217	0.7393	0.2286
3	0.7993	0.2633	0.7873	0.2711

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.8050	0.7704	-2.80%	-4.31%
2	0.6810	0.6533	-1.95%	-4.06%
3	0.6857	0.6604	-1.50%	-3.69%
		AVERAGE	-2.08%	-4.02%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.4447	0.1509	0.4518	0.1548
2	0.3596	0.1216	0.3637	0.1242
3	0.6986	0.2350	0.6996	0.2388

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.3758	0.3799	1.60%	1.09%
2	0.3045	0.3064	1.14%	0.63%
3	0.5931	0.5895	0.14%	-0.60%
		AVERAGE	0.96%	0.37%

500 HRS IN R-22/MINERAL OIL @ 260 F

Wire Type Varnish	Unexposed Bond Strengths (Pounds)	Experimental Bond Strengths (Pounds)	Change in Bond Strength From Unexposed
	57.95	61.90	
Wire Type A	51.25	63.80	
coated with	52.50	40.60	-8.43%
Iso-800	64.45	37.40	
	60.35	58.65	
Average	57.30	52.47	
	65.90	28.95	
Wire Type A	59.60	24.50	
coated with	52.95	25.30	-57.49%
923	56.35	27.30	
	68.40	22.85	
Average	60.64	25.78	
	58.25	65.30	
Wire Type B	53.35	50.55	
coated with	52.30	48.25	-5.58%
Iso-800	54.25	51.50	
	56.95	44.15	
Average	55.02	51.95	
	72.40	51.30	
Wire Type B	69.20	63.70	
coated with	71.65	43.85	-24.07%
923	75.80	53.10	
	63.50	55.75	
Average	70.51	53.54	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Wire Type Varnish	Unexposed Bond Strengths (Pounds)	Experimental Bond Strengths (Pounds)	Change in Bond Strength From Unexposed
	57.95	58.95	
Wire Type A	51.25	60.55	
coated with	52.50	57.00	2.04%
Iso-800	64.45	53.50	
	60.35	62.35	
Average	57.30	58.47	
	65.90	35.95	
Wire Type A	59.60	36.65	
coated with	52.95	21.10	-50.87%
923	56.35	26.05	
	68.40	29.20	
Average	60.64	29.79	
	58.25	49.10	
Wire Type B	53.35	44.45	
coated with	52.30	37.10	-15.16%
Iso-800	54.25	48.40	
	56.95	54.35	
Average	55.02	46.68	
	72.40	71.80	
Wire Type B	69.20	42.20	
coated with	71.65	63.80	-13.09%
923	75.80	66.90	
	63.50	61.70	
Average	70.51	61.28	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

1000 HRS IN R-22/MINERAL OIL @ 260 F

Wire Type Varnish	Unexposed Bond Strengths (Pounds)	Experimental Bond Strengths (Pounds)	Change in Bond Strength From Unexposed
	57.95	55.35	
Wire Type A	51.25	61.80	
coated with	52.50	64.90	3.37%
Iso-800	64.45	49.40	
	60.35	64.70	
Average	57.30	59.23	
	65.90	27.10	
Wire Type A	59.60	24.00	
coated with	52.95	27.15	-58.10%
923	56.35	26.30	
	68.40	22.50	
Average	60.64	25.41	
	58.25	60.65	
Wire Type B	53.35	51.35	
coated with	52.30	44.10	-1.67%
Iso-800	54.25	62.45	
	56.95	51.95	
Average	55.02	54.10	
	72.40	47.95	
Wire Type B	69.20	29.10	
coated with	71.65	46.90	-39.67%
923	75.80	28.25	
	63.50	60.50	
Average	70.51	42.54	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

1000 HRS IN R-22/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Wire Type Varnish	Unexposed Bond Strengths (Pounds)	Experimental Bond Strengths (Pounds)	Change in Bond Strength From Unexposed
	57.95	87.10	
Wire Type A	51.25	63.80	
coated with	52.50	73.45	19.83%
Iso-800	64.45	57.15	
	60.35	61.80	
Average	57.30	68.66	
	65.90	38.65	
Wire Type A	59.60	28.95	
coated with	52.95	38.90	-40.80%
923	56.35	31.90	
	68.40	41.10	
Average	60.64	35.90	
	58.25	69.65	
Wire Type B	53.35	61.30	
coated with	52.30	68.30	20.92%
Iso-800	54.25	64.30	
	56.95	69.10	
Average	55.02	66.53	
	72.40	63.10	
Wire Type B	69.20	61.00	
coated with	71.65	59.00	-12.91%
923	75.80	68.25	
	63.50	55.70	
Average	70.51	61.41	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F

Wire Type Varnish	Unexposed Bond Strengths (Pounds)	Experimental Bond Strengths (Pounds)	Change in Bond Strength From Unexposed
	57.95	75.65	
Wire Type A	51.25	66.15	
coated with	52.50	66.45	15.50%
Iso-800	64.45	64.95	
	60.35	57.70	
Average	57.30	66.18	

	65.90	26.55	
Wire Type A	59.60	25.70	
coated with	52.95	27.35	-55.26%
923	56.35	26.20	
	68.40	29.85	
Average	60.64	27.13	

	58.25	75.90	
Wire Type B	53.35	70.10	
coated with	52.30	60.60	23.97%
Iso-800	54.25	66.95	
	56.95	67.50	
Average	55.02	68.21	

	72.40	63.60	
Wire Type B	69.20	64.20	
coated with	71.65	62.10	-12.11%
923	75.80	53.00	
	63.50	66.95	
Average	70.51	61.97	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Wire Type Varnish	Unexposed Bond Strengths (Pounds)	Experimental Bond Strengths (Pounds)	Change in Bond Strength From Unexposed
	57.95	52.40	
Wire Type A	51.25	47.25	
coated with	52.50	64.90	-8.64%
Iso-800	64.45	50.50	
	60.35	46.70	
Average	57.30	52.35	
	65.90	37.65	
Wire Type A	59.60	36.75	
coated with	52.95	31.65	-45.83%
923	56.35	29.00	
	68.40	29.20	
Average	60.64	32.85	
	58.25	51.20	
Wire Type B	53.35	60.70	
coated with	52.30	61.50	-0.98%
Iso-800	54.25	48.50	
	56.95	50.50	
Average	55.02	54.48	
	72.40	61.05	
Wire Type B	69.20	65.45	
coated with	71.65	63.00	-10.52%
923	75.80	65.70	
	63.50	60.25	
Average	70.51	63.09	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F

Wire Type Varnish	Unexposed Bond Strengths (Pounds)	Experimental Bond Strengths (Pounds)	Change in Bond Strength From Unexposed
	57.95	62.10	
Wire Type A	51.25	63.90	
coated with	52.50	51.40	3.54%
Iso-800	64.45	51.20	
	60.35	68.05	
Average	57.30	59.33	
	65.90	30.95	
Wire Type A	59.60	25.40	
coated with	52.95	24.25	-54.14%
923	56.35	30.20	
	68.40	28.25	
Average	60.64	27.81	
	58.25	46.85	
Wire Type B	53.35	55.05	
coated with	52.30	66.95	3.27%
Iso-800	54.25	53.75	
	56.95	61.50	
Average	55.02	56.82	
	72.40	47.30	
Wire Type B	69.20	36.95	
coated with	71.65	59.70	-26.78%
923	75.80	61.25	
	63.50	52.95	
Average	70.51	51.63	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Wire Type Varnish	Unexposed Bond Strengths (Pounds)	Experimental Bond Strengths (Pounds)	Change in Bond Strength From Unexposed
	57.95	55.90	
Wire Type A	51.25	84.35	
coated with	52.50	65.70	26.27%
Iso-800	64.45	83.90	
	60.35	71.90	
Average	57.30	72.35	
	65.90	58.60	
Wire Type A	59.60	50.30	
coated with	52.95	46.30	-13.69%
923	56.35	64.30	
	68.40	42.20	
Average	60.64	52.34	
	58.25	67.00	
Wire Type B	53.35	61.00	
coated with	52.30	53.55	16.43%
Iso-800	54.25	79.25	
	56.95	59.50	
Average	55.02	64.06	
	72.40	67.05	
Wire Type B	69.20	74.35	
coated with	71.65	62.00	0.95%
923	75.80	80.20	
	63.50	72.30	
Average	70.51	71.18	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F

Wire Type Varnish	Unexposed Bond Strengths (Pounds)	Experimental Bond Strengths (Pounds)	Change in Bond Strength From Unexposed
	57.95	63.90	
Wire Type A	51.25	61.05	
coated with	52.50	56.25	0.17%
Iso-800	64.45	54.40	
	60.35	51.40	
Average	57.30	57.40	
	65.90	29.35	
Wire Type A	59.60	28.05	
coated with	52.95	29.80	-51.10%
923	56.35	27.65	
	68.40	33.40	
Average	60.64	29.65	
	58.25	57.95	
Wire Type B	53.35	67.75	
coated with	52.30	56.85	9.29%
Iso-800	54.25	64.25	
	56.95	53.85	
Average	55.02	60.13	
	72.40	69.55	
Wire Type B	69.20	63.90	
coated with	71.65	69.85	-14.95%
923	75.80	50.65	
	63.50	45.90	
Average	70.51	59.97	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Wire Type Varnish	Unexposed Bond Strengths (Pounds)	Experimental Bond Strengths (Pounds)	Change in Bond Strength From Unexposed
	57.95	63.50	
Wire Type A	51.25	55.35	
coated with	52.50	53.40	-11.68%
Iso-800	64.45	30.65	
	60.35	50.15	
Average	57.30	50.61	
	65.90	29.65	
Wire Type A	59.60	29.25	
coated with	52.95	30.85	-43.19%
923	56.35	43.50	
	68.40	39.00	
Average	60.64	34.45	
	58.25	46.20	
Wire Type B	53.35	50.70	
coated with	52.30	38.75	-9.18%
Iso-800	54.25	69.85	
	56.95	44.35	
Average	55.02	49.97	
	72.40	54.80	
Wire Type B	69.20	56.20	
coated with	71.65	66.46	-8.49%
923	75.80	64.30	
	63.50	80.85	
Average	70.51	64.52	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F

Wire Type Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	19.80		569	418	
Wire Type A	18.18	19.71		586	400	
coated with	17.00	19.74	20.79%	487	386	-26.17%
Iso-800	18.27	18.83		403	411	
	11.90	18.41		557	306	
Average	15.98	19.30		520	384	
	19.93	17.84		652	515	
Wire Type A	16.91	19.55		653	562	
coated with	16.82	19.99	10.80%	642	386	-22.92%
923	14.36	18.13		547	384	
	17.01	18.70		564	510	
Average	17.01	18.84		612	471	
	18.19	19.70		590	406	
Wire Type B	19.70	17.16		494	284	
coated with	18.41	19.77	-0.82%	457	329	-32.18%
Iso-800	19.73	16.99		594	400	
	18.35	19.99		578	421	
Average	18.88	18.72		543	368	
	19.76	19.93		621	288	
Wire Type B	19.71	19.99		423	293	
coated with	19.85	19.78	-2.49%	688	378	-34.80%
923	19.71	19.67		395	297	
	19.90	17.10		643	550	
Average	19.79	19.29		554	361	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

1000 HRS IN R-22/MINERAL OIL @ 260 F

Wire Type Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	19.99		569	375	
Wire Type A	18.18	16.55		586	393	
coated with	17.00	18.71	14.12%	487	375	-25.94%
Iso-800	18.27	16.37		403	396	
	11.90	19.54		557	388	
Average	15.98	18.23		520	385	
	19.93	19.10		652	393	
Wire Type A	16.91	18.20		653	350	
coated with	16.82	19.96	14.36%	642	393	-34.07%
923	14.36	19.99		547	484	
	17.01	19.99		564	396	
Average	17.01	19.45		612	403	
	18.19	13.02		590	281	
Wire Type B	19.70	14.40		494	265	
coated with	18.41	19.98	-13.30%	457	347	-46.59%
Iso-800	19.73	19.96		594	259	
	18.35	14.47		578	297	
Average	18.88	16.37		543	290	
	19.76	19.99		621	315	
Wire Type B	19.71	18.64		423	305	
coated with	19.85	19.99	-0.36%	688	307	-45.81%
923	19.71	19.99		395	285	
	19.90	19.96		643	289	
Average	19.79	19.71		554	300	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F

Wire Type Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	19.12		569	374	
Wire Type A	18.18	19.10		586	409	
coated with	17.00	19.71	21.23%	487	382	-25.48%
Iso-800	18.27	19.60		403	389	
	11.90	19.31		557	385	
Average	15.98	19.37		520	388	
	19.93	19.99		652	391	
Wire Type A	16.91	17.80		653	367	
coated with	16.82	19.95	11.68%	642	549	-28.48%
923	14.36	18.20		547	393	
	17.01	19.02		564	487	
Average	17.01	18.99		612	437	
	18.19	15.36		590	316	
Wire Type B	19.70	19.86		494	322	
coated with	18.41	19.56	-2.73%	457	317	-37.49%
Iso-800	19.73	19.83		594	365	
	18.35	17.19		578	376	
Average	18.88	18.36		543	339	
	19.76	19.98		621	476	
Wire Type B	19.71	18.44		423	401	
coated with	19.85	19.88	-0.66%	688	406	-25.34%
923	19.71	19.99		395	392	
	19.90	19.99		643	393	
Average	19.79	19.66		554	414	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F

Wire Type Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	19.96		569	329	
Wire Type A	18.18	16.41		586	380	
coated with	17.00	19.96	20.38%	487	302	-34.78%
Iso-800	18.27	19.96		403	306	
	11.90	19.87		557	380	
Average	15.98	19.23		520	339	
	19.93	17.69		652	393	
Wire Type A	16.91	19.99		653	542	
coated with	16.82	19.99	8.94%	642	388	-29.01%
923	14.36	19.99		547	493	
	17.01	14.97		564	355	
Average	17.01	18.53		612	434	
	18.19	17.05		590	337	
Wire Type B	19.70	19.99		494	288	
coated with	18.41	16.79	-3.10%	457	245	-44.38%
Iso-800	19.73	17.70		594	296	
	18.35	19.92		578	343	
Average	18.88	18.29		543	302	
	19.76	19.87		621	414	
Wire Type B	19.71	19.91		423	420	
coated with	19.85	19.99	-4.30%	688	529	-23.75%
923	19.71	17.14		395	360	
	19.90	17.77		643	389	
Average	19.79	18.94		554	422	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F

Wire Type Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	19.24		569	404	
Wire Type A	18.18	18.98		586	460	
coated with	17.00	18.72	13.12%	487	362	-27.40%
Iso-800	18.27	17.98		403	330	
	11.90	15.44		557	333	
Average	15.98	18.07		520	378	
	19.93	16.08		652	421	
Wire Type A	16.91	19.96		653	404	
coated with	16.82	19.99	10.28%	642	538	-28.68%
923	14.36	18.99		547	407	
	17.01	No Data		564	411	
Average	17.01	18.76		612	436	
	18.19	19.49		590	335	
Wire Type B	19.70	19.44		494	321	
coated with	18.41	19.83	4.21%	457	308	-39.44%
Iso-800	19.73	19.93		594	297	
	18.35	19.66		578	382	
Average	18.88	19.67		543	329	
	19.76	19.73		621	359	
Wire Type B	19.71	19.84		423	463	
coated with	19.85	19.71	-5.00%	688	393	-29.13%
923	19.71	14.85		395	365	
	19.90	19.85		643	383	
Average	19.79	18.80		554	393	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F

Wire Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	16.40	15.96		518	287	
	15.10	12.97		577	410	
Wire Type A	14.37	12.04	0.96%	569	308	-41.37%
	13.70	16.46		555	303	
	14.66	17.51		556	319	
Average	14.85	14.99		555	325	
	15.24	16.94		576	373	
	14.63	17.48		580	287	
Wire Type B	14.06	17.57	27.16%	595	239	-45.73%
	12.60	16.53		592	295	
	10.60	16.84		576	390	
Average	13.43	17.07		584	317	

