



**STANDARD FOR
TELECOMMUNICATIONS CABLE
AIRCORE, POLYOLEFIN INSULATED, COPPER
CONDUCTOR
TECHNICAL REQUIREMENTS**

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INSULATED CABLE ENGINEERS ASSOCIATION, Inc.

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TELECOMMUNICATIONS CABLE
AIRCORE, POLYOLEFIN INSULATED, COPPER CONDUCTOR
TECHNICAL REQUIREMENTS

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The members of the ICEA Communications Cable Division, Working Group 625, who participated in this project, were:

Chairman and Editor: Ron Stanko

G. Dorna

R. Gould

TABLE OF CONTENTS

CONTENTS:	SECTION	PAGE
1.	GENERAL	
	1.1 Purpose.....	1
	1.2 Scope.....	1
	1.3 Options and Information.....	1
	1.4 Units and Tolerances.....	2
	1.5 References.....	2
	1.6 Quality Assurance.....	2
	1.7 Safety Considerations.....	3
2.	CONDUCTORS	
	2.1 Requirements.....	3
	2.2 Factory Joints.....	4
3.	CONDUCTOR INSULATION	
	3.1 Insulation Materials.....	4
	3.1.1 Propylene/Ethylene Copolymer.....	4
	3.1.2 High-Density Polyethylene.....	4
	3.1.3 Medium-Density Polyethylene.....	4
	3.2 Insulation Type.....	4
	3.2.1 Solid.....	4
	3.2.2 Foam.....	4
	3.2.3 Foam-Skin.....	4
	3.3 Insulation Dimensions, Colors, and Splices.....	4
	3.4 Insulation Physical Requirements.....	5
	3.4.1 Insulation Adhesion.....	5
	3.4.2 Elongation.....	5
	3.4.3 Compression.....	6
	3.4.4 Cold Bend.....	6
	3.4.5 Shrinkback.....	6
	3.4.6 Thermal Oxidative Stability.....	6
	3.5 Twist Length and Color Coding.....	7
4.	CORE CONSTRUCTIONS	
	4.1 Core Assembly.....	7
	4.2 Binders.....	9
	4.3 Spare Pairs.....	10
	4.4 Core Wrap.....	10
	4.5 Self-Support (Figure 8) Cable.....	11
	4.5.1 Support Messenger.....	11
	4.5.2 Undulated Core.....	11

TABLE OF CONTENTS

CONTENTS:	SECTION	PAGE
	4.5.3 Dimensions.....	11
	4.5.4 Reinforced Self-Support	11
	4.6 Flooding Compound.....	11
5.	INTERNAL SCREENS	
	5.1 Description	11
	5.2 Screen Material	12
	5.2.1	
	Film Delamination	12
	5.3 Service Pairs	12
6.	SHIELDS	
	6.1 Shielding Systems.....	12
	6.2 Shield Materials.....	13
	6.2.1 8-mil Bare Aluminum Tape	13
	6.2.2 8-mil Coated Aluminum Tape	13
	6.2.3 5-mil Copper Tape.....	13
	6.2.4 5-mil Copper Clad Alloy Steel Tape.....	13
	6.2.5 5-mil Copper Clad Stainless Steel Tape.....	14
	6.2.6 6- and 7-mil C194 Copper Alloy Tapes	14
	6.2.7 5-mil C230 Copper Alloy Tape	14
	6.2.8 6-mil Bare Steel Tape.....	14
	6.2.9 6-mil Coated Steel Tape.....	15
	6.3 Shield Application.....	15
	6.3.1 Shield Corrugation.....	15
	6.3.2 Residue Forming/Corrugating Oil	15
	6.3.3 Shield Overlap	15
	6.3.4 Shield Splices.....	16
	6.4 Corrosion Resistance	16
	6.5 Gopher Resistance Test.....	16
7.	POLYETHYLENE INNER AND OUTER JACKETS	
	7.1 Inner Jacket.....	17
	7.1.1 Material and Test Requirements	17
	7.1.2 Inner Jacket Thickness Requirement	17
	7.2 Outer Jacket.....	18
	7.2.1 Raw Material	18
	7.2.2 Outer Jacket Thickness Requirement.....	18
	7.2.3 Completed Cable Material Requirements.....	19
	7.2.4 Shrinkback.....	21

