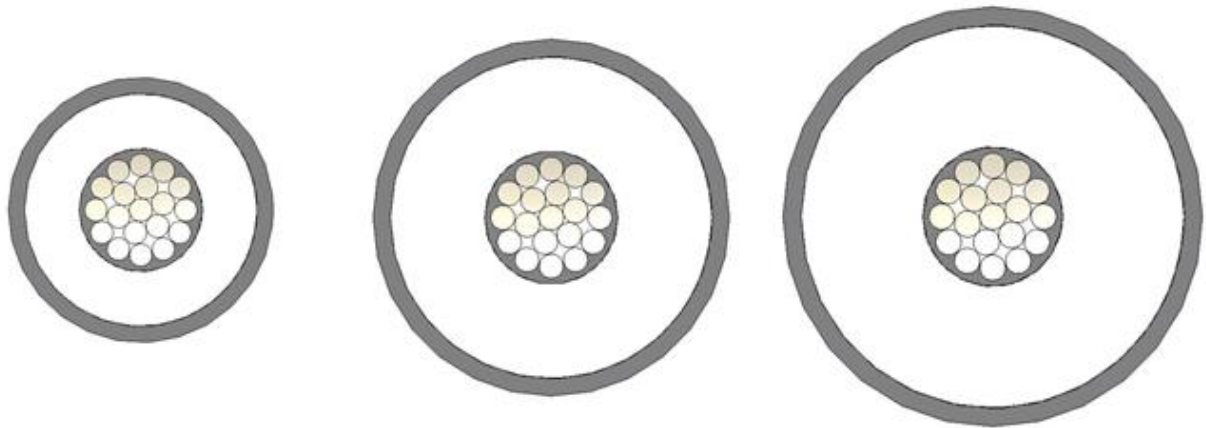


Rejuvenation Instructions

#301 – The Cable Table – UPR



This NRI covers the following:

- Finding the extruded conductor shield cable in the table that most closely matches the cable to be injected.
- The table provides detailed cable geometry data.
- If the cable is not found in the table, contact Novinium Engineering.

Trademarks: <http://www.novinium.com/trademarks/>

Patents: <http://www.novinium.com/patents/>



WARNING: It is dangerous working around energized high-voltage systems, pressurized systems, and chemicals. Always work in accordance to the Novinium Field Operations Safety Handbook (FOSH) or other local governing safety standards.

Table of Contents

XL for Small Cables.....	2
XLe for Small Cables.....	4
iDMDB for Small Cables.....	6
DMDB for Large Cables.....	8
iDMDB for Large Cables.....	10

Cablecure XL - Small Diameter Cables (URD)