1000 HRS IN R-22/MINERAL OIL @ 260 F

	16.40	16.53		518	384	
	15.10	16.70		577	390	
Wire Type A	14.37	17.14	15.47%	569	309	-33.73%
	13.70	17.72		555	379	
	14.66	17.62		556	377	
Average	14.85	17.14		555	368	
	15.24	16.83		576	233	
	14.63	17.02		580	236	
Wire Type B	14.06	17.21	26.90%	595	234	-59.06%
	12.60	16.81		592	239	
	10.60	17.32		576	253	
Average	13.43	17.04		584	239	

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F

	1.00	17.45		518	433	
	15.10	17.07		577	397	
Wire Type A	14.37	16.96	38.42%	569	465	-25.51%
	13.70	13.73		555	383	
	14.66	16.22		556	389	
Average	11.77	16.29		555	413	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F

Wire Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	15.24	15.40		576	404	
	14.63	16.41		580	306	
Wire Type B	14.06	16.67	19.45%	595	303	-40.73%
	12.60	16.36		592	376	
	10.60	15.35		576	341	
Average	13.43	16.04		584	346	

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F

	16.40	15.36		518	532	
	15.10	16.55		577	515	
Wire Type A	14.37	17.05	7.36%	569	509	-10.92%
	13.70	14.24		555	467	
	14.66	16.49		556	449	
Average	14.85	15.94		555	494	
	15.24	14.02		576	309	
	14.63	13.59		580	240	
Wire Type B	14.06	17.17	6.47%	595	238	-53.51%
	12.60	16.36		592	314	
	10.60	10.33		576	256	
Average	13.43	14.29		584	271	

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F

	16.40	16.21		518	530	
	15.10	15.88		577	453	
Wire Type A	14.37	17.34	0.61%	569	411	-15.93%
	13.70	8.86		555	528	
	14.66	16.39		556	411	
Average	14.85	14.94		555	467	
	15.24	17.00		576	530	
	14.63	16.41		580	453	
Wire Type B	14.06	17.20	25.26%	595	411	-20.08%
	12.60	17.44		592	528	
	10.60	16.04		576	411	
Average	13.43	16.82		584	467	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F

Lead Wire Insulation Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
Polyester Composite	10.87	9.36	
Dacron-Mylar-Dacron	10.82	9.29	-6.35%
	7.62	8.80	
Average	9.77	9.15	
Polyester, Fluorpolymer	10.78	13.00	
Composite	9.24	13.53	35.96%
Dacron-Teflon-Dacron	10.46	14.91	
Average	10.16	13.81	

1000 HRS IN R-22/MINERAL OIL @ 260 F

Polyester Composite	10.87	7.75	
Dacron-Mylar-Dacron	10.82	2.26	-38.18%
	7.62	8.11	
Average	9.77	6.04	
Polyester, Fluorpolymer	10.78	10.70	
Composite	9.24	11.97	17.91%
Dacron-Teflon-Dacron	10.46	13.27	
Average	10.16	11.98	

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F

Lead Wire Insulation Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
Polyester Composite	10.87	8.70	
Dacron-Mylar-Dacron	10.82	9.21	-7.20%
	7.62	9.29	
Average	9.77	9.07	
Polyester, Fluorpolymer	10.78	12.96	
Composite	9.24	14.12	39.21%
Dacron-Teflon-Dacron	10.46	15.35	
Average	10.16	14.14	

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F

Polyester Composite	10.87	17.30	
Dacron-Mylar-Dacron	10.82	14.46	62.06%
	7.62	15.74	
Average	9.77	15.83	
Polyester, Fluorpolymer	10.78	18.14	
Composite	9.24	19.46	88.91%
Dacron-Teflon-Dacron	10.46	19.98	
Average	10.16	19.19	

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F

Polyester Composite	10.87	9.32	
Dacron-Mylar-Dacron	10.82	8.47	-10.06%
	7.62	8.57	
Average	9.77	8.79	
Polyester, Fluorpolymer	10.78	13.57	
Composite	9.24	12.85	36.98%
Dacron-Teflon-Dacron	10.46	15.33	
	10.16	13.92	

500 HRS IN R-22/MINERAL OIL @ 260 F

Sleeving Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
Polyester Film	>19.14	>16.47	
	>17.05	>14.97	-7.22%
	>16.60	>17.54	
Average	>17.60	>16.33	
Aramid Fiber Mat	>11.83	>16.17	
Polyester Film	>12.33	>17.48	38.16%
	>12.40	>16.86	
Average	>12.19	>16.84	

1000 HRS IN R-22/MINERAL OIL @ 260 F

Polyester Film	>19.14		
	>17.05	brittle	
	>16.60		
Average	>17.60		
Aramid Fiber Mat	>11.83	9.41	
Polyester Film	>12.33	9.03	-32.88%
	>12.40	6.10	
Average	>12.19	8.18	

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F

Sleeving Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	
Polyester Film	>19.14	>19.99	
	>17.05	>19.99	13.60%
	>16.60	>19.99	
Average	>17.60	>19.99	
Aramid Fiber Mat	>11.83	>15.63	
Polyester Film	>12.33	>15.40	24.07%
	>12.40	>14.33	
Average	>12.19	>15.12	

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F

Polyester Film	>17.05		
	>16.60	brittle	
	>17.60		
Average	>17.08		
Aramid Fiber Mat	>11.83	>15.65	
Polyester Film	>12.33	>16.37	29.92%
	>12.40	>15.48	
Average	>12.19	>15.83	

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F

Sleeving Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	
Polyester Film	>19.14	>14.53	
	>17.05	>13.58	-16.94%
	>16.60	>15.74	
Average	>17.60	>14.62	
Aramid Fiber Mat	>11.83	>10.73	
Polyester Film	>12.33	>14.08	-2.52%
	>12.40	>10.83	
Average	>12.19	>11.88	

500 HRS IN R-22/MINERAL OIL @ 260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.516	92.8	17.98	22.48	-25.23%
2	0.010	0.528	84.8	16.06		
3	0.010	0.478	78.3	16.38		
Average				16.81		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	3.33	166.50%	134.83%	0.99%	>14.10	> 13.86	2.20%
2	2.52	126.00%				> 14.93	
3	2.32	116.00%				> 14.44	
Average		136.17%				> 14.41	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.500	82.5	16.50	19.06	-13.17%
2	0.010	0.470	74.3	15.81		
3	0.010	0.500	86.7	17.34		
Average				16.55		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	2.00	100.00%	142.83%	-25.20%	>14.60	> 14.97	1.64%
2	1.87	93.50%				> 14.99	
3	2.54	127.00%				> 14.56	
Average		106.83%				> 14.84	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.485	123.0	12.08	13.40	-8.74%
2	0.021	0.511	131.9	12.29		
3	0.021	0.465	120.3	12.32		
Average				12.23		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.50	25.00%	29.33%	-14.76%	>18.56	> 16.26	-11.33%
2	0.54	27.00%				> 17.25	
3	0.46	23.00%				> 15.86	
Average		25.00%				> 16.46	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.430	69.4	16.14	18.09	-8.20%
2	0.010	0.550	91.6	16.65		
3	0.010	0.528	89.9	17.03		
Average				16.61		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.48	12.00%	16.25%	-18.97%	10.24	14.16	33.76%
2	0.54	13.50%				13.06	
3	0.56	14.00%				13.87	
Average		13.17%				13.70	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1	0.009	0.511	27.1	5.89	7.07	-17.97%	
2	0.009	0.509	26.2	5.72			
3	0.009	0.503	26.2	5.79			
Average				5.80			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.08	2.00%	1.92%	4.17%	11.39	> 13.53	21.16%
2	0.08	2.00%				> 13.90	
3	0.08	2.00%				> 13.97	
Average		2.00%				> 13.80	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1	0.021	0.507	153.5	14.42	17.05	-14.97%	Delamination
2	0.021	0.488	152.7	14.90			
3	0.021	0.507	150.9	14.17			
Average				14.50			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.52	13.00%	25.50%	-40.20%	>17.76	> 19.99	10.66%
2	0.71	17.75%				> 19.24	
3	0.60	15.00%				> 19.73	
Average		15.25%				> 19.65	

500 HRS IN R-22/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.10	>13.90	-6.50%
2	BRITTLE	BRITTLE				>13.56	
3	BRITTLE	BRITTLE				>12.09	
Average		BRITTLE				>13.18	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	>14.47	-1.00%
2	BRITTLE	BRITTLE				>14.58	
3	BRITTLE	BRITTLE				>14.31	
Average		BRITTLE				> 14.45	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1			BRITTLE	BRITTLE		BRITTLE	DELAM
2			BRITTLE	BRITTLE			BRITTLE
3			BRITTLE	BRITTLE			
Average				BRITTLE			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>18.56	>18.03	-20.55%
2	BRITTLE	BRITTLE				>11.46	
3	BRITTLE	BRITTLE				-	
Average		BRITTLE				> 14.75	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.507	98.2	19.37	18.09	6.25%
2	0.010	0.500	102.3	20.46		
3	0.010	0.568	101.3	17.83		
Average				19.22		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.15	3.75%	16.25%	-76.92%	10.24	9.29	-2.67%
2	0.15	3.75%				10.66	
3	0.15	3.75%				9.95	
Average		3.75%				9.97	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.468	26.9	6.37	7.07	-1.08%
2	0.009	0.485	31.9	7.31		
3	0.009	0.421	27.7	7.30		
Average				6.99		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.02	0.50%	1.92%	-65.28%	11.39	9.21	-8.78%
2	0.03	0.75%				10.38	
3	0.03	0.75%				11.58	
Average		0.67%				10.39	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.549	102.4	8.88	17.05	-49.31%
2	0.021	0.475	84.1	8.43		
3	0.021	0.498	90.2	8.62		
Average				8.64		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.13	3.25%	25.50%	-86.93%	>17.76	>14.25	-20.95%
2	0.13	3.25%				>13.30	
3	0.14	3.50%				>14.57	
Average		3.33%				> 14.04	

1000 HRS IN R-22/MINERAL OIL @ 260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	BRITTLE		BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.10	> 14.25	-0.43%
2	BRITTLE	BRITTLE				> 13.30	
3	BRITTLE	BRITTLE				> 14.57	
Average		BRITTLE				> 14.04	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	BRITTLE		BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	> 14.67	1.48%
2	BRITTLE	BRITTLE				> 14.51	
3	BRITTLE	BRITTLE				> 15.27	
Average		BRITTLE				> 14.82	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.530	30.4	2.73	13.40	-80.40%
2	0.021	0.516	25.1	2.31		
3	0.021	0.573	34.2	2.84		
Average				2.63		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.04	2.00%	29.33%	-93.75%	>18.56	>19.69	1.08%
2	0.03	1.50%				>18.05	
3	0.04	2.00%				>18.54	
Average		1.83%				> 18.76	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.530	70.6	13.32	18.09	-13.61%
2	0.010	0.516	99.2	19.22		
3	0.010	0.573	82.2	14.35		
Average				15.63		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.31	7.75%	16.25%	-47.69%	10.24	13.47	34.73%
2	0.35	8.75%				13.93	
3	0.36	9.00%				13.99	
Average		8.50%				13.80	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.441	23.0	5.78	7.07	-15.29%
2	0.009	0.491	28.2	6.37		
3	0.009	0.472	24.7	5.81		
Average				5.99		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.06	1.50%	1.92%	-17.53%	11.39	13.58	16.24%
2	0.06	1.50%				13.17	
3	0.07	1.75%				12.97	
Average		1.58%				13.24	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.451	83.3	8.79	17.05	-53.29%
2	0.021	0.444	71.6	7.68		
3	0.021	0.482	75.1	7.42		
Average				7.96		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.09	2.25%	25.50%	-92.16%	>17.76	> 19.67	-3.34%
2	0.07	1.75%				> 19.40	
3	0.08	2.00%				12.43	
Average		2.00%				> 17.17	

1000 HRS IN R-22/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	BRITTLE		BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE		BRITTLE	BRITTLE
2	BRITTLE	BRITTLE				BRITTLE	
3	BRITTLE	BRITTLE				BRITTLE	
Average		BRITTLE					

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	BRITTLE		BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE		BRITTLE	BRITTLE
2	BRITTLE	BRITTLE				BRITTLE	
3	BRITTLE	BRITTLE				BRITTLE	
Average		BRITTLE					

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1			BRITTLE	BRITTLE		BRITTLE	WHITENING
2			BRITTLE	BRITTLE			DELAMIN
3			BRITTLE	BRITTLE			
Average				BRITTLE			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>18.56	2.90	-74.39%
2	BRITTLE	BRITTLE				2.20	
3	BRITTLE	BRITTLE				9.16	
Average		BRITTLE				4.75	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1	0.010	0.450	69.7	15.49	18.09	-13.74%	
2	0.010	0.503	79.7	15.84			
3	0.010	0.503	77.9	15.48			
Average				15.60			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.21	5.25%	16.25%	-69.74%	10.24	9.96	5.60%
2	0.19	4.75%				10.84	
3	0.19	4.75%				11.64	
Average		4.92%				10.81	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.503	26.9	5.94	7.07	-15.16%
2	0.009	0.516	27.3	5.88		
3	0.009	0.577	32.1	6.18		
Average				6.00		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.03	0.75%	1.92%	-56.60%	11.39	9.16	-27.22%
2	0.03	0.75%				9.46	
3	0.04	1.00%				6.25	
Average		0.83%				8.29	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1			BRITTLE	BRITTLE		BRITTLE	total
2			BRITTLE	BRITTLE			delamination
3			BRITTLE	BRITTLE			
Average				BRITTLE			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE		BRITTLE	BRITTLE
2	BRITTLE	BRITTLE				BRITTLE	
3	BRITTLE	BRITTLE				BRITTLE	
Average		BRITTLE					

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.449	70.6	15.71	22.48	-28.21%
2	0.010	0.499	81.8	16.39		
3	0.010	0.431	70.3	16.31		
Average				16.14		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	1.05	52.50%	134.83%	-38.19%	>14.10	> 13.97	1.87%
2	2.16	108.00%				> 14.85	
3	1.79	89.50%				> 14.27	
Average		83.33%				> 14.36	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.509	83.8	16.46	19.06	-13.83%
2	0.010	0.485	78.7	16.23		
3	0.010	0.525	87.1	16.58		
Average				16.42		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	2.74	137.00%	142.83%	-1.16%	>14.60	> 14.40	-0.62%
2	2.82	141.00%				> 14.90	
3	2.91	145.50%				> 14.23	
Average		141.17%				> 14.51	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.500	127.4	12.13	13.40	-11.16%
2	0.021	0.552	138.2	11.92		
3	0.021	0.555	135.9	11.66		
Average				11.91		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.89	44.50%	29.33%	50.59%	>18.56	> 19.53	-4.49%
2	0.94	47.00%				> 16.56	
3	0.82	41.00%				> 17.09	
Average		44.17%				> 17.73	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.512	90.9	17.75	18.09	-3.03%
2	0.010	0.559	97.8	17.49		
3	0.010	0.480	83.5	17.39		
Average				17.54		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.32	8.00%	16.25%	-54.36%	10.24	12.66	44.92%
2	0.29	7.25%				14.26	
3	0.28	7.00%				17.60	
Average		7.42%				14.84	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.569	33.1	6.45	7.07	-9.28%
2	0.009	0.495	28.9	6.48		
3	0.009	0.485	27.6	6.31		
Average				6.41		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.07	1.75%	1.92%	-17.53%	11.39	12.04	9.45%
2	0.06	1.50%				12.51	
3	0.06	1.50%				12.85	
Average		1.58%				12.47	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.440	117.3	12.69	17.05	-25.83%
2	0.021	0.430	121.0	13.40		
3	0.021	0.548	136.3	11.84		
Average				12.65		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.24	6.00%	25.50%	-74.84%	>17.76	> 19.69	9.98%
2	0.29	7.25%				> 19.94	
3	0.24	6.00%				> 18.97	
Average		6.42%				> 19.53	

