



**STANDARD FOR
UTILITY SHIELDED POWER CABLES
RATED 5 THROUGH 46 KV**

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INSULATED CABLE ENGINEERS ASSOCIATION, Inc.

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UTILITY SHIELDED POWER CABLES
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FOREWORD

This Standards Publication for Utility Shielded Power Cables Rated 5 to 46 kV (ICEA S-97-682) was developed by the Insulated Cable Engineers Association Inc. (ICEA).

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TABLE OF CONTENTS

Part 1 GENERAL	1
1.1 SCOPE	1
1.2 GENERAL INFORMATION	1
1.3 INFORMATION TO BE SUPPLIED BY PURCHASER	1
1.3.1 Characteristics of Systems on which Cable is to be Used	1
1.3.2 Quantities and Description of Cable.....	2
1.4 DEFINITIONS AND SYMBOLS	2
 Part 2 CONDUCTOR	 5
2.0 GENERAL	5
2.1 PHYSICAL AND ELECTRICAL PROPERTIES	5
2.1.1 Copper Conductors.....	5
2.1.2 Aluminum Conductors	5
2.2 OPTIONAL SEALANT FOR STRANDED CONDUCTORS	6
2.3 CONDUCTOR SIZE UNITS	6
2.4 CONDUCTOR DC RESISTANCE PER UNIT LENGTH	6
2.4.1 Direct Measurement of dc Resistance Per Unit Length.....	6
2.4.2 Calculation of dc Resistance Per Unit Length.....	6
2.5 CONDUCTOR DIAMETER	7
 Part 3 CONDUCTOR SHIELD (STRESS CONTROL LAYER)	 13
3.1 MATERIAL	13
3.2 EXTRUDED SHIELD THICKNESS	13
3.2.1 Reduced Extruded Shield Thickness	13
3.3 PROTRUSIONS AND CONVOLUTIONS	13
3.4 VOIDS	14
3.5 PHYSICAL REQUIREMENTS	14
3.6 ELECTRICAL REQUIREMENTS	14
3.6.1 Extruded Semiconducting Material.....	14
3.6.2 Extruded Nonconducting Material (For EPR Insulation Only)	14
3.6.3 Semiconducting Tape	15
3.7 WAFER BOIL TEST	15
 Part 4 INSULATION	 16
4.1 MATERIAL	16
4.2 INSULATION THICKNESS	17
4.2.1 Selection of Proper Thickness.....	17
4.2.1.1 For Three-Phase Systems with 100 or 133 Percent Insulation Level	17
4.2.1.2 For Delta Systems Where One Phase May Be Grounded For Periods Over One Hour	17
4.2.1.3 For Single- and Two-Phase Systems with 100 Percent Insulation Level.....	17
4.2.1.4 For Single- and Two-Phase Systems with 133 Percent Insulation Level.....	17
4.3 INSULATION REQUIREMENTS	17
4.3.1 Physical and Aging Requirements	17
4.3.2 Electrical Requirements	18
4.3.2.1 Partial-Discharge Extinction Level for Discharge-Free Designs Only	18
4.3.2.2 Discharge (Corona) Resistance for Discharge-Resistant Designs Only	18
4.3.2.3 Voltage Tests.....	19
4.3.2.4 Insulation Resistance Test.....	19
4.3.2.5 Dielectric Constant and Dissipation Factor.....	19