TABLE OF CONTENTS

CONTENTS:	SECTION	PAGE
	7.2.5 Sheath Adherence - Flooded.....	21
	7.2.6 Sheath Adherence - Bonded	21
8.	ELECTRICAL REQUIREMENTS	
	8.1 DC Resistance	21
	8.2 DC Resistance Unbalance	22
	8.3 Mutual Capacitance.....	22
	8.3.1 Final Product 100% Testing.....	22
	8.4 Pair-to-Pair Capacitance Unbalance	23
	8.5 Pair-to-Ground Capacitance Unbalance.....	23
	8.6 Attenuation	23
	8.7 Unit Crosstalk.....	23
	8.7.1 Crosstalk Qualification Test.....	24
	8.8 Between-Compartment Crosstalk for Screened Cables	25
	8.8.1. Requirements for all Applications	25
	8.8.2 Requirements for T-1C and Similar Applications	25
	8.8.3 Qualification Test Procedure	25
	8.9 Insulation Resistance	26
	8.10 Conductor-To-Conductor DC Proof Test.....	26
	8.10.1 Alternate Test Protocols.....	27
	8.11 Core-To-Shield DC Proof Test	27
	8.12 Core-To-Screen DC Proof Test.....	27
	8.13 Shield Resistance	27
	8.14 Continuity of Metallic Cable Elements.....	27
9.	MECHANICAL REQUIREMENTS	
	9.1 Cable Bend Test	27
	9.1.1 Cold Bend Test.....	27
	9.1.2 Hot Bend Test	28
	9.2 Cable Impact.....	28
	9.3 Cable Torsion Test.....	28
10.	GENERAL REQUIREMENTS	
	10.1 Identification and Marking	28
	10.1.1 Identification.....	29
	10.1.2 Length Marking	29
	10.1.3 Defective Pair Marking	30

TABLE OF CONTENTS

CONTENTS:	SECTION	PAGE
	10.1.4 Communication Cable Identifier	30
	10.2 End Sealing.....	30
	10.3 Information Accompanying the Reel	30
	10.4 Pressurization	31
	10.5 Optional Requirements.....	31
	10.5.1 Physical Reel Protection	31
	10.5.2 Pulling Eyes	31

TABLES

Table 1:	Specifications Referenced in This Standard	32
Table 2-1	Conductor Diameter.....	3
Table 2-2	Conductor Elongation	4
Table 3-1	Insulation Colors	5
Table 3-2	Conductor Adhesion	5
Table 3-3	Insulation Compression	6
Table 3-4	Pair Designation and Color Code.....	7
Table 4-1	Group Binder Color Code.....	8
Table 4-2	Super-Unit Binder Color Code	9
Table 4-3	Color Code for Spare or Service Pairs.....	10
Table 6-1	Copper Alloy Tape Minimum Thickness.....	14
Table 6-2	Steel Composition Limits	15
Table 6-3	Shield Tape Tensile Load	16
Table 7-1	Minimum Inner Jacket Thickness.....	18
Table 7-2	Outer Jacket Thicknesses.....	19
Table 7-3	Completed Cable Jacket Material Requirements	20
Table 8-1	Maximum DC Resistance.....	22
Table 8-2	Conductor Resistance Unbalance.....	22
Table 8-3	Mutual Capacitance	22
Table 8-4	Pair-to-Ground Capacitance Unbalance	23
Table 8-5	Average Attenuation	23
Table 8-6	Power Sum Equal Level Far End Crosstalk (PSELFEXT)	24
Table 8-7	Power Sum Near End Crosstalk (PSNEXT).....	24
Table 8-8	Conductor-to-Conductor dc Test Voltages	26
Table 10-1	Pulling Eye Load Factor.....	31

