CSA C22.2 No. 198.3:05

National Standard of Canada

(reaffirmed 2019)

Coated electrical sleeving

Standards Council of Canada
Conseil canadien des normes

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Update No. 1
C22.2 No. 198.3-05
March 2007

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Title: *Coated electrical sleeving* — originally published September 2005

The following revisions have been formally approved:

Revised	Outside front cover, inside front cover, and title page
New	National Standards of Canada text
Deleted	None

CSA C22.2 No. 198.3-05 originally consisted of **38 pages**, each dated **September 2005**. It now consists of the following pages:

September 2005	3–38
March 2007	Cover, National Standards of Canada text, title page, and copyright page

- Update your copy by inserting these revised pages.
- Keep the pages you remove for reference.

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Cette Norme Nationale du Canada n'est disponible qu'en anglais.

Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users to judge its suitability for their particular purpose.

Canadian Standards Association
CAN/CSA-C22.2 No. 198.3-05
Second Edition

Underwriters Laboratories Inc.
UL 1441
Fourth Edition

Coated electrical sleeving

September 16, 2005

(Title page reprinted: March 2007)

Approved
by
Standards Council
of Canada

(approved March 2007)

ANSI/UL 1441-2005

Commitment for Amendments

This standard isissued jointly by Canadian Standards Association (CSA), and Underwriters Laboratories Inc. (UL). Comments or proposals for revisions on any part of the standard may be submitted to CSA or UL at any time. Revisions to this standard will be made only after processing according to the standards development procedures of CSA and UL. CSA and UL will issue revisions to this standard by means of a new edition or revised or additional pages bearing their date of issue.

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(Copyright page replaced March 2007)

Standards Update Service

CSA C22.2 No. 198.3:05
September 2005

Title: *Coated electrical sleeving*

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Contents

Preface

This is the common CSA and UL standard for *Coated electrical sleeving*. It is the second edition of CSA C22.2 No. 198.3 and the fourth edition of UL 1441. This edition of CSA C22.2 No. 198.3 supersedes the previous edition published in 1995. This edition of UL 1441 supersedes the previous edition published in 1995.

This common standard was prepared by the Canadian Standards Association (CSA) and Underwriters Laboratories Inc. (UL). The efforts and support of the Technical Harmonization Committee 15C (Electrical Tubing and Sleeving Products) of the Council on the Harmonization of Electrotechnical Standards of the Nations of the Americas (CANENA) are gratefully acknowledged.

This standard was reviewed by the CSA Subcommittee on Insulation Systems, under the jurisdiction of the CSA Technical Committee on Wiring Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee.

This standard will be submitted to the Standards Council of Canada (SCC) for approval as a National Standard of Canada.

This standard has been approved by the American National Standards Institute (ANSI) as an American National Standard.

Where reference is made to a specific number of samples to be tested, the specified number is to be considered a minimum quantity.

Note: *Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.*

Level of harmonization
This standard uses the IEC format but is not based on, nor is it to be considered equivalent to, an IEC standard. This standard is published as an equivalent standard for CSA and UL.

An equivalent standard is a standard that is substantially the same in technical content, except as follows: Technical national differences are allowed for codes and governmental regulations as well as those recognized as being in accordance with NAFTA Article 905, for example, because of fundamental climatic, geographical, technological, or infrastructural factors, scientific justification, or the level of protection that the country considers appropriate. Presentation is word for word except for editorial changes.

Reasons for differences from IEC
The Technical Harmonization Subcommittee identified the following standard as being within the scope of this standard: IEC 60684, *Flexible Insulating Sleeving*. IEC 60684 and CSA C22.2 No. 198.3/UL 1441 are similar but not identical. Both standards cover multiple, but not identical, products and similar methods. The THC agreed to address the issues involved in the harmonization of these standards during the next revision of CSA C22.2 No. 198.3/UL 1441.

Interpretations
The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

CSA effective date
The effective date for CSA International will be announced through *CSA Informs* or a CSA certification notice.

UL effective date

As of September 16, 2005 all products Listed or Recognized by UL must comply with the requirements in this standard except for Clause 6 which is effective September 16, 2006. New product submittals to UL may be evaluated under all requirements in this standard or, if requested in writing, evaluated under presently effective requirements only. The presently effective requirements are contained in the Third edition of UL 1441.

A UL effective date is one established by Underwriters Laboratories Inc. and is not part of the ANSI approved standard.

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Products in substantial accord with this Standard but which exhibit a minor difference or a new feature may be deemed to meet the Standard providing the feature or difference is found acceptable utilizing appropriate CSA International Operating Procedures. Products that comply with this Standard shall not be certified if they are found to have additional features which are inconsistent with the intent of this Standard. Products shall not be certifiable if they are discovered to contravene applicable laws or regulations.

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Coated electrical sleeving

1 Scope

1.1 The requirements of this Standard apply to Grades A and B acrylic-polymer-coated, silicone-polymer-coated, or vinyl-polymer-coated electrical sleeving that consists of closely woven fabric made from glass (see Table 1 for materials and ratings) and intended for use in equipment designed to be installed and used in accordance with the rules of the *Canadian Electrical Code, Part I (CEC),* or ANSI/NFPA 70, *National Electrical Code (NEC)*. A product for use at temperatures greater than indicated in Clause 1.2 or a different polymer coating or fibre may be acceptable provided that

(a) it meets the performance tests in this Standard; and

(b) long-term heat-aging tests are conducted as covered in UL 746B or CAN/CSA-C22.2 No. 0.17, using dielectric strength as a primary property and flammability as a secondary property.

1.2 These requirements apply to coated electrical sleeving having a standard temperature index classification of 105, 130, 155, 180, 200, 220, and 240 °C.

1.3 These requirements apply to coated electrical sleeving intended for use in connection with the internal wiring of electrical devices and appliances located in dry or damp locations where it is not feasible to employ a standard insulated conductor, such as appliance-wiring material, specifically intended for the purpose. Coated electrical sleeving is intended for insulating one or more uninsulated or partially insulated conductors, bus bars, component leads, or assemblies of electrical components. Coated electrical sleeving may be employed in equipment where it is not subjected to repeated flexing or severe mechanical stress.

1.4 These requirements apply to oil-resistant coated electrical sleeving intended for occasional or intermittent contact with oil.

1.5 These requirements do not apply to unimpregnated or uncoated fabric sleeving, which is generally not considered acceptable for sole (functional) insulation because of the openings inherent in the weave construction of the sleeving fabric.

1.6 These requirements do not apply to tubing extruded with reinforcement, extruded electrical tubing, or tubing intended only for mechanical protection, since they are covered by other requirements.

1.7 These requirements do not apply to coated electrical sleeving when it is employed as splice insulation in an insulation system above 105 °C (Class A) operation.

2 Reference publications and definitions

2.1 Reference publications

For undated references to standards, such reference shall be considered to refer to the latest edition and all revisions to that edition up to the time when this Standard was approved. For dated references to standards, such reference shall be considered to refer to the dated edition and all revisions published to that edition up to the time the standard was approved.

CSA (Canadian Standards Association)
C22.1-02
Canadian Electrical Code, Part I