4.3.3	Voids, Ambers, Gels, Agglomerates and Contaminants as Applicable	19
4.3.3.1	Crosslinked Polyethylene Insulation (XLPE or TRXLPE)	19
4.3.3.2	Ethylene Propylene Rubber (EPR)	20
4.3.4	Shrinkback - Crosslinked Polyethylene Insulation (XLPE or TRXLPE) Only	20
Part 5	EXTRUDED INSULATION SHIELD	23
5.1	MATERIAL	23
5.2	THICKNESS REQUIREMENTS	23
5.3	PROTRUSIONS	24
5.4	SEMICONDUCTING TAPE	24
5.5	INSULATION SHIELD REQUIREMENTS	24
5.5.1	Insulation Shield for DISCHARGE-FREE Cable Designs Only	24
5.5.1.1	Removability	24
5.5.1.2	Voids	25
5.5.1.3	Physical Requirements	25
5.5.1.4	Electrical Requirements	25
5.5.1.5	Wafer Boil Test	25
5.5.2	Insulation Shield for DISCHARGE-RESISTANT Cable Designs Only	25
5.5.2.1	Removability	25
5.5.2.2	Physical Requirements	25
5.5.2.3	Electrical Requirements	26
5.5.2.4	Wafer Boil Test	26
Part 6	METALLIC SHIELDING	27
6.1	GENERAL	27
6.2	HELICALLY APPLIED TAPE(S)	27
6.3	WIRE SHIELD	27
6.4	COMBINATION OF TAPE AND WIRE	27
6.5	LONGITUDINALLY APPLIED CORRUGATED TAPE	27
6.6	LEAD SHEATH	28
6.7	OPTIONAL WATER BLOCKING COMPONENTS FOR METALLIC SHIELD	29
Part 7	JACKET	30
7.1	MATERIAL	30
7.1.1	Low Density and Linear Low Density Polyethylene, Black (LDPE/LLDPE)	30
7.1.2	Medium Density Polyethylene, Black (MDPE)	31
7.1.3	High Density Polyethylene, Black (HDPE)	32
7.1.4	Semiconducting Jacket Type I	33
7.1.5	Semiconducting Jacket Type II	34
7.1.6	Polyvinyl Chloride (PVC)	35
7.1.7	Chlorinated Polyethylene (CPE)	36
7.1.8	Thermoplastic Elastomer (TPE)	37
7.1.9	Polypropylene, Black (PP)	38
7.2	JACKET APPLICATION AND THICKNESS	39
7.2.1	Thickness of Jacket for Tape and Wire Shields	39
7.2.2	Thickness of Optional Jacket for Lead Sheath	39
7.2.3	Tightness of Polyethylene Jackets over Lead Sheath	39
7.3	JACKET IRREGULARITY INSPECTION	39
7.3.1	Non Conducting Jackets	39
7.3.2	Semiconducting Jackets	39
Part 8	CABLE ASSEMBLY AND IDENTIFICATION	41
8.1	MULTIPLEX CABLE ASSEMBLIES	41

8.2 CABLE IDENTIFICATION	41
8.2.1 Jacketed Cable	41
8.2.1.1 Optional Cable Identification	41
8.2.2 Unjacketed Cable (Lead Sheath Cable Only)	41
8.2.3 Optional Center Strand Identification	42
8.2.4 Optional Sequential Length Marking	42
Part 9 PRODUCTION TESTS	43
9.1 TESTING	43
9.2 SAMPLING FREQUENCY	43
9.3 CONDUCTOR TEST METHODS	43
9.3.1 Method for DC Resistance Determination	43
9.3.2 Cross-Sectional Area Determination	43
9.3.3 Diameter Determination	43
9.4 TEST SAMPLES AND SPECIMENS FOR PHYSICAL AND AGING TESTS	43
9.4.1 General	43
9.4.2 Measurement of Thickness	43
9.4.2.1 Micrometer Measurements	44
9.4.2.2 Optical Measuring Device Measurements	44
9.4.3 Number of Test Specimens	44
9.4.4 Size of Specimens	44
9.4.5 Preparation of Specimens of Insulation and Jacket	45
9.4.6 Specimen for Aging Test	45
9.4.7 Calculation of Area of Test Specimens	45
9.4.8 Unaged Test Procedures	45
9.4.8.1 Test Temperature	45
9.4.8.2 Type of Testing Machine	46
9.4.8.3 Tensile Strength Test	46
9.4.8.4 Elongation Test	46
9.4.9 Aging Tests	46
9.4.9.1 Aging Test Specimens	46
9.4.9.2 Air Oven Test	47
9.4.9.3 Oil Immersion Test for Polyvinyl Chloride Jacket	47
9.4.10 Hot Creep Test	47
9.4.11 Solvent Extraction	47
9.4.12 Wafer Boil Test for Conductor and Insulation Shields	47
9.4.13 Amber, Agglomerate, Gel, Contaminant, Protrusion, Convolution and Void Test	47
9.4.13.1 Sample Preparation	47
9.4.13.2 Examination	48
9.4.13.3 Resampling for Amber, Agglomerate, Gel, Contaminant, Protrusion, Convolution and Void Test	48
9.4.13.4 Protrusion and Convolution Measurement Procedure	48
9.4.14 Internal Irregularity Test Procedure for Crosslinked Polyethylene Insulation (XLPE or TRXLPE) Only	49
9.4.14.1 Sample Preparation	49
9.4.14.2 Detection of Irregularity	49
9.4.14.3 Resampling for Internal Irregularity Test	49
9.4.15 Physical Tests for Semiconducting Material Intended for Extrusion	50
9.4.15.1 Test Sample	50
9.4.15.2 Test Specimens	50
9.4.15.3 Elongation	50
9.4.16 Retests for Physical and Aging Properties and Thickness	50

