



STANDARD FOR
TELECOMMUNICATIONS STATION WIRE
FOR INDOOR/OUTDOOR USE
THERMOPLASTIC INSULATED AND JACKETED
TECHNICAL REQUIREMENTS

Approved by

AMERICAN NATIONAL STANDARDS INSTITUTE

June 2, 1998

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FOREWORD

ICEA Standards are published in the public interest and are intended to promote product uniformity and quality throughout the industry. Existence of an ICEA publication does not in any respect preclude the manufacture or use of products not conforming to the Standard.

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 at Headquarters by the Secretary, and the reply shall be provided in writing.

Suggestions for improvements in this Standard are welcome and should be sent to ICEA at the address below.

This Standard was developed by the Telecommunications Wire and Cable Standards Technical Advisory Committee whose membership consisted of technical experts from the manufacturing, user, and general interest segments of the industry. It was approved by ICEA on November 21, 1997. The members of the ICEA Communications Cable Section, Working Group 647, who participated in this project were:

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THERMOPLASTIC INSULATED AND JACKETED TELECOMMUNICATIONS STATION WIRE FOR INDOOR/OUTDOOR USE

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 thermoplastic insulated and jacketed station wire products for indoor/outdoor application.

Because this Standard does not cover all details of individual wire designs, 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 product specifications may be prepared either by the user or the manufacturer. The procurement specification is left to the discretion of the user of this Standard.

- 1.2 **SCOPE:** This Standard covers station wire intended primarily for application on the premises of communications users. The wire is intended for use between the point of demarcation (the network interface device/protector) and the telephone termination device within single and multi-family dwellings. Materials, construction and performance requirements are included in the Standard, together with applicable test procedures.

All designs covered by this Standard are suitable for indoor/outdoor use. Products covered by this Standard are intended only for operation with voltages and currents normally found in communication systems. Typically, these wires are installed both in exposed areas, e.g., surface mounted to walls or building baseboards, and in concealed areas, e.g., within walls or attics.

Station wire is intended for voice and data transmission and is categorized by electrical transmission characteristics based on existing system requirements and projected application needs. Four categories of wire performance are:

Category 1: Intended for basic voice communications.

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

Category 3: Intended for voice and data transmission and whose transmission characteristics are specified for frequencies up to 16 MHz.

Note: Category 4 requirements have been excluded from this Standard due to the telecommunication industry's minimal use

of this product. Should a user specifically require Category 4 product, the specific Electrical Transmission Characteristics applicable to Category 4 must be included in the individual product specification.

Category 5: Intended for voice and data transmission and whose transmission characteristics are specified for frequencies up to 100 MHz.

This Standard is arranged in Sections covering specific areas of wire requirements and may be referenced as complete Sections or individual paragraphs.

Paragraphs of this Standard where the user must specify a particular option are listed below:

- 2.1 Conductor Requirements (AWG)
- 4.1 Core Construction
- 4.3 Rip Cord
- 5.4 Jacket Color
- 6.1 Electrical Classifications
- 7.3 Anvil Test
- 7.4 National Electrical Code
- 8.2 Length Marking
- 8.5 Packaging

To assist the user in selection of options and to avoid possible misunderstandings between the manufacturer and user, it is suggested that a check-off sheet similar to that shown in Informative Annex A be utilized.

- 1.3 **UNITS AND TOLERANCES:** Throughout this Standard, the primary unit of measure is indicated first and these values must be used for determination of product conformance. Parenthetical conversions are approximate and are provided for information only. Unless otherwise specified, the rounding methods of ASTM E 29 shall be used for determining measurement tolerances.
- 1.4 **REFERENCES:** All documents referenced herein are listed in Table 1 with issues and/or dates as indicated.
- 1.5 **QUALITY ASSURANCE:** It is the responsibility of the manufacturer to establish a quality assurance system consistent with ANSI/ASQC Q9000-1 and Q9004-1 or an alternate system acceptable to the user. When the user requires a specific quality assurance program and/or special testing procedures, agreement between the user and the manufacturer should be reached before the order is placed.

Requirements shall be met on every length of completed wire as assured by quality control methods or by 100% testing. The term "completed wire" refers to a continuous length of finished wire resulting from the last jacketing operation.