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	BRITTLE		BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.10	>14.36	3.50%
2	BRITTLE	BRITTLE				>14.61	
3	BRITTLE	BRITTLE				>14.81	
Average		BRITTLE				> 14.59	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	>15.10	4.41%
2	BRITTLE	BRITTLE				>15.09	
3	BRITTLE	BRITTLE				>15.54	
Average		BRITTLE				> 15.24	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>18.56	>16.21	-11.73%
2	BRITTLE	BRITTLE				>16.30	
3	BRITTLE	BRITTLE				>16.64	
Average		BRITTLE				> 16.38	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.426	81.9	19.21	18.09	-1.42%
2	0.010	0.555	93.0	16.76		
3	0.010	0.494	86.6	17.53		
Average				17.83		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.27	6.75%	16.25%	-66.15%	10.24	12.03	18.03%
2	0.19	4.75%				12.07	
3	0.20	5.00%				12.16	
Average		5.50%				12.09	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.415	26.5	7.09	7.07	-1.03%
2	0.009	0.475	29.5	6.89		
3	0.009	0.397	25.1	7.01		
Average				7.00		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.04	1.00%	1.92%	-56.60%	11.39	13.30	15.77%
2	0.03	0.75%				12.86	
3	0.03	0.75%				13.40	
Average		0.83%				13.19	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.482	82.5	8.15	17.05	-53.09%
2	0.021	0.497	80.8	7.74		
3	0.021	0.552	94.0	8.10		
Average				8.00		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.31	7.75%	25.50%	-69.61%	>17.76	>19.77	11.79%
2	0.25	6.25%				>19.82	
3	0.37	9.25%				>19.97	
Average		7.75%				> 19.85	

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.500	76.1	15.22	22.48	-31.29%
2	0.010	0.435	68.0	15.63		
3	0.010	0.461	71.4	15.49		
Average				15.45		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.91	45.50%	134.83%	-71.94%	>14.10	> 14.51	0.83%
2	0.69	34.50%				> 14.33	
3	0.67	33.50%				> 13.81	
Average		37.83%				> 14.22	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.464	71.7	15.45	19.06	-18.31%
2	0.010	0.445	72.3	16.24		
3	0.010	0.492	73.9	15.02		
Average				15.57		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	1.32	66.00%	142.83%	-56.94%	>14.60	> 14.66	-0.09%
2	1.13	56.50%				> 14.70	
3	1.24	62.00%				> 14.40	
Average		61.50%				> 14.59	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.481	104.6	10.36	13.40	-14.07%
2	0.021	0.490	124.6	12.11		
3	0.021	0.505	128.1	12.08		
Average				11.51		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.45	22.50%	29.33%	15.35%	>18.56	> 19.99	7.70%
2	0.73	36.50%				> 19.99	
3	0.85	42.50%				> 19.99	
Average		33.83%				> 19.99	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.436	70.4	16.15	18.09	-9.77%
2	0.010	0.488	81.9	16.77		
3	0.010	0.511	82.0	16.05		
Average				16.32		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.45	11.25%	16.25%	-21.54%	10.24	13.18	27.96%
2	0.23	5.75%				12.86	
3	0.85	21.25%				13.27	
Average		12.75%				13.10	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.501	25.4	5.62	7.07	-20.55%
2	0.009	0.481	23.8	5.50		
3	0.009	0.506	26.1	5.73		
Average				5.62		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.08	2.00%	1.92%	8.51%	11.39	12.57	11.41%
2	0.08	2.00%				12.80	
3	0.09	2.25%				12.70	
Average		2.08%				12.69	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.445	79.4	8.49	17.05	-54.14%
2	0.021	0.514	83.3	7.71		
3	0.021	0.499	76.0	7.25		
Average				7.82		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.07	1.75%	25.50%	-94.12%	>17.76	> 19.87	12.31%
2	0.07	1.75%				> 19.98	
3	0.04	1.00%				> 19.99	
Average		1.50%				> 19.95	

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	BRITTLE		BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.10	>13.85	-6.08%
2	BRITTLE	BRITTLE				>12.74	
3	BRITTLE	BRITTLE				>13.14	
Average		BRITTLE				> 13.24	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	BRITTLE		BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	>14.59	-1.71%
2	BRITTLE	BRITTLE				>14.66	
3	BRITTLE	BRITTLE				>13.80	
Average		BRITTLE				> 14.35	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	BRITTLE		BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>18.56	>19.16	-9.66%
2	BRITTLE	BRITTLE				>15.89	
3	BRITTLE	BRITTLE				>15.25	
Average		BRITTLE				>16.77	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.575	102.3	17.79	18.09	-2.30%
2	0.010	0.524	93.2	17.78		
3	0.010	0.568	99.2	17.46		
Average				17.67		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.39	9.75%	16.25%	-41.54%	10.24	11.22	1.63%
2	0.38	9.50%				11.31	
3	0.37	9.25%				8.69	
Average		9.50%				10.41	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.497	33.8	7.55	7.07	-0.08%
2	0.009	0.483	29.2	6.71		
3	0.009	0.493	30.8	6.94		
Average				7.06		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.04	1.00%	1.92%	-47.92%	11.39	12.51	9.34%
2	0.04	1.00%				11.69	
3	0.04	1.00%				13.16	
Average		1.00%				12.45	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.435	87.8	9.61	17.05	-49.57%
2	0.021	0.553	87.5	7.53		
3	0.021	0.475	86.3	8.65		
Average				8.60		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.37	9.25%	25.50%	-67.97%	>17.76	11.71	-7.79%
2	0.29	7.25%				>18.49	
3	0.32	8.00%				>18.93	
Average		8.17%				> 16.38	

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.494	75.0	15.18	22.48	-32.53%
2	0.010	0.504	77.4	15.35		
3	0.010	0.500	74.9	14.97		
Average				15.17		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.49	24.50%	134.83%	-84.30%	>14.10	> 14.57	2.27%
2	0.39	19.50%				> 13.61	
3	0.39	19.50%				> 15.08	
Average		21.17%				> 14.42	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.485	75.8	15.63	19.06	-18.13%
2	0.010	0.453	70.5	15.55		
3	0.010	0.553	86.5	15.63		
Average				15.60		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	142.83%	-95.10%	>14.60	> 15.13	3.74%
2	0.14	7.00%				> 15.05	
3	0.14	7.00%				> 15.26	
Average		7.00%				> 15.15	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.464	94.8	9.72	13.40	-30.89%
2	0.021	0.544	107.1	9.38		
3	0.021	0.510	93.0	8.68		
Average				9.26		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.10	5.00%	29.33%	-85.79%	>18.56	> 18.64	4.94%
2	0.08	4.00%				> 19.87	
3	0.07	3.50%				> 19.92	
Average		4.17%				> 19.48	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.451	72.9	16.16	18.09	-8.07%
2	0.010	0.510	89.4	17.52		
3	0.010	0.427	69.2	16.21		
Average				16.63		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.24	6.00%	16.25%	-58.97%	10.24	13.43	23.24%
2	0.28	7.00%				12.76	
3	0.28	7.00%				11.67	
Average		6.67%				12.62	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.508	27.3	5.96	7.07	-18.61%
2	0.009	0.500	25.8	5.73		
3	0.009	0.509	25.5	5.57		
Average				5.75		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.06	1.50%	1.92%	-26.22%	11.39	11.40	4.42%
2	0.05	1.25%				12.36	
3	0.06	1.50%				11.92	
Average		1.42%				11.89	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.504	83.4	7.88	17.05	-60.05%
2	0.021	0.510	88.8	8.29		
3	0.021	0.547	49.0	4.26		
Average				6.81		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.22	5.50%	25.50%	-79.41%	>17.76	> 19.16	9.85%
2	0.34	8.50%				> 19.66	
3	0.07	1.75%				> 19.71	
Average		5.25%				> 19.51	

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1	BRITTLE		BRITTLE	BRITTLE		BRITTLE	
2			BRITTLE	BRITTLE			
3			BRITTLE	BRITTLE			
Average				BRITTLE			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.10	>12.69	-11.13%
2	BRITTLE	BRITTLE				>12.41	
3	BRITTLE	BRITTLE				>12.49	
Average		BRITTLE				> 12.53	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1	BRITTLE		BRITTLE	BRITTLE		BRITTLE	powdery
2			BRITTLE	BRITTLE			
3			BRITTLE	BRITTLE			
Average				BRITTLE			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	>13.32	-6.78%
2	BRITTLE	BRITTLE				>13.95	
3	BRITTLE	BRITTLE				>13.56	
Average		BRITTLE				> 13.61	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1	BRITTLE		BRITTLE	BRITTLE		BRITTLE	DELAMIN
2			BRITTLE	BRITTLE			
3			BRITTLE	BRITTLE			
Average				BRITTLE			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>18.56	>17.23	-7.45%
2	BRITTLE	BRITTLE				>14.41	
3	BRITTLE	BRITTLE				>19.89	
Average		BRITTLE				> 17.18	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1	0.010	0.559	90.8	16.25	18.09	-9.15%	BLISTERING
2	0.010	0.441	69.6	15.77			
3	0.010	0.495	85.6	17.29			
Average				16.43			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.31	7.75%	16.25%	-56.41%	10.24	12.32	11.72%
2	0.22	5.50%				11.62	
3	0.32	8.00%				10.38	
Average		7.08%				11.44	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1	0.009	0.495	29.7	6.67	7.07	-6.89%	BLISTERING
2	0.009	0.492	29.0	6.55			
3	0.009	0.488	28.7	6.53			
Average				6.58			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.04	1.00%	1.92%	-47.92%	11.39	12.36	7.14%
2	0.04	1.00%				11.79	
3	0.04	1.00%				12.46	
Average		1.00%				12.20	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1	BRITTLE		BRITTLE	BRITTLE		BRITTLE	DELAM
2			BRITTLE	BRITTLE			
3			BRITTLE	BRITTLE			
Average				BRITTLE			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>18.56	>19.55	-11.96%
2	BRITTLE	BRITTLE				14.21	
3	BRITTLE	BRITTLE				>15.26	
Average		BRITTLE				> 16.34	

500 HRS IN R-22/MINERAL OIL @ 260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	52.00	
A	2	37.20	52.25	24.17%
	3	29.70	54.25	
	Average	42.55	52.83	
Tape	1	441.60	325.00	
B	2	424.20	343.60	-28.08%
	3	490.70	307.00	
	Average	452.17	325.20	
Cord	1	28.05	32.00	
C	2	34.85	35.52	-2.52%
	3	40.50	33.27	
	Average	34.47	33.60	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from Unexposed Elongation
Tape	1	0.64	32.00%	0.74	37.00%	
A	2	0.23	11.50%	0.44	22.00%	29.13%
	3	0.40	20.00%	0.46	23.00%	
	Average	0.42	21.17%	0.55	27.33%	
Tape	1	0.11	5.50%	0.08	4.00%	
B	2	0.11	5.50%	0.07	3.50%	-35.29%
	3	0.12	6.00%	0.07	3.50%	
	Average	0.11	5.67%	0.07	3.67%	
Cord	1	0.62	31.00%	0.39	19.50%	
C	2	0.18	9.00%	0.38	19.00%	18.00%
	3	0.20	10.00%	0.41	20.50%	
	Average	0.33	16.67%	0.39	19.67%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

1000 HRS IN R-22/MINERAL OIL @ 260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	33.40	
A	2	37.20	37.45	-18.61%
	3	29.70	33.05	
	Average	42.55	34.63	
Tape	1	441.60	446.00	
B	2	424.20	448.20	-0.50%
	3	490.70	455.50	
	Average	452.17	449.90	
Cord	1	28.05	24.52	
C	2	34.85	25.60	-31.27%
	3	40.50	20.95	
	Average	34.47	23.69	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from Unexposed Elongation
Tape	1	0.64	32.00%	0.23	11.50%	
A	2	0.23	11.50%	0.32	16.00%	-39.37%
	3	0.40	20.00%	0.22	11.00%	
	Average	0.42	21.17%	0.26	12.83%	
Tape	1	0.11	5.50%	0.10	5.00%	
B	2	0.11	5.50%	0.10	5.00%	-11.76%
	3	0.12	6.00%	0.10	5.00%	
	Average	0.11	5.67%	0.10	5.00%	
Cord	1	0.62	31.00%	0.43	21.50%	
C	2	0.18	9.00%	0.39	19.50%	13.00%
	3	0.20	10.00%	0.31	15.50%	
	Average	0.33	16.67%	0.38	18.83%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	49.50	
A	2	37.20	49.65	5.52%
	3	29.70	35.55	
	Average	42.55	44.90	
Tape	1	441.60	454.00	
B	2	424.20	389.00	-2.91%
	3	490.70	474.00	
	Average	452.17	439.00	
Cord	1	28.05	29.60	
C	2	34.85	28.40	-9.53%
	3	40.50	35.55	
	Average	34.47	31.18	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from Unexposed Elongation
Tape	1	0.64	32.00%	0.47	23.50%	
A	2	0.23	11.50%	0.57	28.50%	3.15%
	3	0.40	20.00%	0.27	13.50%	
	Average	0.42	21.17%	0.44	21.83%	
Tape	1	0.11	5.50%	0.10	5.00%	
B	2	0.11	5.50%	0.10	5.00%	-11.76%
	3	0.12	6.00%	0.10	5.00%	
	Average	0.11	5.67%	0.10	5.00%	
Cord	1	0.62	31.00%	0.44	22.00%	
C	2	0.18	9.00%	0.56	28.00%	57.00%
	3	0.20	10.00%	0.57	28.50%	
	Average	0.33	16.67%	0.52	26.17%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	40.50	
A	2	37.20	41.40	-4.94%
	3	29.70	39.45	
	Average	42.55	40.45	
Tape	1	441.60	338.00	
B	2	424.20	427.00	-15.30%
	3	490.70	384.00	
	Average	452.17	383.00	
Cord	1	28.05	33.55	
C	2	34.85	33.12	-3.41%
	3	40.50	33.20	
	Average	34.47	33.29	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from Unexposed Elongation
Tape	1	0.64	32.00%	0.38	19.00%	
A	2	0.23	11.50%	0.37	18.50%	-12.60%
	3	0.40	20.00%	0.36	18.00%	
	Average	0.42	21.17%	0.37	18.50%	
Tape	1	0.11	5.50%	0.09	4.50%	
B	2	0.11	5.50%	0.08	4.00%	-23.53%
	3	0.12	6.00%	0.09	4.50%	
	Average	0.11	5.67%	0.09	4.33%	
Cord	1	0.62	31.00%	0.85	42.50%	
C	2	0.18	9.00%	0.87	43.50%	159.00%
	3	0.20	10.00%	0.87	43.50%	
	Average	0.33	16.67%	0.86	43.17%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	42.95	
A	2	37.20	43.30	-1.61%
	3	29.70	39.35	
	Average	42.55	41.87	
Tape	1	441.60	408.00	
B	2	424.20	377.20	-32.27%
	3	490.70	133.50	
	Average	452.17	306.23	
Cord	1	28.05	27.65	
C	2	34.85	25.57	-14.56%
	3	40.50	35.12	
	Average	34.47	29.45	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from Unexposed Elongation
Tape	1	0.64	32.00%	0.20	10.00%	
A	2	0.23	11.50%	0.38	19.00%	-29.13%
	3	0.40	20.00%	0.32	16.00%	
	Average	0.42	21.17%	0.30	15.00%	
Tape	1	0.11	5.50%	0.09	4.50%	
B	2	0.11	5.50%	0.08	4.00%	-41.18%
	3	0.12	6.00%	0.03	1.50%	
	Average	0.11	5.67%	0.07	3.33%	
Cord	1	0.62	31.00%	0.53	26.50%	
C	2	0.18	9.00%	0.51	25.50%	52.00%
	3	0.20	10.00%	0.48	24.00%	
	Average	0.33	16.67%	0.51	25.33%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

500 HRS IN R-22/MINERAL OIL @ 260 F

Magnet Wire Type	Unexposed Voltage Withstand	Experimental Voltage Withstand	Appearence Change
Wire Type A	Pass	Pass	
Wire Type B	Pass	Pass	

