

**STANDARD FOR
BURIED TELECOMMUNICATIONS WIRE
FILLED, POLYOLEFIN INSULATED, COPPER CONDUCTOR
TECHNICAL REQUIREMENTS**

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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 wire made in conformity with this Standard. This Standard hereafter assumes that manufacture, testing, installation, and maintenance of wires defined by this Standard will be performed only by properly trained personnel using suitable equipment and employing appropriate safety precautions.

Questions of interpretation of ICEA Standards can only be accepted in writing, and the reply shall be provided in writing. Suggestions for improvements in this Standard are welcome. Questions and suggestions shall be sent to:

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ACRONYMS, ABBREVIATIONS AND SYMBOLS

| | |
|-----------------|---|
| A | Apparent Absorption Coefficient |
| AC | alternating current |
| ANSI | American National Standards Institute |
| AISI | American Iron and Steel 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 |
| °F | Degrees of Temperature, Fahrenheit scale |
| ft | foot or feet |
| ft ² | square feet |
| g | gram |
| Hz | Hertz |
| ICEA | Insulated Cable Engineers Association |
| ISO | International Organization for Standardization |
| in | inch |
| kft | 1000 feet |
| kg | kilogram |
| kHz | kilohertz |
| km | kilometer |
| kV | 1000 volts |
| lb | pounds |
| lbf | pounds of force |
| m | meter |
| mg | milligram |
| MHz | Megahertz |
| min. | minute |
| ml | milliliter |
| mm | millimeter |
| MPa | megapascal |
| m ² | meter square |
| N | Newton |
| nF | nanofarad |
| NEXT | Near-End Crosstalk |
| Nm | nanometer |
| oz | ounce |
| % | percent |
| pF | picofarad |
| psi | pounds per square inch |
| PVC | Polyvinyl chloride |
| rms | root mean square |

| | |
|----|-------------------------------------|
| SI | System International (metric units) |
| UL | Underwriters Laboratories |
| US | United States |
| yd | yard |

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STANDARD FOR
BURIED TELECOMMUNICATIONS WIRE
FILLED, POLYOLEFIN INSULATED, COPPER CONDUCTOR
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 wire specifications covering products intended for normal outside plant use. The parameters covered provide material, construction, and performance requirements.

Because this Standard does not cover all details of individual wire 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 wire type and designates the applicable performance requirements. Such individual wire 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 filled, polyolefin insulated, copper conductor, buried telecommunications wire. It provides alternative choices for type of insulation, type of filling compound, sheath design (shielding materials, single or double jackets, and jacket type and thickness) and armoring.

Buried wire is used to extend buried telephone plant from the distribution cable to the subscriber.

- 1.3 **OPTIONS AND INFORMATION:** This Standard is arranged in Sections covering specific areas of wire requirements and may be referenced as complete Sections or as individual paragraphs.

Paragraphs of this specification where the user may specify a particular option are listed below:

- 2.1 Conductor Size
- 3.2 Insulation Type
- 3.5 Color Coding
- 4.4.1 Filling Compound Type
- 4.5 Flooding Compound
- 4.7 Rip Cord(s)
- 5.1 Shielding System
- 6.1 Inner Jacket
- 6.2.1 Outer Jacket (Material Type)
- 6.3 Armoring Systems
- 7.12 Shield Heating Test