



ICEA STANDARD FOR
CATEGORY 1 & 2 INDIVIDUALLY UNSHIELDED
TWISTED PAIR INDOOR CABLES
(WITH OR WITHOUT AN OVERALL SHIELD)
FOR USE IN COMMUNICATIONS WIRING SYSTEMS
TECHNICAL REQUIREMENTS

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INSULATED CABLE ENGINEERS ASSOCIATION, Inc.

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The user of this Standard is cautioned to observe any applicable health or safety regulations and rules relative to the manufacture and use of cable made in conformity with this Standard. This Standard hereafter assumes that manufacture, testing, installation, and maintenance of cables defined by this Standard will be performed only by properly trained personnel using suitable equipment and employing appropriate safety precautions.

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ACRONYMS, ABBREVIATIONS AND SYMBOLS

ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
ASQC	American Society for Quality Control
ASQ	American Society for Quality
AWG	American Wire Gauge
°C	Degrees of Temperature, Celsius scale
cm	centimeter(s)
CM	UL Listing designation for General Purpose Communication Cable
CMG	UL Listing designation for General Purpose Communication Cable
CMR	UL Listing designation for Riser Communication Cable
CMP	UL Listing designation for Plenum Communication Cable
CMX	UL Listing designation for Limited Use Communication Cable
dc	Direct Current
dB	decibel(s)
°F	Degrees of Temperature, Fahrenheit scale
ft	foot or feet
gm(s)	gram(s)
ICEA	Insulated Cable Engineers Association
in	inch(es)
kHz	kilohertz
kg	kilogram
lbf	pound(s) of force
lbs	pound(s) of weight
L	Length
MHz	Megahertz
m	meter(s)
mm	millimeter(s)
MPa	megapascal
N	Newton
nF	nanofarad
NEC	National Electrical Code
ns	nanoseconds
OIT	Oxidation Induction Time
oz	ounce(s)
pF	picofarad
psi	pounds per square inch
S	Siemens
s	Second(s)
SI	International System of Units
UL	Underwriters Laboratories
°	degrees symbol, temperature or angle
α	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 indoor premises use in the wiring systems of communications users. The parameters covered provide material, construction, and performance requirements.

Because this Standard does not cover all details of individual cable design, it cannot be used as a single document for procurement of product. This Standard is intended for use 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, electrical and flammability requirements for indoor wire and cable intended primarily for use in telecommunication networks or as patch cordage. Depending upon the application and system requirements, this Standard provides choices for materials, transmission characteristics and flammability ratings.

The typical cable construction may be unshielded twisted pair, quad, or unpaired thermoplastic insulated copper conductors (with or without an overall shield) covered by a thermoplastic jacket.

Patch cordage is a length of cable intended to be combined with connectors on one or both ends to join telecommunication circuits/links at the cross-connect.

This Standard covers the minimum performance requirements for the following Categories of cable:

Category 1: Intended for basic voice communications.

Category 2: Intended for basic voice, text and low speed data transmission with transmission characteristics specified for frequencies up to 1 MHz.