1000 HRS IN R-22/MINERAL OIL @ 260 F

Wire Type A	Pass	Pass	
Wire Type B	Pass	Pass	

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F

Wire Type A	Pass	Pass	
Wire Type B	Pass		

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F

Wire Type A	Pass	Pass	
Wire Type B	Pass	Pass	

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F

Wire Type A	Pass	Pass	
Wire Type B	Pass	Pass	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-22/MINERAL OIL @ 260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.515	80.6	15.65	22.48	-31.05%
2	0.010	0.496	76.4	15.39		
3	0.010	0.484	74.8	15.45		
Average				15.50		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.50	25.00%	134.83%	-80.96%	>14.10	> 13.83	-1.11%
2	0.52	26.00%				> 13.54	
3	0.52	26.00%				> 14.46	
Average		25.67%				> 13.94	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.495	79.2	15.99	19.06	-17.60%
2	0.010	0.479	76.0	15.87		
3	0.010	0.502	76.6	15.26		
Average				15.71		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	2.22	111.00%	142.83%	-55.19%	>14.60	> 14.01	-4.52%
2	1.11	55.50%				> 13.81	
3	0.51	25.50%				> 14.00	
Average		64.00%				> 13.94	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.504	142.6	13.47	13.40	-1.64%
2	0.021	0.482	132.6	13.10		
3	0.021	0.506	137.8	12.97		
Average				13.18		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.52	26.00%	29.33%	-15.90%	>18.56	> 16.42	-14.33%
2	0.49	24.50%				> 16.42	
3	0.47	23.50%				> 14.86	
Average		24.67%				> 15.90	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.488	46.6	9.55	18.09	-46.89%
2	0.010	0.510	50.2	9.84		
3	0.010	0.500	47.2	9.43		
Average				9.61		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.20	5.00%	16.25%	-66.67%	10.24	12.86	27.77%
2	0.23	5.75%				12.59	
3	0.22	5.50%				13.80	
Average		5.42%				13.08	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1	0.009	0.571	27.7	5.39	7.07	-29.78%	
2	0.009	0.545	21.7	4.43			
3	0.009	0.504	23.0	5.07			
Average				4.96			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.06	1.50%	1.92%	-34.90%	11.39	> 13.95	23.41%
2	0.04	1.00%				> 13.99	
3	0.05	1.25%				> 14.23	
Average		1.25%				> 14.06	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed	
1	0.021	0.504	161.8	15.29	17.05	-14.01%	Delamination
2	0.021	0.498	149.2	14.27			
3	0.021	0.503	152.4	14.43			
Average				14.66			

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.42	10.50%	25.50%	-58.17%	>17.76	> 18.65	7.73%
2	0.39	9.75%				> 19.22	
3	0.47	11.75%				> 19.53	
Average		10.67%				> 19.13	

500 HRS IN R-22/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.494	90.9	18.40	22.48	-21.62%
2	0.010	0.500	86.7	17.33		
3	0.010	0.517	88.6	17.13		
Average				17.62		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.47	23.50%	134.83%	-90.61%	>14.10	> 13.59	-4.00%
2	0.14	7.00%				> 13.22	
3	0.15	7.50%				> 13.80	
Average		12.67%				> 13.54	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.494	86.9	17.58	19.06	-7.31%
2	0.010	0.505	89.1	17.64		
3	0.010	0.500	88.9	17.78		
Average				17.67		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	142.83%	-94.98%	>14.60	> 14.40	-2.05%
2	0.15	7.50%				> 14.34	
3	0.14	7.00%				> 14.16	
Average		7.17%				> 14.30	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.480	141.5	14.04	13.40	4.11%
2	0.021	0.448	130.5	13.87		
3	0.021	0.444	130.0	13.94		
Average				13.95		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.52	26.00%	29.33%	-14.76%	>18.56	> 17.14	0.90%
2	0.48	24.00%				> 19.61	
3	0.50	25.00%				> 19.43	
Average		25.00%				> 18.73	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.590	92.2	15.62	18.09	-32.26%
2	0.010	0.495	51.0	10.30		
3	0.010	0.500	54.2	10.84		
Average				12.25		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.32	8.00%	16.25%	-61.03%	10.24	9.40	-2.18%
2	0.22	5.50%				10.52	
3	0.22	5.50%				10.13	
Average		6.33%				10.02	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.523	21.8	4.64	7.07	-24.47%
2	0.009	0.492	22.4	5.05		
3	0.009	0.490	28.0	6.34		
Average				5.34		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.04	1.00%	1.92%	-39.24%	11.39	10.38	-8.49%
2	0.05	1.25%				10.70	
3	0.05	1.25%				10.19	
Average		1.17%				10.42	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.530	204.7	18.39	17.05	3.70%
2	0.021	0.529	194.1	17.47		
3	0.021	0.499	180.0	17.18		
Average				17.68		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.27	6.75%	25.50%	-55.56%	>17.76	> 17.54	-0.15%
2	0.50	12.50%				> 17.90	
3	0.59	14.75%				> 17.76	
Average		11.33%				> 17.73	

1000 HRS IN R-22/MINERAL OIL @ 260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.497	73.4	14.77	22.48	-34.57%
2	0.010	0.435	63.5	14.59		
3	0.010	0.508	75.1	14.77		
Average				14.71		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.13	6.50%	134.83%	-93.08%	>14.10	> 14.48	4.14%
2	0.13	6.50%				> 14.66	
3	0.30	15.00%				> 14.91	
Average		9.33%				> 14.68	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.490	82.8	16.90	19.06	-18.04%
2	0.010	0.475	71.0	14.94		
3	0.010	0.495	74.4	15.03		
Average				15.62		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.55	27.50%	142.83%	-86.46%	>14.60	> 15.74	8.86%
2	0.27	13.50%				> 16.04	
3	0.34	17.00%				> 15.90	
Average		19.33%				> 15.89	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.530	131.6	11.82	13.40	-10.90%
2	0.021	0.505	128.9	12.15		
3	0.021	0.500	124.3	11.84		
Average				11.94		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.44	22.00%	29.33%	-35.79%	>18.56	> 16.40	-12.21%
2	0.37	18.50%				> 16.04	
3	0.32	16.00%				> 16.44	
Average		18.83%				> 16.29	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.495	81.4	16.43	18.09	-32.35%
2	0.010	0.495	49.7	10.03		
3	0.010	0.518	53.1	10.25		
Average				12.24		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.27	6.75%	16.25%	-60.00%	10.24	13.64	36.00%
2	0.24	6.00%				14.50	
3	0.27	6.75%				13.64	
Average		6.50%				13.93	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.493	28.5	6.41	7.07	-15.17%
2	0.009	0.476	26.1	6.08		
3	0.009	0.425	21.0	5.50		
Average				6.00		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.05	1.25%	1.92%	-39.24%	11.39	> 14.30	24.38%
2	0.05	1.25%				> 14.10	
3	0.04	1.00%				> 14.10	
Average		1.17%				> 14.17	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.497	166.9	15.99	17.05	-7.52%
2	0.021	0.503	164.9	15.61		
3	0.021	0.468	154.3	15.70		
Average				15.77		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.64	16.00%	25.50%	-36.93%	>17.76	> 19.81	11.75%
2	0.61	15.25%				> 19.97	
3	0.68	17.00%				> 19.76	
Average		16.08%				> 19.85	

1000 HRS IN R-22/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.491	74.7	15.21	22.48	-30.25%
2	0.010	0.438	66.9	15.27		
3	0.010	0.467	77.3	16.55		
Average				15.68		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.16	8.00%	134.83%	-94.93%	>14.10	> 13.51	1.75%
2	0.05	2.50%				> 15.00	
3	0.20	10.00%				> 14.53	
Average		6.83%				> 14.35	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.480	63.8	13.29	19.06	-24.26%
2	0.010	0.505	62.3	12.33		
3	0.010	0.474	83.9	17.69		
Average				14.44		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.11	5.50%	142.83%	-94.63%	>14.60	> 13.95	-4.18%
2	0.07	3.50%				> 14.37	
3	0.28	14.00%				> 13.65	
Average		7.67%				> 13.99	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.487	116.5	11.39	13.40	-16.93%
2	0.021	0.492	113.0	10.94		
3	0.021	0.525	122.0	11.07		
Average				11.13		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.19	9.50%	29.33%	-66.47%	>18.56	> 16.82	-6.84%
2	0.17	8.50%				> 17.35	
3	0.23	11.50%				> 17.70	
Average		9.83%				> 17.29	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.500	52.9	10.57	18.09	-43.05%
2	0.010	0.508	51.9	10.22		
3	0.010	0.506	51.2	10.12		
Average				10.30		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.22	5.50%	16.25%	-66.67%	10.24	9.90	-4.95%
2	0.24	6.00%				10.10	
3	0.19	4.75%				9.20	
Average		5.42%				9.73	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.478	25.8	5.99	7.07	-14.62%
2	0.009	0.478	27.2	6.31		
3	0.009	0.496	26.0	5.81		
Average				6.04		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.05	1.25%	1.92%	-43.58%	11.39	10.84	-9.89%
2	0.04	1.00%				9.62	
3	0.04	1.00%				10.33	
Average		1.08%				10.26	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.522	169.5	15.46	17.05	-7.51%
2	0.021	0.485	161.4	15.85		
3	0.021	0.506	170.0	16.00		
Average				15.77		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.18	4.50%	25.50%	-79.41%	>17.76	> 18.33	0.54%
2	0.20	5.00%				> 17.94	
3	0.25	6.25%				> 17.30	
Average		5.25%				> 17.86	

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.498	77.5	15.55	22.48	-31.83%
2	0.010	0.472	72.1	15.26		
3	0.010	0.488	74.0	15.15		
Average				15.32		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.18	9.00%	134.83%	-93.82%	>14.10	> 14.27	2.01%
2	0.15	7.50%				> 15.01	
3	0.17	8.50%				> 13.87	
Average		8.33%				> 14.38	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.506	80.3	15.87	19.06	-17.18%
2	0.010	0.451	71.3	15.81		
3	0.010	0.501	78.6	15.68		
Average				15.79		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.40	20.00%	142.83%	-89.38%	>14.60	> 13.83	-0.50%
2	0.27	13.50%				> 14.72	
3	0.24	12.00%				> 15.03	
Average		15.17%				> 14.53	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.449	116.6	12.37	13.40	-6.20%
2	0.021	0.460	117.8	12.19		
3	0.021	0.489	135.0	13.15		
Average				12.57		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.39	19.50%	29.33%	-24.99%	>18.56	> 17.82	-7.90%
2	0.40	20.00%				> 16.11	
3	0.53	26.50%				> 17.35	
Average		22.00%				> 17.09	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.485	76.1	15.69	18.09	-11.94%
2	0.010	0.502	81.2	16.18		
3	0.010	0.499	79.5	15.92		
Average				15.93		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.31	7.75%	16.25%	-52.82%	10.24	11.11	23.86%
2	0.34	8.50%				13.64	
3	0.27	6.75%				13.30	
Average		7.67%				12.68	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.487	25.4	5.80	7.07	-19.14%
2	0.009	0.486	24.1	5.51		
3	0.009	0.518	27.3	5.85		
Average				5.72		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.04	1.00%	1.92%	-47.92%	11.39	12.77	13.58%
2	0.03	0.75%				13.31	
3	0.05	1.25%				12.73	
Average		1.00%				12.94	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.508	167.0	15.65	17.05	-5.70%
2	0.021	0.502	172.9	16.40		
3	0.021	0.495	168.2	16.18		
Average				16.08		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.59	14.75%	25.50%	-35.29%	>17.76	> 17.13	0.81%
2	0.71	17.75%				> 18.05	
3	0.68	17.00%				> 18.53	
Average		16.50%				> 17.90	

500 HRS IN R-22/MINERAL OIL @ 260 F
168 HRS IN R-407C/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.480	83.6	17.41	22.48	-23.69%
2	0.010	0.505	87.4	17.31		
3	0.010	0.485	81.3	16.75		
Average				17.16		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.15	7.50%	134.83%	-94.56%	>14.10	> 14.02	-0.95%
2	0.14	7.00%				> 14.38	
3	0.15	7.50%				> 13.50	
Average		7.33%				> 13.97	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.100	0.493	86.2	1.75	19.06	-35.04%
2	0.010	0.499	87.6	17.56		
3	0.010	0.503	89.8	17.84		
Average				12.38		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.15	7.50%	142.83%	-94.98%	>14.60	> 14.49	-1.55%
2	0.14	7.00%				> 14.32	
3	0.14	7.00%				> 14.31	
Average		7.17%				> 14.37	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.447	122.9	13.09	13.40	0.91%
2	0.021	0.508	147.8	13.85		
3	0.021	0.465	133.0	13.62		
Average				13.52		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.42	21.00%	29.33%	-21.01%	>18.56	> 15.48	-9.95%
2	0.50	25.00%				> 18.66	
3	0.47	23.50%				> 16.00	
Average		23.17%				> 16.71	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.517	84.7	16.37	18.09	-4.62%
2	0.010	0.503	88.1	17.50		
3	0.010	0.492	88.0	17.89		
Average				17.25		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.20	5.00%	16.25%	-63.59%	10.24	10.54	- 2.86%
2	0.23	5.75%				9.87	
3	0.28	7.00%				9.43	
Average		5.92%				9.95	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.538	22.0	4.53	7.07	-22.65%
2	0.009	0.496	22.5	5.03		
3	0.009	0.535	33.0	6.84		
Average				5.47		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.03	0.75%	1.92%	-43.58%	11.39	12.06	5.03%
2	0.05	1.25%				12.16	
3	0.05	1.25%				11.67	
Average		1.08%				11.96	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.505	183.1	17.27	17.05	1.96%
2	0.021	0.542	198.4	17.43		
3	0.021	0.506	185.5	17.46		
Average				17.38		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.43	10.75%	25.50%	-50.00%	>17.76	> 18.42	4.50%
2	0.55	13.75%				> 18.75	
3	0.55	13.75%				> 18.51	
Average		12.75%				> 18.56	

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.492	86.1	17.49	22.48	-23.32%
2	0.010	0.484	82.8	17.10		
3	0.010	0.492	84.3	17.12		
Average				17.24		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.16	8.00%	134.83%	-94.56%	>14.10	> 13.95	1.04%
2	0.14	7.00%				> 14.24	
3	0.14	7.00%				> 14.55	
Average		7.33%				> 14.25	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.450	81.3	18.07	19.06	-7.67%
2	0.010	0.459	79.8	17.39		
3	0.010	0.478	82.9	17.34		
Average				17.60		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.16	8.00%	142.83%	-94.63%	>14.60	> 15.75	7.37%
2	0.14	7.00%				> 16.95	
3	0.16	8.00%				> 14.33	
Average		7.67%				> 15.68	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.452	126.8	13.36	13.40	0.17%
2	0.021	0.502	145.4	13.79		
3	0.021	0.461	127.0	13.12		
Average				13.42		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.45	22.50%	29.33%	-17.60%	>18.56	> 15.59	-15.61%
2	0.50	25.00%				> 17.15	
3	0.50	25.00%				> 14.25	
Average		24.17%				> 15.66	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.510	82.9	16.25	18.09	-6.99%
2	0.010	0.503	87.6	17.41		
3	0.010	0.492	82.8	16.82		
Average				16.83		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.21	5.25%	16.25%	-67.18%	10.24	11.64	17.19%
2	0.25	6.25%				12.35	
3	0.18	4.50%				12.01	
Average		5.33%				12.00	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.518	32.5	6.97	7.07	-10.94%
2	0.009	0.507	30.3	6.63		
3	0.009	0.491	23.4	5.29		
Average				6.30		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.05	1.25%	1.92%	-39.24%	11.39	> 13.28	15.72%
2	0.04	1.00%				> 13.22	
3	0.05	1.25%				> 13.04	
Average		1.17%				> 13.18	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.510	178.1	16.63	17.05	-3.96%
2	0.021	0.495	168.3	16.18		
3	0.021	0.504	172.7	16.32		
Average				16.37		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.27	6.75%	25.50%	-72.55%	>17.76	> 18.70	5.41%
2	0.26	6.50%				> 18.24	
3	0.31	7.75%				> 19.22	
Average		7.00%				> 18.72	

