

ANSI/ICEA S-84-608-2002

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

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DEDICATION

In recognition of his forty years of contribution to the Wire and Cable Industry and in particular for his vision in recognizing in 1984 a need for a true Industry standard, his perseverance in organizing a broad based user/manufacturer technical forum, and his leadership in the preparation of this document until his retirement in 1987, this Standard is gratefully dedicated to:

E.D. (ED) METCALF

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FOREWORD

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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.

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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S-84-608 was the first standard 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 first approved and published as an ANSI (American National Standards Institute) standard on June 30, 1989. It and its companion standard, S-85-625 published in April, 1990, were patterned after an existing ICEA Standard, S-56-434

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ICEA STANDARD FOR
 FILLED, POLYOLEFIN INSULATED, COPPER CONDUCTOR
 TELECOMMUNICATIONS CABLE
 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 filled, 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 filled, polyolefin insulated, copper conductor telecommunications cable. It provides alternative choices for type of insulation, type of filling compound, core lay-ups, color code, sheath design (shielding materials, single or double jackets, and jacket thickness), and screened or non-screened core.

These cables are traditional outside plant (OSP) cables having a nominal mutual capacitance at 1 kHz of 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-99-689, Broadband Twisted Pair Cable, Filled, Polyolefin Insulated, Copper Conductor.

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

Sections of this Standard where the user may specify a particular option are listed below:

- 2.1 Conductor Size
- 3.2 Insulation Type
- 4.1 Core Layup
- 4.3 Spare Pairs
- 4.5.1 Type Filling Compound
- 5.1 Internal Screens
- 5.3 Service Pairs