9.5	DIMENSIONAL MEASUREMENTS OF THE METALLIC SHIELD	50
9.5.1	Tape Shield.....	50
9.5.2	Wire Shield.....	51
9.5.3	Lead Sheath.....	51
9.6	DIAMETER MEASUREMENT OF INSULATION AND INSULATION SHIELD	51
9.7	TESTS FOR JACKETS	51
9.7.1	Heat Shock.....	51
9.7.2	Heat Distortion.....	52
9.7.3	Cold Bend.....	52
9.8	VOLUME RESISTIVITY	52
9.8.1	Conductor Shield (Stress Control).....	52
9.8.2	Insulation Shield.....	52
9.8.3	Test Equipment.....	53
9.8.4	Test Procedure.....	53
9.8.4.1	Two-electrode Method.....	53
9.8.4.2	Four-electrode Method.....	53
9.8.4.3	Measurement.....	53
9.8.5	Semiconducting Jacket Radial Resistivity Test.....	53
9.8.5.1	Sample Preparation.....	54
9.8.5.2	Test Equipment Setup.....	54
9.8.5.3	Calculation.....	55
9.9	ADHESION (INSULATION SHIELD REMOVABILITY) TEST	55
9.10	SHRINKBACK TEST PROCEDURE	56
9.10.1	Sample Preparation.....	56
9.10.2	Test Procedure.....	56
9.10.3	Pass/Fail Criteria and Procedure.....	56
9.11	RETESTS ON SAMPLES	56
9.12	AC VOLTAGE TEST	57
9.12.1	General.....	57
9.12.2	AC Voltage Test.....	57
9.13	PARTIAL-DISCHARGE TEST PROCEDURE	57
9.14	METHOD FOR DETERMINING DIELECTRIC CONSTANT AND DIELECTRIC STRENGTH OF EXTRUDED NONCONDUCTING POLYMERIC STRESS CONTROL LAYERS	57
9.15	WATER CONTENT	57
9.15.1	Water Under the Jacket.....	57
9.15.2	Water in the Conductor.....	57
9.15.3	Water Expulsion Procedure.....	58
9.15.4	Presence of Water Test.....	58
9.16	TIGHTNESS OF POLYETHYLENE JACKET TO SHEATH TEST	58
9.17	PRODUCTION TEST SAMPLING PLANS	59
Part 10	QUALIFICATION TESTS	62
10.0	GENERAL	62
10.1	CORE QUALIFICATION TESTS	62
10.1.1	Material Qualification Requirements.....	62
10.1.1.1	Conductor Shield/Insulation Qualification.....	62
10.1.1.2	Insulation/Insulation Shield Qualification.....	63
10.1.2	Manufacturing Qualification Requirements.....	63
10.1.2.1	Conductor Shield/Insulation Qualification.....	63
10.1.2.2	Insulation/Insulation Shield Qualification.....	63
10.1.3	High Voltage Time Test Procedure.....	65
10.1.4	Hot Impulse Test Procedure.....	66