500 HRS IN R-22/MINERAL OIL @ 260 F
336 HRS IN R-407C/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.489	82.0	16.76	22.48	-26.39%
2	0.010	0.495	81.6	16.48		
3	0.010	0.486	79.7	16.40		
Average				16.55		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.13	6.50%	134.83%	-94.93%	>14.10	> 14.20	0.21%
2	0.14	7.00%				> 14.14	
3	0.14	7.00%				> 14.05	
Average		6.83%				> 14.13	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.471	83.1	17.63	19.06	-8.11%
2	0.010	0.498	89.5	17.96		
3	0.010	0.508	86.1	16.95		
Average				17.51		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.57	28.50%	142.83%	-86.81%	>14.60	> 16.18	9.86%
2	0.44	22.00%				> 16.16	
3	0.12	6.00%				> 15.78	
Average		18.83%				> 16.04	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.479	131.4	13.06	13.40	-3.65%
2	0.021	0.481	125.3	12.40		
3	0.021	0.528	147.1	13.27		
Average				12.91		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.41	20.50%	29.33%	-34.65%	>18.56	> 17.83	-10.54%
2	0.32	16.00%				> 16.26	
3	0.42	21.00%				> 15.72	
Average		19.17%				> 16.60	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.485	85.5	17.62	18.09	-8.02%
2	0.010	0.521	86.8	16.66		
3	0.010	0.503	78.7	15.64		
Average				16.64		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.36	9.00%	16.25%	-53.33%	10.24	13.48	29.13%
2	0.33	8.25%				12.86	
3	0.22	5.50%				13.33	
Average		7.58%				13.22	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.490	23.0	5.20	7.07	-28.36%
2	0.009	0.481	21.0	4.85		
3	0.009	0.509	23.6	5.14		
Average				5.07		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.06	1.50%	1.92%	-30.56%	11.39	> 13.61	14.02%
2	0.05	1.25%				> 12.11	
3	0.05	1.25%				> 13.24	
Average		1.33%				> 12.99	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.525	171.2	15.53	17.05	-9.43%
2	0.021	0.496	161.8	15.53		
3	0.021	0.505	161.9	15.27		
Average				15.44		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.39	9.75%	25.50%	-65.36%	>17.76	> 18.06	1.63%
2	0.34	8.50%				> 18.69	
3	0.33	8.25%				> 17.40	
Average		8.83%				> 18.05	

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.480	79.5	16.55	22.48	-26.84%
2	0.010	0.491	80.4	16.36		
3	0.010	0.510	83.8	16.42		
Average				16.45		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	134.83%	-94.56%	>14.10	> 14.48	3.19%
2	0.14	7.00%				> 14.14	
3	0.16	8.00%				> 15.03	
Average		7.33%				> 14.55	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.484	79.7	16.46	19.06	-14.59%
2	0.010	0.505	81.4	16.12		
3	0.010	0.495	80.5	16.26		
Average				16.28		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	142.83%	-95.10%	>14.60	> 15.10	3.38%
2	0.14	7.00%				> 15.08	
3	0.14	7.00%				> 15.10	
Average		7.00%				> 15.09	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.510	94.8	8.85	13.40	-27.00%
2	0.021	0.454	107.1	11.23		
3	0.021	0.478	93.0	9.26		
Average				9.78		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.47	23.50%	29.33%	-26.13%	>18.56	> 18.25	-4.51%
2	0.38	19.00%				> 17.50	
3	0.45	22.50%				> 17.42	
Average		21.67%				> 17.72	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.495	47.8	9.65	18.09	-38.32%
2	0.010	0.515	45.8	8.89		
3	0.010	0.466	69.6	14.94		
Average				11.16		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.23	5.75%	16.25%	-64.10%	10.24	13.91	27.90%
2	0.23	5.75%				12.74	
3	0.24	6.00%				12.64	
Average		5.83%				13.10	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.415	17.2	4.60	7.07	-27.09%
2	0.009	0.514	27.8	6.00		
3	0.009	0.523	22.9	4.87		
Average				5.16		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.05	1.25%	1.92%	-34.90%	11.39	12.58	12.15%
2	0.04	1.00%				12.18	
3	0.06	1.50%				13.56	
Average		1.25%				12.77	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.521	164.1	15.00	17.05	-15.70%
2	0.021	0.486	143.4	14.05		
3	0.021	0.490	144.8	14.07		
Average				14.37		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.11	2.75%	25.50%	-83.01%	>17.76	> 19.70	8.00%
2	0.21	5.25%				> 18.74	
3	0.20	5.00%				> 19.10	
Average		4.33%				> 19.18	

500 HRS IN R-22/MINERAL OIL @ 260 F
500 HRS IN R-407C/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.509	89.2	17.51	22.48	-23.29%
2	0.010	0.470	79.2	16.84		
3	0.010	0.513	89.2	17.38		
Average				17.24		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.15	7.50%	134.83%	-94.68%	>14.10	> 14.00	-0.24%
2	0.14	7.00%				> 14.11	
3	0.14	7.00%				> 14.09	
Average		7.17%				> 14.07	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.508	86.7	17.06	19.06	-9.32%
2	0.010	0.525	91.7	17.46		
3	0.010	0.509	88.3	17.34		
Average				17.28		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.16	8.00%	142.83%	-94.87%	>14.60	> 14.66	0.89%
2	0.14	7.00%				> 14.89	
3	0.14	7.00%				> 14.64	
Average		7.33%				> 14.73	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.522	146.2	13.34	13.40	0.89%
2	0.021	0.512	147.3	13.70		
3	0.021	0.492	139.7	13.52		
Average				13.52		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.39	19.50%	29.33%	-24.99%	>18.56	> 18.25	-4.51%
2	0.47	23.50%				> 17.50	
3	0.46	23.00%				> 17.42	
Average		22.00%				> 17.72	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.500	88.8	17.76	18.09	2.34%
2	0.010	0.495	97.7	19.74		
3	0.010	0.485	87.5	18.04		
Average				18.51		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.23	5.75%	16.25%	-56.92%	10.24	12.33	10.06%
2	0.36	9.00%				11.78	
3	0.25	6.25%				9.70	
Average		7.00%				11.27	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.519	27.7	5.93	7.07	-18.22%
2	0.009	0.478	26.8	6.23		
3	0.009	0.541	25.3	5.19		
Average				5.78		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.05	1.25%	1.92%	-34.90%	11.39	12.10	6.61%
2	0.05	1.25%				12.52	
3	0.05	1.25%				11.81	
Average		1.25%				12.14	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.492	162.2	15.70	17.05	-10.42%
2	0.021	0.520	167.7	15.36		
3	0.021	0.526	163.1	14.77		
Average				15.27		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.22	5.50%	25.50%	-79.74%	>17.76	> 18.97	10.08%
2	0.22	5.50%				> 19.83	
3	0.18	4.50%				> 19.85	
Average		5.17%				> 19.55	

Data Tables
Part 3

R-502/Mineral Oil to R-404A/Polyolester

500 HRS IN R-502/MINERAL OIL @ 260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.5835	0.1932	0.5372	0.1851
2	0.7122	0.2348	0.6459	0.2232
3	0.9472	0.3111	0.8554	0.2946

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.4993	0.4504	-7.93%	-9.79%
2	0.6107	0.5407	-9.31%	-11.46%
3	0.8137	0.7174	-9.69%	-11.84%
		AVERAGE	-8.98%	-11.03%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	1.2260	0.4083	1.1995	0.4118
2	0.8899	0.2975	0.8820	0.3029
3	0.8352	0.2794	0.8295	0.2848

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	1.0461	1.0077	-2.16%	-3.67%
2	0.7578	0.7408	-0.89%	-2.25%
3	0.7110	0.6968	-0.68%	-2.00%
		AVERAGE	-1.24%	-2.64%

1000 HRS IN R-502/MINERAL OIL @ 260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.7111	0.2306	0.6636	0.2221
2	0.6034	0.1976	0.5221	0.1888
3	0.8707	0.2872	0.7960	0.2776

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.6147	0.5648	-6.68%	-8.12%
2	0.5191	0.4264	-13.47%	-17.87%
3	0.7465	0.6632	-8.58%	-11.16%
		AVERAGE	-9.58%	-12.38%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	1.2260	0.4083	1.2140	0.4202
2	0.8899	0.2975	0.8948	0.2926
3	0.8352	0.2794	0.8437	0.3112

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	1.0461	1.0155	-0.98%	-2.92%
2	0.7578	0.7704	0.55%	1.65%
3	0.7110	0.6812	1.02%	-4.19%
		AVERAGE	0.20%	-1.82%

500 HRS IN R-502/MINERAL OIL @ 260 F
168 HRS IN R-404A/POLYOLESTER @260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.5835	0.1932	0.5273	0.1798
2	0.7122	0.2348	0.6358	0.2169
3	0.9472	0.3111	0.8395	0.2873

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.4993	0.4445	-9.63%	-10.97%
2	0.6107	0.5359	-10.73%	-12.25%
3	0.8137	0.7064	-11.37%	-13.19%
		AVERAGE	-10.58%	-12.14%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	1.5700	0.5211	1.4935	0.5059
2	1.3061	0.4350	1.2556	0.4256
3	1.1600	0.3867	1.1196	0.3788

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	1.3418	1.2634	-4.87%	-5.84%
2	1.1144	1.0618	-3.87%	-4.72%
3	0.9893	0.9477	-3.48%	-4.20%
		AVERAGE	-4.07%	-4.92%

500 HRS IN R-502/MINERAL OIL @ 260 F
336 HRS IN R-404A/POLYOLESTER @260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.5835	0.1932	0.5245	0.1791
2	0.7122	0.2348	0.6332	0.2155
3	0.9472	0.3111	0.8360	0.2851

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.4993	0.4419	-10.11%	-11.50%
2	0.6107	0.5343	-11.09%	-12.51%
3	0.8137	0.7047	-11.74%	-13.39%
		AVERAGE	-10.98%	-12.47%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	1.5700	0.5211	1.4890	0.5034
2	1.3061	0.4350	1.2526	0.4240
3	1.1600	0.3867	1.1152	0.3776

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	1.3418	1.2608	-5.16%	-6.03%
2	1.1144	1.0600	-4.10%	-4.88%
3	0.9893	0.9436	-3.86%	-4.62%
		AVERAGE	-4.37%	-5.18%

500 HRS IN R-502/MINERAL OIL @ 260 F
500 HRS IN R-404A/POLYOLESTER @260 F

Varnish Type Iso-800

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	0.5835	0.1932	0.5244	0.1787
2	0.7122	0.2348	0.6322	0.2155
3	0.9472	0.3111	0.8360	0.2847

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	0.4993	0.4422	-10.13%	-11.43%
2	0.6107	0.5331	-11.23%	-12.71%
3	0.8137	0.7053	-11.74%	-13.33%
		AVERAGE	-11.03%	-12.49%

Varnish Type 923

Varnish Disk#	Weight Disk Before in Air (grams)	Weight Disk before in Methanol (grams)	Weight Disk after in Air (grams)	Weight Disk after in MeOH (grams)
1	1.5700	0.5211	1.4886	0.4939
2	1.3061	0.4350	1.2538	0.4239
3	1.1600	0.3867	1.1163	0.3773

Varnish Disk#	Volume Before (milliters)	Volume After (milliliters)	Change in Weight	Change in Volume
1	1.3418	1.2725	-5.18%	-5.17%
2	1.1144	1.0617	-4.00%	-4.73%
3	0.9893	0.9454	-3.77%	-4.44%
		AVERAGE	-4.32%	-4.78%

500 HRS IN R-502 / MINERAL OIL @ 260 F

Wire Type Varnish	Unexposed Bond Strengths Pounds	Experimental Bond Strengths Pounds	Change in Bond Strength From Unexposed
	57.95	53.10	
Wire Type A	51.25	43.25	
coated with	52.50	46.30	-13.37%
Iso-800	64.45	60.50	
	60.35	45.05	
Average	57.30	49.64	
	65.90	37.90	
Wire Type A	59.60	28.45	
coated with	52.95	28.30	-53.35%
923	56.35	27.95	
	68.40	18.85	
Average	60.64	28.29	
	58.25	57.35	
Wire Type B	53.35	60.55	
coated with	52.30	65.20	4.78%
Iso-800	54.25	57.10	
	56.95	48.05	
Average	55.02	57.65	
	72.40	74.70	
Wire Type B	69.20	70.10	
coated with	71.65	50.55	-7.50%
923	75.80	67.10	
	63.50	63.65	
Average	70.51	65.22	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502 / MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Wire Type Varnish	Unexposed Bond Strengths Pounds	Experimental Bond Strengths Pounds	Change in Bond Strength From Unexposed
	57.95	66.15	
Wire Type A	51.25	52.60	
coated with	52.50	47.25	-0.52%
Iso-800	64.45	62.05	
	60.35	56.95	
Average	57.30	57.00	
	65.90	48.10	
Wire Type A	59.60	41.15	
coated with	52.95	47.90	-26.43%
923	56.35	42.40	
	68.40	43.50	
Average	60.64	44.61	
	58.25	40.30	
Wire Type B	53.35	56.20	
coated with	52.30	88.65	11.63%
Iso-800	54.25	66.60	
	56.95	55.35	
Average	55.02	61.42	
	72.40	58.15	
Wire Type B	69.20	38.85	
coated with	71.65	57.10	-23.47%
923	75.80	54.20	
	63.50	61.50	
Average	70.51	53.96	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

1000 HRS IN R-502/MINERAL OIL @ 260 F

Wire Type Varnish	Unexposed Bond Strengths Pounds	Experimental Bond Strengths Pounds	Change in Bond Strength From Unexposed
	57.95	42.27	
Wire Type A	51.25	56.05	
coated with	52.50	61.02	-2.60%
Iso-800	64.45	47.95	
	60.35	71.77	
Average	57.30	55.81	
	65.90	27.82	
Wire Type A	59.60	28.22	
coated with	52.95	32.32	-53.91%
923	56.35	23.10	
	68.40	28.30	
Average	60.64	27.95	
	58.25	40.92	
Wire Type B	53.35	56.95	
coated with	52.30	50.92	-3.17%
Iso-800	54.25	54.12	
	56.95	63.47	
Average	55.02	53.28	
	72.40	65.25	
Wire Type B	69.20	59.37	
coated with	71.65	67.55	-12.16%
923	75.80	46.70	
	63.50	70.82	
Average	70.51	61.94	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

1000 HRS IN R-502/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Wire Type Varnish	Unexposed Bond Strengths Pounds	Experimental Bond Strengths Pounds	Change in Bond Strength From Unexposed
	57.95	63.65	
Wire Type A	51.25	54.40	
coated with	52.50	63.27	6.73%
Iso-800	64.45	71.30	
	60.35	53.15	
Average	57.30	61.15	
	65.90	34.42	
Wire Type A	59.60	30.42	
coated with	52.95	33.00	-45.65%
923	56.35	30.97	
	68.40	35.97	
Average	60.64	32.96	
	58.25	58.32	
Wire Type B	53.35	68.02	
coated with	52.30	62.80	16.76%
Iso-800	54.25	61.15	
	56.95	70.92	
Average	55.02	64.24	
	72.40	61.92	
Wire Type B	69.20	64.10	
coated with	71.65	68.15	-11.44%
923	75.80	76.12	
	63.50	41.92	
Average	70.51	62.44	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502 / MINERAL OIL @ 260 F
168 HRS IN R-404A / POLYOLESTER @260 F

Wire Type Varnish	Unexposed Bond Strengths Pounds	Experimental Bond Strengths Pounds	Change in Bond Strength From Unexposed
	57.95	59.95	
Wire Type A	51.25	62.50	
coated with	52.50	58.00	0.07%
Iso-800	64.45	56.45	
	60.35	49.80	
Average	57.30	57.34	
	65.90	31.00	
Wire Type A	59.60	32.75	
coated with	52.95	26.75	-51.53%
923	56.35	27.60	
	68.40	28.85	
Average	60.64	29.39	
	58.25	61.10	
Wire Type B	53.35	57.30	
coated with	52.30	58.60	-2.71%
Iso-800	54.25	49.45	
	56.95	41.20	
Average	55.02	53.53	
	72.40	63.10	
Wire Type B	69.20	68.45	
coated with	71.65	43.05	-28.85%
923	75.80	43.65	
	63.50	32.60	
Average	70.51	50.17	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502/MINERAL OIL @ 260 F
168 HRS IN R-404A/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Wire Type Varnish	Unexposed Bond Strengths Pounds	Experimental Bond Strengths Pounds	Change in Bond Strength From Unexposed
	57.95	42.85	
Wire Type A	51.25	57.50	
coated with	52.50	41.95	-8.81%
Iso-800	64.45	56.90	
	60.35	62.05	
Average	57.30	52.25	
	65.90	32.75	
Wire Type A	59.60	40.40	
coated with	52.95	41.70	-39.40%
923	56.35	34.25	
	68.40	34.65	
Average	60.64	36.75	
	58.25	61.75	
Wire Type B	53.35	64.75	
coated with	52.30	62.35	9.38%
Iso-800	54.25	50.80	
	56.95	61.25	
Average	55.02	60.18	
	72.40	50.65	
Wire Type B	69.20	56.10	
coated with	71.65	67.75	-14.21%
923	75.80	68.10	
	63.50	59.85	
Average	70.51	60.49	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502 / MINERAL OIL @ 260 F
336 HRS IN R-404A / POLYOLESTER @260 F