Cable Description		Conductor			Conductor Shield	Insulation		Insulation Shield		Soak	3" Tank (in./1,000ft)			4" Tank (in./1,000ft)			Weight
		AWG, Compression	Insulation Rating, %, mils	# of Strands		Diameter	Strand Dia.	Material	Diameter		Material	Diameter	Days	Injection	Soak	Total	
#2, Compressed	15kV, 100%, 175mil	7	0.283	0.097	Extruded	XLPE	0.692	Extruded	0.752	60	3.6	20.0	23.6	2.0	11.1	13.1	5.5
#2, Compressed	15kV, 133%, 220mil	7	0.283	0.097	Extruded	XLPE	0.764	Extruded	.864	75	3.6	20.0	23.6	2.0	11.1	13.1	5.5
#2, Compressed	25kV, 100%, 260mil	7	0.283	0.097	Extruded	XLPE	0.844	Extruded	.944	90	3.6	21.8	25.4	2.0	12.1	14.1	5.9
#2, Compressed	35kV, 100%, 345mil	7	0.283	0.097	Extruded	XLPE	1.014	Extruded	1.114	115	3.6	25.6	29.2	2.0	14.2	16.2	6.8
#1, Compressed	15kV, 100%, 175mil	19	0.322	0.066	Extruded	XLPE	0.712	Extruded	0.812	60	15.3	19.3	34.6	8.5	10.7	19.2	8.3
#1, Compressed	15kV, 133%, 220mil	19	0.322	0.066	Extruded	XLPE	0.802	Extruded	0.902	75	15.3	20.5	35.8	8.5	11.4	19.9	8.6
#1, Compressed	25kV, 100%, 260mil	19	0.322	0.066	Extruded	XLPE	0.882	Extruded	0.982	90	15.3	22.5	37.8	8.5	12.5	21.0	9.0
#1, Compressed	35kV, 100%, 345mil	19	0.322	0.066	Extruded	XLPE	1.052	Extruded	1.152	115	15.3	26.8	42.1	8.5	14.9	23.4	10.0
1/0, Compressed	15kV, 100%, 175mil	19	0.364	0.075	Extruded	XLPE	0.754	Extruded	.854	60	18.9	21.8	40.7	10.5	12.1	22.6	9.8
1/0, Compressed	15kV, 133%, 220mil	19	0.364	0.075	Extruded	XLPE	0.864	Extruded	.940	75	19.6	23.0	42.7	10.9	12.8	23.7	10.2
1/0, Compressed	25kV, 100%, 260mil	19	0.364	0.075	Extruded	XLPE	0.924	Extruded	1.024	90	18.9	25.6	44.5	10.5	14.2	24.7	10.6
1/0, Compressed	35kV, 100%, 345mil	19	0.364	0.075	Extruded	XLPE	1.094	Extruded	1.194	115	18.9	29.9	48.8	10.5	16.6	27.1	11.6
2/0, Compressed	15kV, 100%, 175mil	19	0.407	0.084	Extruded	XLPE	.797	Extruded	.897	60	23.9	24.8	48.8	13.3	13.8	27.1	11.7
2/0, Compressed	15kV, 133%, 220mil	19	0.407	0.084	Extruded	XLPE	.887	Extruded	.987	75	23.9	26.8	50.8	13.3	14.9	28.2	12.2
2/0, Compressed	25kV, 100%, 260mil	19	0.407	0.084	Extruded	XLPE	.967	Extruded	1.067	90	23.9	28.6	52.6	13.3	15.9	29.2	12.6
2/0, Compressed	35kV, 100%, 345mil	19	0.407	0.084	Extruded	XLPE	1.137	Extruded	1.237	115	23.9	33.7	57.6	13.3	18.7	32.0	13.7
3/0, Compressed	15kV, 100%, 175mil	19	0.456	0.094	Extruded	XLPE	.846	Extruded	.946	60	30.1	28.6	58.7	16.7	15.9	32.6	14.2
3/0, Compressed	15kV, 133%, 220mil	19	0.456	0.094	Extruded	XLPE	.936	Extruded	1.036	75	30.1	30.6	60.7	16.7	17.0	33.7	14.6
3/0, Compressed	25kV, 100%, 260mil	19	0.456	0.094	Extruded	XLPE	1.016	Extruded	1.116	90	30.1	32.9	63.0	16.7	18.3	35.0	15.2

Cablecure XL - Small Diameter Cables (URD)

Cable Description		Conductor			Conductor Shield	Insulation		Insulation Shield		Soak	3" Tank (in./1,000ft)			4" Tank (in./1,000ft)			Weight
		AWG, Compression	Insulation Rating, %, mils	# of Strands		Diameter	Strand Dia.	Material	Diameter		Material	Diameter	Days	Injection	Soak	Total	
3/0, Compressed	35kV, 100%, 345mil	19	0.456	0.094	Extruded	XLPE	1.186	Extruded	1.286	115	30.1	37.4	67.5	16.7	20.8	37.5	16.2

Cablecure XLe - Small Diameter Cables (URD)