10.1.5	Cyclic Aging.....	66
10.1.5.1	Cable Length	66
10.1.5.2	Sample Preparation.....	67
10.1.5.3	Conduit.....	67
10.1.5.4	Load Cycle.....	67
10.1.6	Accelerated Water Treeing Test (AWTT) Procedure.....	67
10.1.6.1	General	67
10.1.6.2	Quantity of Cable To Be Aged	67
10.1.6.3	Aging Time.....	67
10.1.6.4	Conduit Fixture	67
10.1.6.4.1	Structures Above Conduit Fixtures	68
10.1.6.4.2	Conduit Fixtures Dimensions	68
10.1.6.5	Water	68
10.1.6.6	Ambient Temperature	68
10.1.6.7	Test Procedure	68
10.1.6.8	Water pH.....	70
10.1.6.9	High Voltage Time Test Requirements.....	70
10.1.6.10	Retesting.....	71
10.1.7	Qualification Test Electrical Measurements	72
10.1.8	Qualification Test Physical Measurements	72
10.2	THERMOMECHANICAL QUALIFICATION TEST - Optional	72
10.2.1	Scope	72
10.2.2	Procedure.....	72
10.2.2.1	Fixture	72
10.2.2.2	Load Cycling.....	72
10.2.2.3	Electrical Measurements.....	73
10.2.2.4	Physical Measurements Before and After the Thermomechanical Design Test.....	73
10.3	JACKET MATERIAL QUALIFICATION TESTS	74
10.3.1	Polyethylene And Polypropylene Jackets	75
10.3.1.1	Environmental Stress Cracking Test	75
10.3.1.1.1	Test Specimen.....	75
10.3.1.1.2	Test Procedure	75
10.3.1.2	Absorption Coefficient Test.....	75
10.3.2	Semiconducting Jackets	75
10.3.2.1	Brittleness Test.....	75
10.3.3	Polyvinyl Chloride and Chlorinated Polyethylene Jackets.....	75
10.3.3.1	Sunlight Resistance.....	75
10.3.3.1.1	Test Samples.....	75
10.3.3.1.2	Test Procedure	75
10.3.4	Extruded Red Stripe For Jackets.....	76
10.3.4.1	Sunlight Resistance.....	76
10.3.4.1.1	Test Samples.....	76
10.3.4.1.2	Test Procedure	76
10.4	CV EXTRUSION QUALIFICATION TEST	76
10.4.1	Thermal Conditioning.....	76
10.4.2	Dissipation Factor Verification	76
10.4.3	AC Withstand Verification	77
10.5	OTHER QUALIFICATION TESTS	77
10.5.1	Insulation Resistance.....	77
10.5.2	Accelerated Water Absorption Tests.....	77
10.5.3	Resistance Stability Test.....	78
10.5.4	Brittleness Temperature for Semiconducting Shields.....	78