Wire Type Varnish	Unexposed Bond Strengths Pounds	Experimental Bond Strengths Pounds	Change in Bond Strength From Unexposed
	57.95	69.05	
Wire Type A	51.25	71.85	
coated with	52.50	70.90	26.95%
Iso-800	64.45	78.05	
	60.35	73.85	
Average	57.30	72.74	
	65.90	31.50	
Wire Type A	59.60	34.85	
coated with	52.95	32.35	-44.08%
923	56.35	33.65	
	68.40	37.20	
Average	60.64	33.91	
	58.25	73.70	
Wire Type B	53.35	80.65	
coated with	52.30	69.85	29.95%
Iso-800	54.25	59.65	
	56.95	73.65	
Average	55.02	71.50	
	72.40	63.00	
Wire Type B	69.20	77.35	
coated with	71.65	56.00	-11.79%
923	75.80	56.15	
	63.50	58.50	
Average	70.51	62.20	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502/MINERAL OIL @ 260 F
336 HRS IN R-404A/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Wire Type Varnish	Unexposed Bond Strengths Pounds	Experimental Bond Strengths Pounds	Change in Bond Strength From Unexposed
	57.95	81.30	
Wire Type A	51.25	65.75	
coated with	52.50	58.95	6.11%
Iso-800	64.45	44.85	
	60.35	53.15	
Average	57.30	60.80	
	65.90	31.70	
Wire Type A	59.60	35.95	
coated with	52.95	38.20	-38.41%
923	56.35	39.60	
	68.40	41.30	
Average	60.64	37.35	
	58.25	53.80	
Wire Type B	53.35	66.15	
coated with	52.30	54.75	3.78%
Iso-800	54.25	62.50	
	56.95	48.30	
Average	55.02	57.10	
	72.40	54.45	
Wire Type B	69.20	54.90	
coated with	71.65	47.75	-28.51%
923	75.80	53.60	
	63.50	41.35	
Average	70.51	50.41	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502 / MINERAL OIL @ 260 F
500 HRS IN R-404A / POLYOLESTER @260 F

Wire Type Varnish	Unexposed Bond Strengths Pounds	Experimental Bond Strengths Pounds	Change in Bond Strength From Unexposed
	57.95	85.07	
Wire Type A	51.25	62.32	
coated with	52.50	41.27	6.19%
Iso-800	64.45	60.82	
	60.35	54.75	
Average	57.30	60.85	
	65.90	34.32	
Wire Type A	59.60	30.87	
coated with	52.95	28.35	-48.92%
923	56.35	31.52	
	68.40	29.80	
Average	60.64	30.97	
	58.25	60.52	
Wire Type B	53.35	61.07	
coated with	52.30	52.05	1.82%
Iso-800	54.25	47.30	
	56.95	59.17	
Average	55.02	56.02	
	72.40	43.15	
Wire Type B	69.20	68.20	
coated with	71.65	46.67	-19.95%
923	75.80	63.65	
	63.50	60.55	
Average	70.51	56.44	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502/MINERAL OIL @ 260 F
500 HRS IN R-404A/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Wire Type Varnish	Unexposed Bond Strengths Pounds	Experimental Bond Strengths Pounds	Change in Bond Strength From Unexposed
	57.95	50.57	
Wire Type A	51.25	66.32	
coated with	52.50	57.32	2.50%
Iso-800	64.45	56.30	
	60.35	63.15	
Average	57.30	58.73	
	65.90	34.07	
Wire Type A	59.60	39.10	
coated with	52.95	38.32	-40.62%
923	56.35	39.47	
	68.40	29.07	
Average	60.64	36.01	
	58.25	61.35	
Wire Type B	53.35	56.15	
coated with	52.30	72.00	11.28%
Iso-800	54.25	62.97	
	56.95	53.65	
Average	55.02	61.22	
	72.40	65.60	
Wire Type B	69.20	48.20	
coated with	71.65	65.10	-10.53%
923	75.80	59.87	
	63.50	76.67	
Average	70.51	63.09	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502/MINERAL OIL @ 260 F

Wire Type /Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	19.12		569	405	
Wire Type A	18.18	19.72		586	414	
coated with	17.00	19.83	19.62%	487	326	-28.08%
Iso-800	18.27	18.18		483	422	
	11.90	18.70		557	362	
Average	15.98	19.11		536	386	
	19.93	19.89		652	405	
Wire Type A	16.91	18.40		653	423	
coated with	16.82	19.90	15.42%	642	418	-30.48%
923	14.36	19.96		547	492	
	17.01	19.99		564	388	
Average	17.01	19.63		612	425	
	18.19	19.72		590	260	
Wire Type B	19.70	19.65		494	223	
coated with	18.41	18.83	3.43%	457	363	-42.24%
Iso-800	19.73	19.73		594	287	
	18.35	19.69		578	434	
Average	18.88	19.52		543	313	
	19.76	16.35		621	374	
Wire Type B	19.70	16.04		423	485	
coated with	19.85	19.89	-9.77%	688	462	-14.22%
923	19.71	16.99		395	685	
	19.90	19.99		643	370	
Average	19.78	17.85		554	475	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

1000 HRS IN R-502/MINERAL OIL @ 260 F

Wire Type /Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	18.60		569	449	
Wire Type A	18.18	12.80		586	403	
coated with	17.00	19.76	2.92%	487	423	-22.26%
Iso-800	18.27	16.22		483	414	
	11.90	14.83		557	396	
Average	15.98	16.44		536	417	
	19.93	17.85		652	350	
Wire Type A	16.91	17.88		653	368	
coated with	16.82	19.86	9.21%	642	310	-44.28%
923	14.36	19.88		547	334	
	17.01	17.39		564	342	
Average	17.01	18.57		612	341	
	18.19	19.99		590	547	
Wire Type B	19.70	16.02		494	400	
coated with	18.41	19.81	1.06%	457	441	-13.12%
Iso-800	19.73	19.75		594	550	
	18.35	19.81		578	419	
Average	18.88	19.08		543	471	
	19.76	14.76		621	396	
Wire Type B	19.70	19.95		423	519	
coated with	19.85	16.09	-9.26%	688	356	-25.99%
923	19.71	19.39		395	456	
	19.90	19.57		643	323	
Average	19.78	17.95		554	410	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502/MINERAL OIL @ 260 F
168 HRS IN R-404A/POLYOLESTER @260 F

Wire Type /Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	18.42		569	396	
Wire Type A	18.18	17.92		586	381	
coated with	17.00	19.66	19.55%	487	400	-29.23%
Iso-800	18.27	19.80		483	385	
	11.90	19.70		557	336	
Average	15.98	19.10		536	380	
	19.93	19.73		652	522	
Wire Type A	16.91	19.79		653	524	
coated with	16.82	19.96	13.67%	642	497	-16.25%
923	14.36	17.18		547	482	
	17.01	19.99		564	536	
Average	17.01	19.33		612	512	
	18.19	18.38		590	334	
Wire Type B	19.70	19.99		494	275	
coated with	18.41	19.96	3.56%	457	305	-39.88%
Iso-800	19.73	19.60		594	302	
	18.35	19.81		578	415	
Average	18.88	19.55		543	326	
	19.76	19.80		621	532	
Wire Type B	19.70	19.83		423	427	
coated with	19.85	19.99	0.10%	688	481	-5.42%
923	19.71	19.99		395	522	
	19.90	19.41		643	658	
Average	19.78	19.80		554	524	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502/MINERAL OIL @ 260 F
336 HRS IN R-404A/POLYOLESTER @260 F

Wire Type /Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	16.50		569	369	
Wire Type A	18.18	19.99		586	373	
coated with	17.00	18.89	17.34%	487	348	-30.13%
Iso-800	18.27	19.70		483	387	
	11.90	18.65		557	397	
Average	15.98	18.75		536	375	
	19.93	19.71		652	451	
Wire Type A	16.91	18.87		653	419	
coated with	16.82	19.70	12.48%	642	458	-23.35%
923	14.36	18.40		547	555	
	17.01	18.96		564	461	
Average	17.01	19.13		612	469	
	18.19	17.50		590	358	
Wire Type B	19.70	14.81		494	388	
coated with	18.41	19.71	-5.21%	457	393	-29.89%
Iso-800	19.73	17.70		594	362	
	18.35	19.74		578	401	
Average	18.88	17.89		543	380	
	19.76	16.15		621	355	
Wire Type B	19.70	17.56		423	381	
coated with	19.85	15.43	-14.72%	688	411	-32.17%
923	19.71	19.71		395	397	
	19.90	15.51		643	335	
Average	19.78	16.87		554	376	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502/MINERAL OIL @ 260 F
500 HRS IN R-404A/POLYOLESTER @260 F

Wire Type /Varnish	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	14.53	18.18		569	376	
Wire Type A	18.18	19.17		586	357	
coated with	17.00	17.70	10.02%	487	464	-29.79%
Iso-800	18.27	16.36		483	300	
	11.90	16.47		557	386	
Average	15.98	17.58		536	377	
	19.93	19.89		652	507	
Wire Type A	16.91	19.69		653	490	
coated with	16.82	19.99	14.78%	642	503	-23.68%
923	14.36	19.90		547	410	
	17.01	18.13		564	424	
Average	17.01	19.52		612	467	
	18.19	19.73		590	331	
Wire Type B	19.70	19.73		494	446	
coated with	18.41	19.30	-2.03%	457	402	-33.28%
Iso-800	19.73	17.10		594	368	
	18.35	16.60		578	263	
Average	18.88	18.49		543	362	
	19.76	18.88		621	546	
Wire Type B	19.70	19.96		423	439	
coated with	19.85	19.75	-1.11%	688	543	-14.33%
923	19.71	19.33		395	426	
	19.90	19.90		643	419	
Average	19.78	19.56		554	475	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502/MINERAL OIL @ 260 F

Wire Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	16.40	13.17		518	391	
	15.10	11.99		577	465	
Wire Type A	14.37	9.86	-13.09%	569	420	-19.96%
	15.70	14.61		555	437	
	14.66	16.62		556	508	
Average	15.25	13.25		555	444	
	15.24	15.97		576	550	
	14.63	14.63		580	468	
Wire Type B	14.06	16.54	17.59%	595	553	-8.74%
	12.60	16.21		592	543	
	10.60	15.59		576	550	
Average	13.43	15.79		584	533	

1000 HRS IN R-502/MINERAL OIL @ 260 F

	16.40	17.05		518	375	
	15.10	17.97		577	386	
Wire Type A	14.37	16.00	10.27%	569	345	-33.55%
	15.70	16.53		555	346	
	14.66	16.51		556	392	
Average	15.25	16.81		555	369	
	15.24	12.20		576	395	
	14.63	16.36		580	305	
Wire Type B	14.06	15.02	10.67%	595	249	-40.49%
	12.60	16.20		592	388	
	10.60	14.51		576	400	
Average	13.43	14.86		584	347	

500 HRS IN R-502/MINERAL OIL @ 260 F
168 HRS IN R-404A/POLYOLESTER @260 F

	16.40	17.30		518	389	
	15.10	15.96		577	405	
Wire Type A	14.37	17.36	10.63%	569	410	-26.13%
	15.70	16.28		555	430	
	14.66	17.43		556	416	
Average	15.25	16.87		555	410	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502/MINERAL OIL @ 260 F
168 HRS IN R-404A/POLYOLESTER @260 F

Wire Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change	Unexposed Burnout Strengths (seconds)	Experimental Burnout Strengths (seconds)	Burnout Change
	15.24	15.60		576	356	
	14.63	15.05		580	458	
Wire Type B	14.06	15.69	16.03%	595	252	-39.77%
	12.60	15.61		592	336	
	10.60	15.94		576	356	
Average	13.43	15.58		584	352	

500 HRS IN R-502/MINERAL OIL @ 260 F
336 HRS IN R-404A/POLYOLESTER @260 F

	16.40	16.47		518	431	
	15.10	17.89		577	413	
Wire Type A	14.37	17.61	14.74%	569	435	-22.45%
	15.70	17.84		555	446	
	14.66	17.66		556	427	
Average	15.25	17.49		555	430	
	15.24	15.92		576	443	
	14.63	16.38		580	436	
Wire Type B	14.06	16.78	13.06%	595	392	-26.89%
	12.60	13.29		592	443	
	10.60	13.53		576	420	
Average	13.43	15.18		584	427	

500 HRS IN R-502/MINERAL OIL @ 260 F
500 HRS IN R-404A/POLYOLESTER @260 F

	16.40	16.65		518	404	
	15.10	12.96		577	429	
Wire Type A	14.37	17.11	8.34%	569	397	-26.02%
	15.70	18.21		555	409	
	14.66	17.66		556	414	
Average	15.25	16.52		555	411	
	15.24	15.49		576	408	
	14.63	14.00		580	478	
Wire Type B	14.06	16.00	16.28%	595	407	-26.89%
	12.60	15.87		592	430	
	10.60	16.70		576	411	
Average	13.43	15.61		584	427	

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat

500 HRS IN R-502/MINERAL OIL @ 260 F

Lead Wire Insulation Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
Polyester Composite	10.87	9.65	
Dacron-Mylar-Dacron	10.82	10.09	2.46%
	7.62	10.29	
Average	9.77	10.01	
Polyester, Fluorpolymer	10.78	14.59	
Composite	9.24	15.18	43.83%
Dacron-Teflon-Dacron	10.46	14.07	
Average	10.16	14.61	

1000 HRS IN R-502/MINERAL OIL @ 260 F

Polyester Composite	10.87	2.24	
Dacron-Mylar-Dacron	10.82	2.39	-75.50%
	7.62	2.55	
Average	9.77	2.39	
Polyester, Fluorpolymer	10.78	11.00	
Composite	9.24	10.87	6.40%
Dacron-Teflon-Dacron	10.46	10.56	
Average	10.16	10.81	

500 HRS IN R-502/MINERAL OIL @ 260 F
168 HRS IN R-404A/POLYOLESTER @260 F

Lead Wire Insulation Type	Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
Polyester Composite	10.87	6.86	
Dacron-Mylar-Dacron	10.82	9.35	-12.96%
	7.62	9.30	
Average	9.77	8.50	
Polyester, Fluorpolymer	10.78	15.66	
Composite	9.24	14.98	51.51%
Dacron-Teflon-Dacron	10.46	15.54	
Average	10.16	15.39	

500 HRS IN R-502/MINERAL OIL @ 260 F
336 HRS IN R-404A/POLYOLESTER @260 F

Polyester Composite	10.87	9.50	
Dacron-Mylar-Dacron	10.82	7.55	-7.37%
	7.62	10.10	
Average	9.77	9.05	
Polyester, Fluorpolymer	10.78	11.84	
Composite	9.24	16.14	35.20%
Dacron-Teflon-Dacron	10.46	13.23	
Average	10.16	13.74	

500 HRS IN R-502/MINERAL OIL @ 260 F
500 HRS IN R-404A/POLYOLESTER @260 F

Polyester Composite	10.87	4.03	
Dacron-Mylar-Dacron	10.82	7.63	-26.31%
	7.62	9.94	
Average	9.77	7.20	
Polyester, Fluorpolymer	10.78	11.92	
Composite	9.24	13.23	31.00%
Dacron-Teflon-Dacron	10.46	14.78	
	10.16	13.31	

500 HRS IN R-502/MINERAL OIL @ 260 F

Sleeving Type		Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric change
Polyester Film		>19.14	>15.21	
		>17.05	>18.27	-2.29%
		>16.60	>18.10	
	Average	>17.60	>17.19	
Aramid Fiber Mat		>11.83	>10.69	
Polyester Film		>12.33	>12.57	0.19%
		>12.40	>13.37	
	Average	>12.19	>12.21	