Cable Description		Conductor			Conductor Shield	Insulation		Insulation Shield		3" Tank	4" Tank	Weight
AWG, Compression	Insulation Rating, %, mils	# of Strands	Diameter	Strand Dia.	Material	Material	Diameter	Material	Diameter	Injection (in./1000ft)	Injection (in./1000ft)	Injection (lbs/1000ft)
#2, Compressed	15kV, 100%, 175mil	7	0.283	0.097	Extruded	XLPE	0.692	Extruded	0.752	3.6	2.0	0.8
#2, Compressed	15kV, 133%, 220mil	7	0.283	0.097	Extruded	XLPE	0.764	Extruded	.864	3.6	2.0	0.8
#2, Compressed	25kV, 100%, 260mil	7	0.283	0.097	Extruded	XLPE	0.844	Extruded	.944	3.6	2.0	0.8
#2, Compressed	35kV, 100%, 345mil	7	0.283	0.097	Extruded	XLPE	1.014	Extruded	1.114	3.6	2.0	0.8
#1, Compressed	15kV, 100%, 175mil	19	0.322	0.066	Extruded	XLPE	0.712	Extruded	0.812	15.3	8.5	3.3
#1, Compressed	15kV, 133%, 220mil	19	0.322	0.066	Extruded	XLPE	0.802	Extruded	0.902	15.3	8.5	3.3
#1, Compressed	25kV, 100%, 260mil	19	0.322	0.066	Extruded	XLPE	0.882	Extruded	0.982	15.3	8.5	3.3
#1, Compressed	35kV, 100%, 345mil	19	0.322	0.066	Extruded	XLPE	1.052	Extruded	1.152	15.3	8.5	3.3
1/0, Compressed	15kV, 100%, 175mil	19	0.364	0.075	Extruded	XLPE	0.754	Extruded	.854	18.9	10.5	4.0
1/0, Compressed	15kV, 133%, 220mil	19	0.364	0.075	Extruded	XLPE	0.864	Extruded	.940	19.6	10.9	4.2
1/0, Compressed	25kV, 100%, 260mil	19	0.364	0.075	Extruded	XLPE	0.924	Extruded	1.024	18.9	10.5	4.0
1/0, Compressed	35kV, 100%, 345mil	19	0.364	0.075	Extruded	XLPE	1.094	Extruded	1.194	18.9	10.5	4.0
2/0, Compressed	15kV, 100%, 175mil	19	0.407	0.084	Extruded	XLPE	.797	Extruded	.897	23.9	13.3	5.1
2/0, Compressed	15kV, 133%, 220mil	19	0.407	0.084	Extruded	XLPE	.887	Extruded	.987	23.9	13.3	5.1
2/0, Compressed	25kV, 100%, 260mil	19	0.407	0.084	Extruded	XLPE	.967	Extruded	1.067	23.9	13.3	5.1
2/0, Compressed	35kV, 100%, 345mil	19	0.407	0.084	Extruded	XLPE	1.137	Extruded	1.237	23.9	13.3	5.1
3/0, Compressed	15kV, 100%, 175mil	19	0.456	0.094	Extruded	XLPE	.846	Extruded	.946	30.1	16.7	6.4
3/0, Compressed	15kV, 133%, 220mil	19	0.456	0.094	Extruded	XLPE	.936	Extruded	1.036	30.1	16.7	6.4

Cablecure XLe - Small Diameter Cables (URD)

Cable Description		Conductor			Conductor Shield	Insulation		Insulation Shield		3" Tank	4" Tank	Weight
		AWG, Compression	Insulation Rating, %, mils	# of Strands	Diameter	Strand Dia.	Material	Material	Diameter	Material	Diameter	Injection (in./1000ft)
3/0, Compressed	25kV, 100%, 260mil	19	0.456	0.094	Extruded	XLPE	1.016	Extruded	1.116	30.1	16.7	6.4
3/0, Compressed	35kV, 100%, 345mil	19	0.456	0.094	Extruded	XLPE	1.186	Extruded	1.286	30.1	16.7	6.4

Cablecure iDMDB - Small Diameter Cables (URD)

