



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

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**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
$\alpha$	Attenuation

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**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.