1000 HRS IN R-502/MINERAL OIL @ 260 F

Polyester Film		>19.14	-	
		>17.05	>14.76	16.03%
		>16.60	>11.27	
	Average	>11.22	>13.02	
Aramid Fiber Mat		>11.83	6.61	
Polyester Film		>12.33	6.12	-50.44%
		>12.40	5.39	
	Average	>12.19	6.04	

500 HRS IN R-502/MINERAL OIL @ 260 F
168 HRS IN R-404A/POLYOLESTER @260 F

Sleeving Type		Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric change
Polyester Film		>19.14	>17.13	
		>17.05	>17.76	-6.23%
		>16.60	>15.24	
	Average	>17.60	>16.50	
Aramid Fiber Mat		>11.83	>12.51	
Polyester Film		>12.33	8.57	-10.48%
		>12.40	11.65	
	Average	>12.19	>10.91	

500 HRS IN R-502/MINERAL OIL @ 260 F
336 HRS IN R-404A/POLYOLESTER @260 F

Polyester Film		>19.14	>18.36	
		>17.05	>15.25	-1.57%
		>16.60	>18.35	
	Average	>17.60	>17.32	
Aramid Fiber Mat		>11.83	10.57	
Polyester Film		>12.33	11.03	-11.38%
		>12.40	-	
	Average	>12.19	10.80	

500 HRS IN R-502/MINERAL OIL @ 260 F
500 HRS IN R-404A/POLYOLESTER @260 F

Sleeving Type		Unexposed Dielectric Strengths (Kilovolts)	Experimental Dielectric Strengths (Kilovolts)	Dielectric change
Polyester Film		>19.14	>16.41	
		>17.05	>15.79	-8.51%
		>16.60	-	
	Average	>17.60	>16.10	
Aramid Fiber Mat		>11.83	5.99	
Polyester Film		>12.33	11.63	-28.31%
		>12.40	8.59	
	Average	>12.19	8.74	

500 HRS IN R-502/MINERAL OIL @ 260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.500	81.6	16.31	22.48	-26.33%
2	0.010	0.435	73.2	16.82		
3	0.010	0.564	93.4	16.55		
Average				16.56		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	1.47	73.50%	134.83%	-45.86%	>14.10	>14.51	2.81%
2	1.44	72.00%				>14.43	
3	1.47	73.50%				>14.55	
Average		73.00%				>14.50	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.460	80.0	17.38	19.06	-10.54%
2	0.010	0.496	88.1	17.76		
3	0.010	0.460	73.7	16.01		
Average				17.05		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	2.12	106.00%	142.83%	-26.72%	>14.60	>14.70	0.55%
2	2.57	128.50%				>14.47	
3	1.59	79.50%				>14.87	
Average		104.67%				>14.68	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.489	119.5	11.64	13.40	-11.27%
2	0.021	0.550	145.3	12.58		
3	0.021	0.410	98.6	11.45		
Average				11.89		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.32	16.00%	29.33%	-39.77%	>18.56	>15.40	-9.55%
2	0.40	20.00%				>18.86	
3	0.34	17.00%				>16.10	
Average		17.67%				>16.79	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.492	80.2	16.29	18.09	-10.36%
2	0.010	0.579	94.2	16.27		
3	0.010	0.579	93.2	16.09		
Average				16.22		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.54	13.50%	16.25%	-15.90%	10.24	13.93	19.08%
2	0.54	13.50%				11.35	
3	0.56	14.00%				11.30	
Average		13.67%				12.19	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.484	22.1	5.07	7.07	-22.53%
2	0.009	0.510	26.8	5.84		
3	0.009	0.465	23.1	5.52		
Average				5.48		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.09	2.25%	1.92%	12.85%	11.39	13.33	19.08%
2	0.09	2.25%				14.26	
3	0.08	2.00%				13.10	
Average		2.17%				13.56	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.494	146.6	14.13	17.05	-16.07%
2	0.021	0.521	153.1	13.99		
3	0.021	0.504	156.7	14.81		
Average				14.31		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.59	14.75%	25.50%	-39.22%	>17.76	>18.30	4.82%
2	0.63	15.75%				>18.65	
3	0.64	16.00%				>18.90	
Average		15.50%				>18.62	

500 HRS IN R-502/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.567	99.0	17.46	22.48	-21.24%
2	0.010	0.490	89.6	18.29		
3	0.010	0.488	84.8	17.37		
Average				17.70		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	1.74	87.00%	134.83%	-26.57%	>14.10	>14.28	0.50%
2	2.62	131.00%				>14.24	
3	1.58	79.00%				>13.99	
Average		99.00%				>14.17	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.504	87.1	17.28	19.06	-9.05%
2	0.010	0.512	90.1	17.59		
3	0.010	0.497	85.2	17.13		
Average				17.33		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	2.58	129.00%	142.83%	-12.83%	>14.60	>14.16	-2.26%
2	2.95	147.50%				>14.60	
3	1.94	97.00%				>14.05	
Average		124.50%				>14.27	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.549	152.2	13.20	13.40	-0.23%
2	0.021	0.466	132.4	13.53		
3	0.021	0.455	127.8	13.38		
Average				13.37		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.43	21.50%	29.33%	-29.54%	>18.56	>19.45	4.35%
2	0.40	20.00%				>19.86	
3	0.41	20.50%				>18.79	
Average		20.67%				>19.37	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.444	86.3	19.44	18.09	11.75%
2	0.010	0.486	100.4	20.66		
3	0.010	0.509	104.6	20.55		
Average				20.22		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.34	8.50%	16.25%	-43.08%	10.24	11.59	7.62%
2	0.38	9.50%				9.21	
3	0.39	9.75%				12.26	
Average		9.25%				11.02	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.482	28.1	6.47	7.07	-4.69%
2	0.009	0.475	28.7	6.70		
3	0.009	0.562	35.7	7.05		
Average				6.74		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.07	1.75%	1.92%	-8.85%	11.39	10.41	-5.38%
2	0.06	1.50%				11.21	
3	0.08	2.00%				10.71	
Average		1.75%				10.78	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.512	187.0	17.39	17.05	-0.02%
3	0.021	0.466	160.1	16.36		
3	0.021	0.539	196.8	17.39		
Average				17.05		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.38	9.50%	25.50%	-65.69%	>17.76	>17.65	-0.51%
2	0.29	7.25%				>18.09	
3	0.38	9.50%				>17.27	
Average		8.75%				>17.67	

1000 HRS IN R-502/MINERAL OIL @ 260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.10	>14.61	2.29%
2	BRITTLE	BRITTLE				>14.64	
3	BRITTLE	BRITTLE				>14.02	
Average		BRITTLE				>14.42	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1			BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	>14.01	-4.25%
2	BRITTLE	BRITTLE				>13.91	
3	BRITTLE	BRITTLE				>14.02	
Average		BRITTLE				>13.98	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.520	27.2	2.49	13.40	-83.14%
2	0.021	0.587	26.8	2.17		
3	0.021	0.487	21.7	2.12		
Average				2.26		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.04	2.00%	29.33%	-93.75%	>18.56	>16.56	-10.09%
2	0.03	1.50%				>17.20	
3	0.04	2.00%				>16.30	
Average		1.83%				>16.69	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.435	75.7	17.39	18.09	-7.35%
2	0.010	0.472	78.1	16.55		
3	0.010	0.510	83.4	16.34		
Average				16.76		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.33	8.25%	16.25%	-47.18%	10.24	14.39	32.26%
2	0.35	8.75%				13.39	
3	0.35	8.75%				12.85	
Average		8.58%				13.54	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.571	32.7	6.35	7.07	-12.49%
2	0.009	0.472	27.2	6.40		
3	0.009	0.542	28.4	5.81		
Average				6.19		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.07	1.75%	1.92%	-17.53%	11.39	13.90	16.77%
2	0.06	1.50%				12.87	
3	0.06	1.50%				13.13	
Average		1.58%				13.30	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.471	72.5	7.32	17.05	-66.09%
2	0.021	0.544	88.7	7.76		
3	0.021	0.533	25.3	2.26		
Average				5.78		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.29	7.25%	25.50%	-76.47%	>17.76	>19.71	8.41%
2	0.39	9.75%				>19.49	
3	0.04	1.00%				>18.56	
Average		6.00%				>19.25	

1000 HRS IN R-502/MINERAL OIL @ 260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	BROKE		BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.10	>14.44	-0.57%
2	BRITTLE	BRITTLE				>13.78	
3	BRITTLE	BRITTLE				>13.84	
Average		BRITTLE				>14.02	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	BROKE		BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>14.60	>14.64	-1.44%
2	BRITTLE	BRITTLE				>14.34	
3	BRITTLE	BRITTLE				>14.19	
Average		BRITTLE				>14.39	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	BROKE		BRITTLE	BRITTLE		BRITTLE
2			BRITTLE	BRITTLE		
3			BRITTLE	BRITTLE		
Average				BRITTLE		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	BRITTLE	BRITTLE		BRITTLE	>18.56	>19.84	-7.47%
2	BRITTLE	BRITTLE				12.26	
3	BRITTLE	BRITTLE				>19.42	
Average		BRITTLE				>17.17	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.608	107.8	17.73	18.09	-6.46%
2	0.010	0.517	84.4	16.32		
3	0.010	0.492	82.2	16.71		
Average				16.92		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.25	6.25%	16.25%	-50.26%	10.24	10.42	4.20%
2	0.35	8.75%				10.49	
3	0.37	9.25%				11.10	
Average		8.08%				10.67	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.439	23.7	6.00	7.07	-17.82%
2	0.009	0.497	28.2	6.30		
3	0.009	0.461	21.3	5.13		
Average				5.81		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.10	2.50%	1.92%	-13.19%	11.39	11.83	-0.41%
2	0.06	1.50%				12.20	
3	0.04	1.00%				10.00	
Average		1.67%				11.34	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.450	72.8	7.70	17.05	-55.19%
2	0.021	0.450	72.8	7.70		
3	0.021	0.532	84.0	7.52		
Average				7.64		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.40	10.00%	25.50%	-64.05%	>17.76	>19.82	5.42%
2	0.30	7.50%				>17.35	
3	0.40	10.00%				>19.00	
Average		9.17%				>18.72	

500 HRS IN R-502/MINERAL OIL @ 260 F
168 HRS IN R-404A/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.475	75.7	17.70	22.48	-20.77%
2	0.009	0.440	70.0	17.66		
3	0.009	0.463	75.3	18.07		
Average				17.81		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	1.59	79.50%	134.83%	-50.80%	>14.10	>14.30	2.84%
2	0.84	42.00%				>14.63	
3	1.55	77.50%				>14.57	
Average		66.33%				>14.50	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.481	78.5	16.32	19.06	-14.86%
2	0.010	0.443	71.0	16.03		
3	0.010	0.551	90.0	16.33		
Average				16.23		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	1.27	63.50%	142.83%	-56.24%	>14.60	>15.39	5.50%
2	1.21	60.50%				>16.02	
3	1.27	63.50%				>14.80	
Average		62.50%				>15.40	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.565	153.4	12.93	13.40	-8.45%
2	0.021	0.461	123.7	12.78		
3	0.023	0.513	131.5	11.10		
Average				12.27		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.44	22.00%	29.33%	-28.97%	>18.56	>19.40	-7.33%
2	0.44	22.00%				>16.18	
3	0.37	18.50%				>16.02	
Average		20.83%				>17.20	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.460	80.6	17.51	18.09	-5.60%
2	0.010	0.503	87.4	17.38		
3	0.010	0.521	85.2	16.34		
Average				17.08		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.22	5.50%	16.25%	-37.44%	10.24	13.78	32.13%
2	0.58	14.50%				13.29	
3	0.42	10.50%				13.52	
Average		10.17%				13.53	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.450	22.2	5.48	7.07	-23.28%
2	0.009	0.492	24.6	5.56		
3	0.009	0.503	23.7	5.24		
Average				5.42		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.08	2.00%	1.92%	8.51%	11.39	13.47	19.23%
2	0.09	2.25%				12.97	
3	0.08	2.00%				14.30	
Average		2.08%				13.58	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.509	166.8	15.60	17.05	-8.91%
2	0.021	0.499	160.5	15.32		
3	0.021	0.519	170.8	15.67		
Average				15.53		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.71	17.75%	25.50%	-39.22%	>17.76	>19.39	4.99%
2	0.50	12.50%				>18.60	
3	0.65	16.25%				>17.95	
Average		15.50%				>18.65	

500 HRS IN R-502/MINERAL OIL @ 260 F
168 HRS IN R-404A/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.562	93.1	18.40	22.48	-17.84%
2	0.009	0.489	83.7	19.02		
3	0.009	0.460	74.5	18.00		
Average				18.47		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	1.55	77.50%	134.83%	-36.09%	>14.10	>14.30	1.73%
2	2.07	103.50%				>14.74	
3	1.55	77.50%				>13.99	
Average		86.17%				>14.34	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.490	74.5	15.20	19.06	-18.69%
2	0.010	0.522	80.2	15.36		
3	0.010	0.475	75.7	15.93		
Average				15.50		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	1.37	68.50%	142.83%	-48.54%	>14.60	>14.39	1.10%
2	1.27	63.50%				>15.05	
3	1.77	88.50%				>14.84	
Average		73.50%				>14.76	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.409	109.1	12.70	13.40	-3.53%
2	0.021	0.506	138.3	13.02		
3	0.021	0.538	147.6	13.06		
Average				12.93		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.37	18.50%	29.33%	-32.38%	>18.56	>17.66	2.66%
2	0.40	20.00%				>19.94	
3	0.42	21.00%				>19.56	
Average		19.83%				>19.05	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.522	85.8	16.44	18.09	-4.74%
2	0.010	0.591	105.2	17.80		
3	0.010	0.500	87.3	17.46		
Average				17.23		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.50	12.50%	16.25%	-12.82%	10.24	11.59	24.09%
2	0.62	15.50%				12.97	
3	0.58	14.50%				13.56	
Average		14.17%				12.71	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.524	27.2	5.76	7.07	-23.41%
2	0.009	0.465	24.2	5.77		
3	0.009	0.497	21.1	4.72		
Average				5.41		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.11	2.75%	1.92%	21.53%	11.39	11.10	6.85%
2	0.10	2.50%				13.00	
3	0.07	1.75%				12.41	
Average		2.33%				12.17	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.582	153.0	12.52	17.05	-40.21%
2	0.021	0.464	71.9	7.38		
3	0.021	0.493	110.6	10.68		
Average				10.19		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.38	9.50%	25.50%	-68.95%	>17.76	>19.67	8.65%
2	0.39	9.75%				>18.91	
3	0.18	4.50%				>19.31	
Average		7.92%				>19.30	

500 HRS IN R-502/MINERAL OIL @ 260 F
336 HRS IN R-404A/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.440	73.3	18.51	22.48	-17.62%
2	0.009	0.450	74.5	18.40		
3	0.009	0.490	82.3	18.65		
Average				18.52		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	1.94	97.00%	134.83%	-21.51%	>14.10	>13.36	-3.48%
2	1.75	87.50%				>13.38	
3	2.66	133.00%				>14.09	
Average		105.83%				>13.61	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.550	90.8	16.50	19.06	-13.52%
2	0.010	0.492	81.2	16.50		
3	0.010	0.502	82.6	16.44		
Average				16.48		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.16	8.00%	142.83%	-94.63%	>14.60	>14.38	-0.80%
2	0.16	8.00%				>14.36	
3	0.14	7.00%				>14.71	
Average		7.67%				>14.48	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.485	130.2	12.78	13.40	-4.01%
2	0.021	0.500	136.1	12.96		
3	0.021	0.505	136.2	12.84		
Average				12.86		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.44	22.00%	29.33%	-22.72%	>18.56	>18.80	3.16%
2	0.47	23.50%				>18.89	
3	0.45	22.50%				>19.75	
Average		22.67%				>19.15	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.505	90.0	17.82	18.09	-3.39%
2	0.010	0.519	91.8	17.68		
3	0.010	0.451	76.4	16.93		
Average				17.48		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.48	12.00%	16.25%	-35.90%	10.24	12.72	22.92%
2	0.45	11.25%				12.47	
3	0.32	8.00%				12.57	
Average		10.42%				12.59	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.489	23.0	5.21	7.07	-12.39%
2	0.009	0.494	28.3	6.37		
3	0.009	0.503	31.7	7.00		
Average				6.19		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.08	2.00%	1.92%	-13.19%	11.39	12.16	0.64%
2	0.05	1.25%				10.46	
3	0.07	1.75%				11.77	
Average		1.67%				11.46	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.498	171.3	16.38	17.05	-4.75%
2	0.021	0.494	166.4	16.04		
3	0.021	0.503	172.2	16.30		
Average				16.24		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.60	15.00%	25.50%	-42.48%	>17.76	>18.11	0.28%
2	0.58	14.50%				>17.73	
3	0.58	14.50%				>17.59	
Average		14.67%				>17.81	