Cable Description		Conductor			Conductor Shield	Insulation		Insulation Shield		Soak	3" Tank (in./1,000ft)			4" Tank (in./1,000ft)			Weight
		AWG, Compression	Insulation Rating, %, mils	# of Strands		Diameter	Strand Dia.	Material	Diameter		Material	Diameter	Days	Injection	Soak	Total	
#2, Compressed	15kV, 100%, 175mil	7	0.283	0.097	Extruded	XLPE	0.692	Extruded	0.752	60	3.6	15.8	19.4	2.0	8.8	10.8	4.1
#2, Compressed	15kV, 133%, 220mil	7	0.283	0.097	Extruded	XLPE	0.764	Extruded	.864	75	3.6	16.9	20.5	2.0	9.4	11.4	4.4
#2, Compressed	25kV, 100%, 260mil	7	0.283	0.097	Extruded	XLPE	0.844	Extruded	.944	90	3.6	18.4	22.0	2.0	10.2	12.2	4.7
#2, Compressed	35kV, 100%, 345mil	7	0.283	0.097	Extruded	XLPE	1.014	Extruded	1.114	115	3.6	21.8	25.4	2.0	12.1	14.1	5.4
#1, Compressed	15kV, 100%, 175mil	19	0.322	0.066	Extruded	XLPE	0.712	Extruded	0.812	60	15.3	14.2	29.5	8.5	7.9	16.4	6.3
#1, Compressed	15kV, 133%, 220mil	19	0.322	0.066	Extruded	XLPE	0.802	Extruded	0.902	75	15.3	15.7	31.0	8.5	8.7	17.2	6.6
#1, Compressed	25kV, 100%, 260mil	19	0.322	0.066	Extruded	XLPE	0.882	Extruded	0.982	90	15.3	17.1	32.4	8.5	9.5	18.0	6.9
#1, Compressed	35kV, 100%, 345mil	19	0.322	0.066	Extruded	XLPE	1.052	Extruded	1.152	115	15.3	20.5	35.8	8.5	11.4	19.9	7.7
1/0, Compressed	15kV, 100%, 175mil	19	0.364	0.075	Extruded	XLPE	0.754	Extruded	.854	60	18.9	16.4	35.3	10.5	9.1	19.6	7.5
1/0, Compressed	15kV, 133%, 220mil	19	0.364	0.075	Extruded	XLPE	0.864	Extruded	.940	75	18.9	18.5	37.4	10.5	10.3	21.2	8.1
1/0, Compressed	25kV, 100%, 260mil	19	0.364	0.075	Extruded	XLPE	0.924	Extruded	1.024	90	18.9	19.4	38.3	10.5	10.8	21.3	8.2
1/0, Compressed	35kV, 100%, 345mil	19	0.364	0.075	Extruded	XLPE	1.094	Extruded	1.194	115	18.9	23.0	41.9	10.5	12.8	23.3	9.0
2/0, Compressed	15kV, 100%, 175mil	19	0.407	0.084	Extruded	XLPE	.797	Extruded	.897	60	23.9	18.5	42.5	13.3	10.3	23.6	9.1
2/0, Compressed	15kV, 133%, 220mil	19	0.407	0.084	Extruded	XLPE	.887	Extruded	.987	75	23.9	20.2	44.1	13.3	11.2	24.5	9.4
2/0, Compressed	25kV, 100%, 260mil	19	0.407	0.084	Extruded	XLPE	.967	Extruded	1.067	90	23.9	21.8	45.7	13.3	12.1	25.4	9.8
2/0, Compressed	35kV, 100%, 345mil	19	0.407	0.084	Extruded	XLPE	1.137	Extruded	1.237	115	23.9	25.6	49.5	13.3	14.2	27.5	10.6
3/0, Compressed	15kV, 100%, 175mil	19	0.456	0.094	Extruded	XLPE	.846	Extruded	.946	60	30.1	21.2	51.3	16.7	11.8	28.5	10.9
3/0, Compressed	15kV, 133%, 220mil	19	0.456	0.094	Extruded	XLPE	.936	Extruded	1.036	75	30.1	22.9	52.9	16.7	12.7	29.4	11.3
3/0, Compressed	25kV, 100%, 260mil	19	0.456	0.094	Extruded	XLPE	1.016	Extruded	1.116	90	30.1	24.5	54.5	16.7	13.6	30.3	11.7

Cablecure iDMDB - Small Diameter Cables (URD)

Cable Description		Conductor			Conductor Shield	Insulation		Insulation Shield		Soak	3" Tank (in./1,000ft)			4" Tank (in./1,000ft)			Weight
AWG, Compression	Insulation Rating, %, mils	# of Strands	Diameter	Strand Dia.	Material	Material	Diameter	Material	Diameter	Days	Injection	Soak	Total	Injection	Soak	Total	Total lbs.
3/0, Compressed	35kV, 100%, 345mil	19	0.456	0.094	Extruded	XLPE	1.186	Extruded	1.286	115	30.1	28.6	58.7	16.7	15.9	32.6	12.5

Cablecure DMDB - Large Diameter Cables (Feeder)

