UL 62

STANDARD FOR SAFETY

Flexible Cords and Cables

UL Standard for Safety for Flexible Cords and Cables, UL 62

Twentieth Edition, Dated July 6, 2018

Summary of Topics

This new edition of ANSI/UL 62 has been published to update the ANSI approval of the standard and includes:

Revised reference publications.

Removal of specific material requirements for tape or yarn used as a separator.

Clarified construction requirements for range and dryer cords and added mm^2 size designations.

Clarified substitutability of materials of higher temperature ratings.

Changed ″%″ to ″percent″ and better defined how diameter (D) under braid is to be used and measured.

Added a requirement for testing of bare copper wire shields with thermoset insulations.

Clarified the required flame test requirements for SPT cords used in Mexico.

Added HSJW and HPNW to permit use of heater cords exposed to sunlight and water|.

Revised wording to clarify the requirements for insulations used in duplex units of elevator cables.

Added NISP-1, NISP-2, NISPE-1, NISPE-2, NISPT-1, NISPT-2 to clarify that these types are not required to be subjected to the Tightness of Insulation test.

Clarifed the AC Leakage Current Test for Low Leakage Cord.

Clarified oil resistant types that can have an ″O″ in the type designation and those types that are required to be oil resistant, but are not permitted to have an ″O″ in the type designation.

Added a requirement for caution marking on single conductor $CXWT^c$.

Added new types CXTW-S and CXTW-IS that can be shown to have the equivalent strength to the breaking strength of a 2-conductor, twisted 22 AWG CXTW (UL 588, 13.2.4), or to the breaking strength of a single conductor CXTW twisted with a supporting rope (UL 588, 81A.2).

Added the ″-X″ suffix for Type CXTW in sizes smaller than 22 AWG that are equivalent in breaking strength to a 22 AWG,

Added Types LXT and LXTW used in decorative lighting products, and added ″-X″ suffix for constructions that are equivalent in breaking strength to 22 AWG.

Added testing and marking requirements for cords incorporating the overall braid.

Added the missing Spark Test voltage in Table 46.

Added 20 AWG DPT and DPTW types.

Added grounding conductor size for cables containing 9 AWG circuit conductors.

Added 1000 V electric vehicle cable.

Clarified the definition of Neutral Conductor.

Added thermoplastic oil resistant compound like an SVTO as an optional jacket for elevator cables.

Added Annex D to provide a list of cord types by country.

Added a note to Table 22 for single conductor CXWT used in two conductor CXWT twisted lighting strings.

Revised Table 20 to allow SPT-1W and SPT-2W for use in Canada and Mexico.

Added applicable tests for conductors containing fibrous strength members.

Added harmonized type designations for Flexible Cords and Cables and Electric Vehicle Cables using TPE insulation and jacket.

Added the abbreviation ″w/thrd″ to shorten the required marking for those products containing a thread in the conductor.

Revised the Cold Impact Test temperature required on all electric vehicle cables.

Added Type YXTW for use in year-round lighting strings.

Revised requirements for data and signal conductors used in Electric Vehicle Cables.

Editorial changes.

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated August 4, 2017.

Standard on the purchaser's computer system.

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NMX-J-436-ANCE-2018
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Fifteenth Edition

Underwriters Laboratories Inc.
UL 62
Twentieth Edition

Flexible Cords and Cables

July 6, 2018

ANSI/UL 62-2018

Commitment for Amendments

This standard is issued jointly by the Association of Standardization and Certification (ANCE), the Canadian Standards Association (operating as "CSA Group"), and Underwriters Laboratories Inc. (UL). Comments or proposals for revisions on any part of the standard may be submitted to ANCE, CSA Group, or UL at anytime. Revisions to this standard will be made only after processing according to the standards development procedures of ANCE, CSA Group, and UL. CSA Group and UL will issue revisions to this standard by means of a new edition or revised or additional pages bearing their date of issue. ANCE will incorporate the same revisions into a new edition of the standard bearing the same date of issue as the CSA Group and UL pages.

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This Standard is subject to review within five years from the date of publication, and suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change to CSA Standards, please send the following information to inquires@csa.ca and include ″Proposal for change″ in the subject line: Standard designation (number); relevant clause, table and/or figure number; wording of the proposed change; and rationale for the change.

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This ANSI/UL Standard for Safety consists of the Twentieth Edition. The most recent designation of ANSI/UL 62 as an American National Standard (ANSI) occurred on July 6, 2018. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

The Department of Defense (DoD) has adopted UL 62 on November 6, 1987. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at https://csds.ul.com.

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PREFACE

This is the harmonized ANCE, CSA Group, and UL standard for flexible cords and cables. It is the sixth edition of NMX-J-436-ANCE, the fifteenth edition of CAN/CSA-C22.2 No. 49, and the twentieth edition of UL 62. This edition of CAN/CSA C22.2 No. 49 supersedes the previous edition(s) published in 2014, 2010, 2006, 1998, 1992, 1989, 1988, 1981, 1973, 1962, 1960, 1956, 1941, and 1937. This edition of UL 62 supersedes the previous edition published in 2014.

This harmonized standard was prepared by the Association of Standardization and Certification (ANCE), CSA Group, and Underwriters Laboratories Inc. (UL). The efforts and support of the Technical Harmonization Subcommittee, Flex Cords, THSC 20, of the Council on the Harmonization of Electrotechnical Standards of the Nations of the Americas (CANENA) are gratefully acknowledged.

This standard is considered suitable for use for conformity assessment within the stated scope of the standard.

The present Mexican standard was developed by the CT 20 – Conductores from the Comite de Normalizacion de la Asociacion de Normalizacion y Certificacion, A.C., CONANCE, with the collaboration of the wire and cables manufacturers and users.

This standard was reviewed by the CSA Integrated Committee on Flexible Cords/Equipment and Appliance Wires and Cables, 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 has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

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

Application of 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 ANCE, CSA Group, 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.