500 HRS IN R-502/MINERAL OIL @ 260 F
336 HRS IN R-404A/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.495	79.3	17.80	22.48	-20.42%
2	0.009	0.492	80.1	18.09		
3	0.009	0.508	81.3	17.78		
Average				17.89		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.91	45.50%	134.83%	-59.46%	>14.10	>14.60	1.37%
2	1.10	55.00%				>14.27	
3	1.27	63.50%				>14.01	
Average		54.67%				>14.29	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.503	88.2	17.52	19.06	-8.53%
2	0.010	0.499	87.1	17.44		
3	0.010	0.504	87.4	17.33		
Average				17.43		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	142.83%	-95.10%	>14.60	>13.40	-3.22%
2	0.14	7.00%				>14.40	
3	0.14	7.00%				>14.59	
Average		7.00%				>14.13	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.499	133.4	12.73	13.40	-2.95%
2	0.021	0.483	130.9	12.91		
3	0.021	0.504	141.6	13.38		
Average				13.00		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.35	17.50%	29.33%	-34.08%	>18.56	>19.82	5.94%
2	0.39	19.50%				>19.20	
3	0.42	21.00%				>19.97	
Average		19.33%				>19.66	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.505	89.4	17.70	18.09	-1.86%
2	0.010	0.465	83.7	18.00		
3	0.010	0.487	85.5	17.56		
Average				17.75		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.38	9.50%	16.25%	-40.00%	10.24	10.00	7.03%
2	0.41	10.25%				11.59	
3	0.38	9.50%				11.29	
Average		9.75%				10.96	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.499	28.6	6.36	7.07	-15.86%
2	0.009	0.433	23.1	5.93		
3	0.009	0.472	23.6	5.56		
Average				5.95		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.07	1.75%	1.92%	-17.53%	11.39	12.51	7.11%
2	0.06	1.50%				12.16	
3	0.06	1.50%				11.93	
Average		1.58%				12.20	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.499	170.4	16.26	17.05	-7.96%
2	0.021	0.495	162.1	15.59		
3	0.021	0.504	161.1	15.22		
Average				15.69		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.51	12.75%	25.50%	-62.42%	>17.76	>18.58	2.74%
2	0.37	9.25%				>17.44	
3	0.27	6.75%				>18.72	
Average		9.58%				>18.25	

500 HRS IN R-502/MINERAL OIL @ 260 F
500 HRS IN R-404A/POLYOLESTER @260 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.453	73.2	17.96	22.48	-21.44%
2	0.009	0.494	72.8	16.38		
3	0.009	0.512	85.9	18.64		
Average				17.66		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.90	45.00%	134.83%	-59.46%	>14.10	>14.01	2.32%
2	0.11	5.50%				>14.67	
3	2.27	113.50%				>14.60	
Average		54.67%				>14.43	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.487	81.6	16.75	19.06	-12.06%
2	0.010	0.495	82.8	16.72		
3	0.010	0.499	83.9	16.81		
Average				16.76		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	142.83%	-95.10%	>14.60	>14.37	0.07%
2	0.14	7.00%				>14.26	
3	0.14	7.00%				>15.20	
Average		7.00%				>14.61	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.495	132.3	12.73	13.40	-4.88%
2	0.021	0.404	104.2	12.28		
3	0.021	0.504	140.0	13.23		
Average				12.75		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.48	24.00%	29.33%	-28.40%	>18.56	>19.35	-3.54%
2	0.34	17.00%				>18.30	
3	0.44	22.00%				>16.06	
Average		21.00%				>17.90	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.496	93.9	18.92	18.09	-0.42%
2	0.010	0.505	86.3	17.09		
3	0.010	0.516	93.1	18.03		
Average				18.01		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.55	13.75%	16.25%	-27.18%	10.24	13.70	30.27%
2	0.40	10.00%				13.33	
3	0.47	11.75%				12.99	
Average		11.83%				13.34	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.499	27.4	6.09	7.07	-14.43%
2	0.009	0.514	27.5	5.93		
3	0.009	0.507	28.0	6.13		
Average				6.05		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.07	1.75%	1.92%	-8.85%	11.39	12.83	11.71%
2	0.07	1.75%				12.82	
3	0.07	1.75%				12.52	
Average		1.75%				12.72	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.500	163.8	15.60	17.05	-17.22%
2	0.021	0.533	120.4	10.76		
3	0.021	0.431	144.7	15.99		
Average				14.11		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.37	9.25%	25.50%	-57.84%	>17.76	>17.73	4.99%
2	0.39	9.75%				>19.10	
3	0.53	13.25%				>19.11	
Average		10.75%				>18.65	

500 HRS IN R-502/MINERAL OIL @ 260 F
500 HRS IN R-404A/POLYOLESTER @260 F
24 HR BAKE @ 302 F

Insulation Type: Polyester Film

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.501	81.9	18.15	22.48	-19.74%
2	0.009	0.470	75.4	17.83		
3	0.009	0.490	80.1	18.15		
Average				18.04		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	134.83%	-94.44%	>14.10	>14.55	2.67%
2	0.16	8.00%				>14.85	
3	0.15	7.50%				>14.03	
Average		7.50%				>14.48	

Insulation Type: Polyester Film,Low Oligomer

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.450	74.9	16.64	19.06	-13.02%
2	0.010	0.548	89.9	16.41		
3	0.010	0.489	81.6	16.69		
Average				16.58		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.14	7.00%	142.83%	-94.87%	>14.60	>14.73	4.68%
2	0.16	8.00%				>15.89	
3	0.14	7.00%				>15.23	
Average		7.33%				>15.28	

Insulation Type: Polyester Composite- Dacron-Mylar-Dacron

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.513	137.0	12.72	13.40	-2.65%
2	0.021	0.495	136.3	13.11		
3	0.021	0.495	138.3	13.30		
Average				13.04		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.39	19.50%	29.33%	-24.42%	>18.56	>17.17	-4.31%
2	0.45	22.50%				>18.93	
3	0.49	24.50%				>17.18	
Average		22.17%				>17.76	

Insulation Type: Aramid Fiber Mat- Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.010	0.493	85.9	17.42	18.09	-9.52%
2	0.010	0.577	93.4	16.19		
3	0.010	0.445	69.0	15.49		
Average				16.37		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.54	13.50%	16.25%	-42.05%	10.24	11.76	10.90%
2	0.32	8.00%				9.52	
3	0.27	6.75%				12.79	
Average		9.42%				11.36	

Insulation Type: Aramid Fiber, Mica Mat- Nomex Mica

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.009	0.490	26.1	5.92	7.07	-16.65%
2	0.009	0.568	28.2	5.52		
3	0.009	0.492	27.7	6.24		
Average				5.89		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.07	1.75%	1.92%	-8.85%	11.39	12.74	12.73%
2	0.06	1.50%				12.92	
3	0.08	2.00%				12.86	
Average		1.75%				12.84	

Insulation Type: Aramid Mat, Polyester Film Composite- Nomex-Mylar-Nomex

Sample #	Sample Width (Inches)	Sample Thickness (Inches)	Break Load (Pounds)	Tensile Strength (ksi)	Average Tensile Strength (Unexposed)	Change in Tensile Strenth From Unexposed
1	0.021	0.520	119.5	10.94	17.05	-16.66%
2	0.021	0.507	166.2	15.61		
3	0.021	0.514	173.5	16.07		
Average				14.21		

	Stretch (Inches)	Experimental Elongation	Average Elongations (Unexposed)	Change in Elongation from Unexposed	Average Dielectric Strengths (Unexposed)	Experimental Dielectric Strengths (Kilovolts)	Dielectric Change
1	0.17	4.25%	25.50%	-68.63%	>17.76	>18.70	2.68%
2	0.45	11.25%				>18.76	
3	0.34	8.50%				>17.25	
Average		8.00%				>18.24	

500 HRS IN R-502 / MINERAL OIL @ 260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	36.55	
A	2	37.20	38.55	-9.48%
	3	29.70	40.45	
	Average	42.55	38.52	
Tape	1	441.60	419.10	
B	2	424.20	314.50	-16.56%
	3	490.70	398.20	
	Average	452.17	377.27	
Cord	1	28.05	27.75	
C	2	34.85	32.50	-12.28%
	3	40.50	30.45	
	Average	34.47	30.23	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from unexposed Elongation
Tape	1	0.64	32.00%	0.22	11.00%	
A	2	0.23	11.50%	0.32	16.00%	-24.41%
	3	0.40	20.00%	0.42	21.00%	
	Average	0.42	21.17%	0.32	16.00%	
Tape	1	0.11	5.50%	0.10	5.00%	
B	2	0.11	5.50%	0.07	3.50%	-17.65%
	3	0.12	6.00%	0.11	5.50%	
	Average	0.11	5.67%	0.09	4.67%	
Cord	1	0.62	31.00%	0.40	20.00%	
C	2	0.18	9.00%	0.51	25.50%	34.00%
	3	0.20	10.00%	0.43	21.50%	
	Average	0.33	16.67%	0.45	22.33%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

1000 HRS IN R-502/MINERAL OIL @ 260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	24.30	
A	2	37.20	27.92	-40.43%
	3	29.70	23.82	
	Average	42.55	25.35	
Tape	1	441.60	361.20	
B	2	424.20	327.50	-33.16%
	3	490.70	218.00	
	Average	452.17	302.23	
Cord	1	28.05	22.30	
C	2	34.85	25.30	-36.68%
	3	40.50	17.87	
	Average	34.47	21.82	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from unexposed Elongation
Tape	1	0.64	32.00%	0.09	4.50%	
A	2	0.23	11.50%	0.07	3.50%	-82.68%
	3	0.40	20.00%	0.06	3.00%	
	Average	0.42	21.17%	0.07	3.67%	
Tape	1	0.11	5.50%	0.20	10.00%	
B	2	0.11	5.50%	0.12	6.00%	17.65%
	3	0.12	6.00%	0.08	4.00%	
	Average	0.11	5.67%	0.13	6.67%	
Cord	1	0.62	31.00%	0.32	16.00%	
C	2	0.18	9.00%	0.36	18.00%	-4.00%
	3	0.20	10.00%	0.28	14.00%	
	Average	0.33	16.67%	0.32	16.00%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

500 HRS IN R-502/MINERAL OIL @ 260 F
168 HRS IN R-404A/POLYOLESTER @260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	39.50	
A	2	37.20	40.07	-6.37%
	3	29.70	39.95	
	Average	42.55	39.84	
Tape	1	441.60	448.70	
B	2	424.20	470.00	-1.53%
	3	490.70	417.00	
	Average	452.17	445.23	
Cord	1	28.05	28.55	
C	2	34.85	26.37	-20.56%
	3	40.50	27.22	
	Average	34.47	27.38	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from unexposed Elongation
Tape	1	0.64	32.00%	0.28	14.00%	
A	2	0.23	11.50%	0.29	14.50%	-31.50%
	3	0.40	20.00%	0.30	15.00%	
	Average	0.42	21.17%	0.29	14.50%	
Tape	1	0.11	5.50%	0.15	7.50%	
B	2	0.11	5.50%	0.12	6.00%	8.82%
	3	0.12	6.00%	0.10	5.00%	
	Average	0.11	5.67%	0.12	6.17%	
Cord	1	0.62	31.00%	0.29	14.50%	
C	2	0.18	9.00%	0.31	15.50%	-7.00%
	3	0.20	10.00%	0.33	16.50%	
	Average	0.33	16.67%	0.31	15.50%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

500 HRS IN R-502/MINERAL OIL @ 260 F
336 HRS IN R-404A/POLYOLESTER @260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	39.00	
A	2	37.20	39.90	-18.96%
	3	29.70	24.55	
	Average	42.55	34.48	
Tape	1	441.60	375.00	
B	2	424.20	348.70	-22.23%
	3	490.70	331.20	
	Average	452.17	351.63	
Cord	1	28.05	28.90	
C	2	34.85	21.85	-24.84%
	3	40.50	26.97	
	Average	34.47	25.91	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from unexposed Elongation
Tape	1	0.64	32.00%	0.34	17.00%	
A	2	0.23	11.50%	0.31	15.50%	-29.13%
	3	0.40	20.00%	0.25	12.50%	
	Average	0.42	21.17%	0.30	15.00%	
Tape	1	0.11	5.50%	0.09	4.50%	
B	2	0.11	5.50%	0.08	4.00%	-29.41%
	3	0.12	6.00%	0.07	3.50%	
	Average	0.11	5.67%	0.08	4.00%	
Cord	1	0.62	31.00%	0.42	21.00%	
C	2	0.18	9.00%	0.40	20.00%	22.00%
	3	0.20	10.00%	0.40	20.00%	
	Average	0.33	16.67%	0.41	20.33%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

500 HRS IN R-502/MINERAL OIL @ 260 F
500 HRS IN R-404A/POLYOLESTER @260 F

Tape Tie Cords	Sample #	Unexposed Break Load (lbs.)	Experimental Breakload (lbs.)	Change in Breakload Strength
Tape	1	60.75	38.29	
A	2	37.20	40.15	-8.02%
	3	29.70	38.97	
	Average	42.55	39.14	
Tape	1	441.60	239.50	
B	2	424.20	421.00	-20.74%
	3	490.70	414.70	
	Average	452.17	358.40	
Cord	1	28.05	30.10	
C	2	34.85	33.20	-7.23%
	3	40.50	32.62	
	Average	34.47	31.97	

		Unexposed Stretch (Inches)	Unexposed Elongation	Experimental Stretch (Inches)	Experimental Elongation	Change from unexposed Elongation
Tape	1	0.64	32.00%	0.29	14.50%	
A	2	0.23	11.50%	0.32	16.00%	-30.71%
	3	0.40	20.00%	0.27	13.50%	
	Average	0.42	21.17%	0.29	14.67%	
Tape	1	0.11	5.50%	0.09	4.50%	
B	2	0.11	5.50%	0.09	4.50%	-17.65%
	3	0.12	6.00%	0.10	5.00%	
	Average	0.11	5.67%	0.09	4.67%	
Cord	1	0.62	31.00%	0.41	20.50%	
C	2	0.18	9.00%	0.41	20.50%	27.00%
	3	0.20	10.00%	0.45	22.50%	
	Average	0.33	16.67%	0.42	21.17%	

Tape A is heat shrinkable braided polyester

Tape B is braided polyester, acrylic binder

Cord C is polyester tie cord

500 HRS IN R-502/MINERAL OIL @ 260 F

Magnet Wire Type	Unexposed Voltage Withstand	Experimental Voltage Withstand	Appearence Change
Wire Type A	Pass	Pass	None
Wire Type B	Pass	Pass	None

1000 HRS IN R-502/MINERAL OIL @ 260 F

Wire Type A	Pass	Pass	None
Wire Type B	Pass	Pass	None

500 HRS IN R-502/MINERAL OIL @ 260 F
168 HRS IN R-404A/POLYOLESTER @260 F

Wire Type A	Pass	Pass	None
Wire Type B	Pass	Pass	None

500 HRS IN R-502/MINERAL OIL @ 260 F
336 HRS IN R-404A/POLYOLESTER @260 F

Wire Type A	Pass	Pass	None
Wire Type B	Pass	Pass	None

500 HRS IN R-502/MINERAL OIL @ 260 F
500 HRS IN R-404A/POLYOLESTER @260 F

Wire Type A	Pass	Pass	None
Wire Type B	Pass	Pass	None

Wire Type A is Polyester base with amide imide overcoat

Wire Type B is Esterimide base with amide imide overcoat