Cable Description		Conductor			Conductor Shield	Insulation		Insulation Shield		3" Tank Injection (in./1000ft)	4" Tank Injection (in./1000ft)	Weight Injection (lbs/1000ft)
		AWG, Compression	Insulation Rating, %, mils	# of Strands		Diameter	Strand Dia.	Material	Diameter			
4/0, Compressed	15kV, 100%, 175mil	19	0.514	0.106	Extruded	XLPE	0.926	Extruded	1.010	41.2	22.9	8.8
4/0, Compressed	15kV, 133%, 220mil	19	0.512	0.106	Extruded	XLPE	0.992	Extruded	1.027	41.2	22.9	8.8
4/0, Compressed	25kV, 100%, 260mil	19	0.512	0.106	Extruded	XLPE	1.072	Extruded	1.092	41.2	22.9	8.8
4/0, Compressed	35kV, 100%, 345mil	19	0.512	0.106	Extruded	XLPE	1.242	Extruded	1.342	41.2	22.9	8.8
250, Compressed	15kV, 100%, 175mil	37	0.558	0.082	Extruded	XLPE	0.948	Extruded	1.048	56.7	31.5	12.1
250, Compressed	15kV, 133%, 220mil	37	0.558	0.082	Extruded	XLPE	1.038	Extruded	1.138	56.7	31.5	12.1
250, Compressed	25kV, 100%, 260mil	37	0.558	0.082	Extruded	XLPE	1.118	Extruded	1.218	56.7	31.5	12.1
250, Compressed	35kV, 100%, 345mil	37	0.558	0.082	Extruded	XLPE	1.288	Extruded	1.388	56.7	31.5	12.1
350, Compressed	15kV, 100%, 175mil	37	0.661	0.097	Extruded	XLPE	1.051	Extruded	1.151	80.1	44.5	17.1
350, Compressed	15kV, 133%, 220mil	37	0.661	0.097	Extruded	XLPE	1.141	Extruded	1.241	80.1	44.5	17.1
350, Compressed	25kV, 100%, 260mil	37	0.661	0.097	Extruded	XLPE	1.221	Extruded	1.321	80.1	44.5	17.1
350, Compressed	35kV, 100%, 345mil	37	0.661	0.097	Extruded	XLPE	1.391	Extruded	1.491	80.1	44.5	17.1

Cablecure DMDB - Large Diameter Cables (Feeder)

Cable Description		Conductor			Conductor Shield	Insulation		Insulation Shield		3" Tank Injection (in./1000ft)	4" Tank Injection (in./1000ft)	Weight Injection (lbs/1000ft)
		AWG, Compression	Insulation Rating, %, mils	# of Strands		Diameter	Strand Dia.	Material	Diameter			
500, Compressed	15kV, 100%, 175mil	37	0.789	0.116	Extruded	XLPE	1.196	Extruded	1.222	112.9	62.7	24.1
500, Compressed	15kV, 133%, 220mil	37	0.789	0.116	Extruded	XLPE	1.269	Extruded	1.369	112.9	62.7	24.1
500, Compressed	25kV, 100%, 260mil	37	0.789	0.116	Extruded	XLPE	1.349	Extruded	1.449	112.9	62.7	24.1
500, Compressed	35kV, 100%, 345mil	37	0.789	0.116	Extruded	XLPE	1.519	Extruded	1.619	112.9	62.7	24.1
750, Compressed	15kV, 100%, 175mil	61	0.955	0.111	Extruded	XLPE	1.398	Extruded	1.498	165.8	92.1	35.4
750, Compressed	15kV, 133%, 220mil	61	0.955	0.111	Extruded	XLPE	1.51	Extruded	1.63	165.8	92.1	35.4
750, Compressed	25kV, 100%, 260mil	61	0.955	0.111	Extruded	XLPE	1.546	Extruded	1.696	165.8	92.1	35.4
750, Compressed	35kV, 100%, 345mil	61	0.955	0.111	Extruded	XLPE	1.698	Extruded	1.798	165.8	92.1	35.4
1000, Compressed	15kV, 100%, 175mil	61	1.117	0.128	Extruded	XLPE	1.529	Extruded	1.615	255.1	141.7	54.5
1000, Compressed	15kV, 133%, 220mil	61	1.117	0.128	Extruded	XLPE	1.597	Extruded	1.697	255.1	141.7	54.5
1000, Compressed	25kV, 100%, 260mil	61	1.117	0.128	Extruded	XLPE	1.677	Extruded	1.777	255.1	141.7	54.5
1000, Compressed	35kV, 100%, 345mil	61	1.117	0.128	Extruded	XLPE	1.847	Extruded	1.947	255.1	141.7	54.5

Cablecure iDMDB - Large Diameter Cables (Feeder)