TABLE OF CONTENTS

CONTENTS: SECTION PAGE

FIGURES

Figure 1-A:	Polyethylene Jacket Thickness Requirements for Self-Support (Figure 8) Cable - Option A.....	35
Figure 1-B:	Polyethylene Jacket Thickness Requirements for Self-Support (Figure 8) Cable - Option B.....	36
Figure 1-C:	Polyethylene Jacket Thickness Requirements for Reinforced Self-Support (Figure 8) Cable.....	37
Figure 2:	Forming of Steel Tape Overlap.....	38
Figure 3:	Sheath Adherence Sample Preparation.....	41

APPENDICES

Appendix A:	Wicking and Hygroscopicity Test Procedures.....	42
	Figure A-1	43
Appendix B:	Excess Core Test Procedure	44
	Figure B-1, Excess Core Test Setup.....	45
Appendix C:	Metallic Tape Splice Breaking Strength, Percent Retention	47
Appendix D:	Standard Internally Screened (IS) Cable Pair Counts	48
Appendix E:	Corrosion Resistance.....	50

ANNEXES

Informative Annex A:	Product Guide	A-1
Informative Annex B:	ICEA Telecommunication Cable Standards	B-1

ACRONYMS, ABBREVIATIONS AND SYMBOLS

ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
AWG	American Wire Gauge
°C	Degrees of Temperature, Celsius scale, Centigrade
dB	decibel
dc	Direct Current
EIA	Electronic Industries Alliance
ELFEXT	Equal Level Far-End Crosstalk
°F	Degrees of Temperature, Fahrenheit scale
ft	foot or feet
g	gram
ICEA	Insulated Cable Engineers Association
in	inch
ISO	- International Organization for Standardization
kHz	kilohertz
kV	kilovolt
lb	pounds
lbf	pounds of force
MHz	Megahertz
m	meter
mm	millimeter
MPa	megapascal
N	Newton
nF	nanofarad
NEXT	Near-End Crosstalk
NESC	National Electrical Safety Code
ns	nanoseconds
pF	picofarad
PSELFEXT	power sum equal level far end crosstalk
PSNEXT	power sum near end crosstalk
psi	pounds per square inch
rms	root mean square
α	Attenuation

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TECHNICAL REQUIREMENTS**

SECTION 1 GENERAL

- 1.1 **PURPOSE:** The purpose of this Standard is to establish generic technical requirements that may be referenced by individual telecommunications cable specifications covering products intended for normal outside plant use. The parameters covered provide material, construction, and performance requirements that are applicable to aircore, polyolefin insulated and jacketed cables of all pair counts, including a variety of shield and jacket combinations and optional compartmental screening.

Because this Standard does not cover all details of individual cable design, it cannot be used as a single document for procurement of product. It is intended to be used in conjunction with an individual product specification that provides complete design details for the specific cable type and designates the applicable performance requirements. Such individual cable specifications may be prepared either by the user or the manufacturer. The specification designated for procurement is at the option of the user.

- 1.2 **SCOPE:** This Standard covers mechanical and electrical requirements for aircore, polyolefin insulated, copper conductor telecommunications cable. It provides alternative choices for type of insulation, core assembly, color code, sheath design (shielding materials, single or double jackets, and jacket thickness), and screened or non-screened core.
- 1.3 **OPTIONS AND INFORMATION:** These cables are traditional outside plant (OSP) cables having a nominal mutual capacitance at 1 kHz of 52 nF/km (83 nF/mile), with attenuation and crosstalk characterized at discrete frequencies up to 6.3 MHz. For cables characterized above 6.3 MHz, refer to ICEA S-99-688, Broadband Twisted Pair Cable, Aircore, Polyolefin Insulated, Copper Conductors.

This Standard is arranged in Sections. Each covers one specific area of cable requirement and may be referenced as complete Sections or as individual paragraphs.