10.5.5	Dry Electrical Test for Class III Insulation Only	78
10.5.5.1	Test Samples.....	78
10.5.5.2	Test Procedure	78
10.5.5.3	Electrical Measurements.....	79
10.5.6	Discharge Resistance Test for EPR Class IV Insulation Only.....	79
10.5.6.1	Test Specimens.....	79
10.5.6.2	Test Environment	79
10.5.6.3	Test Electrodes.....	79
10.5.7	Dissipation Factor Characterization Test	80
10.5.7.1	Test Samples.....	80
10.5.7.2	Thermal Conditioning	80
10.5.7.3	Dissipation Factor Testing.....	80
10.5.8	Dielectric Constant and Voltage Withstand for Nonconducting Stress Control Layers	80
Part 11	APPENDICES	81
APPENDIX A	NEMA, ICEA, IEEE, ASTM AND ANSI STANDARDS (Normative)	81
A1	NEMA PUBLICATIONS	81
A2	ICEA PUBLICATIONS	81
A3	IEEE AND ANSI STANDARDS.....	81
A4	ASTM STANDARDS.....	81
APPENDIX B	EMERGENCY OVERLOADS (Normative).....	84
APPENDIX C	PROCEDURE FOR DETERMINING DIAMETERS OF CABLE (Normative).....	85
APPENDIX D	SHIELDING (Informative).....	89
D1	DEFINITION OF SHIELDING.....	89
D2	FUNCTIONS OF SHIELDING	89
D3	USE OF INSULATION SHIELDING.....	89
D4	GROUNDING OF THE INSULATION SHIELD	90
D5	SHIELD MATERIALS	90
D6	SPLICES AND TERMINATIONS	90
APPENDIX E	HANDLING AND INSTALLATION PARAMETERS (Informative).....	91
E1	INSTALLATION TEMPERATURES.....	91
E2	RECOMMENDED MINIMUM BENDING RADIUS	91
E2.1	Tape Shield.....	91
E2.2	Wire Shield	91
E2.3	Lead Sheath	91
E3	DRUM DIAMETERS OF REELS.....	91
E4	MAXIMUM TENSION AND SIDEWALL BEARING PRESSURES	91
E5	TESTS DURING AND AFTER INSTALLATION.....	91
E5.1	During Installation.....	91
E5.2	After Installation	92
E5.3	In Service	92
APPENDIX F	OPTIONAL FACTORY DC TEST (Informative).....	93
APPENDIX G	ADDITIONAL CONDUCTOR INFORMATION (Informative)	94
APPENDIX H	ETHYLENE ALKENE COPOLYMER (EAM) (Informative).....	97
APPENDIX I	REVISED AWTT CONDUIT FIXTURES (Informative)	98
APPENDIX J	INSULATION COMPOUND INSPECTION (Normative)	99
J1	SCOPE	99
J2	PROCEDURE	99
J2.1	Compound Tape Inspection Sampling Plan.....	99
J2.2	Compound Pellet Inspection Sampling Plan	99