Cable Description		Conductor			Conductor Shield	Insulation		Insulation Shield		3" Tank Injection (in./1000ft)	4" Tank Injection (in./1000ft)	Weight Injection (lbs/1000ft)
		AWG, Compression	Insulation Rating, %, mils	# of Strands		Diameter	Strand Dia.	Material	Diameter			
4/0, Compressed	15kV, 100%, 175mil	19	0.514	0.106	Extruded	XLPE	0.926	Extruded	1.010	41.2	22.9	8.8
4/0, Compressed	15kV, 133%, 220mil	19	0.512	0.106	Extruded	XLPE	0.992	Extruded	1.027	41.2	22.9	8.8
4/0, Compressed	25kV, 100%, 260mil	19	0.512	0.106	Extruded	XLPE	1.072	Extruded	1.092	41.2	22.9	8.8
4/0, Compressed	35kV, 100%, 345mil	19	0.512	0.106	Extruded	XLPE	1.242	Extruded	1.342	41.2	22.9	8.8
250, Compressed	15kV, 100%, 175mil	37	0.558	0.082	Extruded	XLPE	0.948	Extruded	1.048	56.7	31.5	12.1
250, Compressed	15kV, 133%, 220mil	37	0.558	0.082	Extruded	XLPE	1.038	Extruded	1.138	56.7	31.5	12.1
250, Compressed	25kV, 100%, 260mil	37	0.558	0.082	Extruded	XLPE	1.118	Extruded	1.218	56.7	31.5	12.1
250, Compressed	35kV, 100%, 345mil	37	0.558	0.082	Extruded	XLPE	1.288	Extruded	1.388	56.7	31.5	12.1
350, Compressed	15kV, 100%, 175mil	37	0.661	0.097	Extruded	XLPE	1.051	Extruded	1.151	80.1	44.5	17.1
350, Compressed	15kV, 133%, 220mil	37	0.661	0.097	Extruded	XLPE	1.141	Extruded	1.241	80.1	44.5	17.1
350, Compressed	25kV, 100%, 260mil	37	0.661	0.097	Extruded	XLPE	1.221	Extruded	1.321	80.1	44.5	17.1
350, Compressed	35kV, 100%, 345mil	37	0.661	0.097	Extruded	XLPE	1.391	Extruded	1.491	80.1	44.5	17.1

Cablecure iDMDB - Large Diameter Cables (Feeder)

Cable Description		Conductor			Conductor Shield	Insulation		Insulation Shield		3" Tank Injection (in./1000ft)	4" Tank Injection (in./1000ft)	Weight Injection (lbs/1000ft)
		AWG, Compression	Insulation Rating, %, mils	# of Strands		Diameter	Strand Dia.	Material	Diameter			
500, Compressed	15kV, 100%, 175mil	37	0.789	0.116	Extruded	XLPE	1.196	Extruded	1.222	112.9	62.7	24.1
500, Compressed	15kV, 133%, 220mil	37	0.789	0.116	Extruded	XLPE	1.269	Extruded	1.369	112.9	62.7	24.1
500, Compressed	25kV, 100%, 260mil	37	0.789	0.116	Extruded	XLPE	1.349	Extruded	1.449	112.9	62.7	24.1
500, Compressed	35kV, 100%, 345mil	37	0.789	0.116	Extruded	XLPE	1.519	Extruded	1.619	112.9	62.7	24.1
750, Compressed	15kV, 100%, 175mil	61	0.955	0.111	Extruded	XLPE	1.398	Extruded	1.498	165.8	92.1	35.4
750, Compressed	15kV, 133%, 220mil	61	0.955	0.111	Extruded	XLPE	1.51	Extruded	1.63	165.8	92.1	35.4
750, Compressed	25kV, 100%, 260mil	61	0.955	0.111	Extruded	XLPE	1.546	Extruded	1.696	165.8	92.1	35.4
750, Compressed	35kV, 100%, 345mil	61	0.955	0.111	Extruded	XLPE	1.698	Extruded	1.798	165.8	92.1	35.4
1000, Compressed	15kV, 100%, 175mil	61	1.117	0.128	Extruded	XLPE	1.529	Extruded	1.615	255.1	141.7	54.5
1000, Compressed	15kV, 133%, 220mil	61	1.117	0.128	Extruded	XLPE	1.597	Extruded	1.697	255.1	141.7	54.5
1000, Compressed	25kV, 100%, 260mil	61	1.117	0.128	Extruded	XLPE	1.677	Extruded	1.777	255.1	141.7	54.5
1000, Compressed	35kV, 100%, 345mil	61	1.117	0.128	Extruded	XLPE	1.847	Extruded	1.947	255.1	141.7	54.5