LIST OF TABLES

Table 2-1	Weight Increment Factors	7
Table 2-2	Schedule for Establishing Maximum Direct Current Resistance Per Unit Length of Completed Cable Conductors listed in Table 2-4.....	7
Table 2-3	Nominal Direct Current Resistance in Ohms Per 1000 Feet at 25°C of Solid and Concentric Lay Stranded Conductor	8
Table 2-3 (Metric)	Nominal Direct Current Resistance in Milliohms Per Meter at 25°C of Solid and Concentric Lay Stranded Conductor	9
Table 2-4	Nominal Diameters for Copper and Aluminum Conductors.....	10
Table 2-4 (Metric)	Nominal Diameters for Copper and Aluminum Conductors.....	11
Table 2-5	Factors for Determining Nominal Resistance of Stranded Conductors Per 1000 Feet at 25°C	12
Table 3-1	Extruded Conductor Shield Thickness.....	13
Table 3-2	Extruded Conductor Shield Requirements	14
Table 4-1	Conductor Maximum Temperatures	16
Table 4-2	Insulation Physical Requirements.....	18
Table 4-3	Dielectric Constant and Dissipation Factor	19
Table 4-4	Shrinkback Test Requirements Cables Having Sealed Strand Conductors and/or a Tape Over the Conductor	20
Table 4-5	Shrinkback Test Requirements All Cables Not Covered by Table 4-4	20
Table 4-6	BIL Values.....	21
Table 4-7	Conductor Sizes, Insulation Thicknesses and Test Voltages	21
Table 4-7 (Metric)	Conductor Sizes, Insulation Thicknesses and Test Voltages	22
Table 5-1	Insulation Shield Thickness Cables Without Embedded Corrugated Wires	23
Table 5-2	Insulation Shield Thickness Cables With Embedded Corrugated Wires.....	24
Table 5-3	Extruded Insulation Shield Requirements Discharge-Free Designs	25
Table 5-4	Extruded Insulation Shield Requirements Discharge-Resistant Designs	26
Table 6-1	Lead Sheath Thickness for Cable Without an Overall Jacket	28
Table 6-2	Lead Sheath Thickness for Cable With an Overall Jacket	29
Table 7-1	Low Density and Linear Low Density Polyethylene, Black (LDPE/LLDPE)	30
Table 7-2	Medium Density Polyethylene, Black (MDPE)	31
Table 7-3	High Density Polyethylene, Black (HDPE).....	32
Table 7-4	Semiconducting Jacket Type I.....	33
Table 7-5	Semiconducting Jacket Type II.....	34
Table 7-6	Polyvinyl Chloride (PVC).....	35
Table 7-7	Chlorinated Polyethylene (CPE)	36
Table 7-8	Thermoplastic Elastomer (TPE).....	37
Table 7-9	Polypropylene, Black (PP)	38
Table 7-10	Jacket Thickness and Test Voltage for Tape or Wire Shield Cables.....	40
Table 7-11	Jacket Thickness and Test Voltage for Lead Sheath Cables	40
Table 8-1	Nominal Insulation Thickness	42
Table 9-1	Test Specimens for Physical and Aging Tests.....	44
Table 9-2	Bending Requirements for Heat Shock Test	51
Table 9-3	Bending Requirements for Cold Bend Test.....	52
Table 9-4	Summary of Production Tests and Sampling Frequency Requirements	59
Table 9-5	Plan E	61
Table 9-6	Plan F.....	61
Table 10-1	Minimum ac Withstand Values	71
Table 10-2	Maximum Temperature Gradient for Thermal Aging.....	73
Table 10-3	Generic Grouping of Cable Components	74
Table 10-4	AC Withstand Voltage Requirements 15-35 kV Rated Cables.....	77
Table 10-5	Accelerated Water Absorption Properties	78

Table C-1	Insulation Diameter Calculation	85
Table C-2	Insulation Shield Adders	86
Table C-3	Calculated Dimensions – Compressed Stranding	87
Table C-4	Calculated Dimensions – Compact Stranding.....	88
Table E-1	DC Field Test Voltages.....	92
Table F-1	DC Test Voltages	93
Table G-1	Solid Aluminum and Copper Conductors	94
Table G-2	Concentric Stranded Class B Aluminum and Copper Conductors	95
Table G-3	Concentric Stranded Class C and D Aluminum and Copper Conductors.....	96

Part 1 GENERAL

1.1 SCOPE

These standards apply to materials, constructions, and testing of crosslinked polyethylene, tree retardant crosslinked polyethylene and ethylene propylene rubber insulated single conductor or multiplexed shielded power cables rated 5 to 46 kV which are used for the transmission and distribution of electrical energy.

1.2 GENERAL INFORMATION

This publication is so arranged to allow selection from two design concepts, one known as "DISCHARGE-FREE" and the other as "DISCHARGE-RESISTANT", as well as allowing for selection of those individual components (such as conductors, insulation type and thickness, metallic shield type, jackets, etc.) as required for specific installation and service conditions.

Parts 2 to 7 cover the major components of cables:

Part 2 - Conductor

Part 3 - Conductor Shield

Part 4 - Insulation

Part 5 - Extruded Insulation Shield

Part 6 - Metallic Shielding (See ANSI/ICEA S-94-649 for Concentric Neutral Cable)

Part 7 - Jacket

Each of these parts designates the materials, material characteristics, dimensions, and tests applicable to the particular component and, as applicable, to the design concept.

Part 8 covers the assembly and identification of cables.

Part 9 covers production test procedures applicable to cable component materials and to completed cables.

Part 10 covers qualification test procedures.

Part 11 contains appendices of pertinent information.

U.S. customary units, except for temperature, are specified throughout this standard. Approximate International System of Units (SI) equivalents are included for information only.