CSA GROUP™

CSA C22.2 No. 2420:09

National Standard of Canada

(reaffirmed 2019)

Belowground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings

Standards Council of Canada
Conseil canadien des normes

REVISED APRIL 2021

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Revision History

CSA C22.2 No. 2420:09, Belowground reinforced thermosetting resin conduit (RTRC) and fittings — originally published July 2009

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Revisions issued: Update No. 1 — September 2012

Update No. 2 — April 2021	**Revision symbol (in margin)**
Cover, copyright page, Preface, Clauses 1.1, 2.4, and 3, and Tables 5, 6, 7, and 8 **Note:** *Only revised pages have been provided.*	|

National Standard of Canada — July 2019
Outside front cover, National Standard of Canada text, and title page. 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.

Standard for Safety for Belowground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings

First Edition, Dated July 30, 2009

Summary of Topics

This revision dated April 23, 2021 includes the following:

– Clarification on where to measure the minimum inside diameter of socket specified in Table 5 to Table 8

– Editorial updates to replace the reference to "CEC" with "CE Code"; 1.1, 2.4 and 3.1.1

Canadian Standards Association
CSA C22.2 No. 2420-09
First Edition

Underwriters Laboratories Inc.
UL 2420
First Edition

Belowground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings

July 30, 2009

(Title Page Reprinted: April 23, 2021)

Approved American National Standard

ANSI/UL 2420-2021

Commitment for Amendments

This standard is issued jointly by 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 CSA Group or UL at anytime. Revisions to this standard will be made only after processing according to the standards development procedures of 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.

ISBN 1-55397-056-X © 2021 Canadian Standards Association

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, please send the following information to inquiries@csagroup. org 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 First Edition including revisions through April 23, 2021.

The most recent designation of ANSI/UL 2420 as an American National Standard (ANSI) occurred on April 23, 2021. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

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PREFACE

This is the harmonized CSA Group and UL standard for belowground reinforced thermosetting resin conduit (RTRC) and fittings. It is the first edition of CSA C22.2 No. 2420, and the first edition of UL 2420. This harmonized standard has been jointly revised on April 23, 2021. For this purpose, CSA Group and UL are issuing revision pages dated April 23, 2021.

This harmonized standard was prepared by the CSA Group and Underwriters Laboratories Inc. (UL). The efforts and support of the conduit manufacturing industry and the Technical Harmonization Subcommittee for Conduit and Tubing, of the Council of the Harmonization of Electrotechnical Standards for 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.

This standard was reviewed by the CSA Integrated Committee on Nonmetallic Conduit, Tubing, and Fittings, 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.

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 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 deviations are allowed for codes and governmental regulations and 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 to be word for word except for editorial changes.

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.

Belowground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings

1 Scope

1.1 This Standard specifies the requirements for low-halogen belowground (Type BG) reinforced thermosetting resin conduit (RTRC) and fittings, for installation and use in accordance with CSA C22.1 Canadian Electrical Code (CE Code), Part I, and NFPA 70, National Electrical Code (NEC).

1.2 The products specified in this Standard are intended for use at -40°C (-40°F) to 110°C (230°F).

1.3 Type BG conduit has not been evaluated for directional boring applications.

1.4 This Standard covers ID (dimensions based on inside diameters) and IPS (dimensions based on outside diameters of iron pipe sizes) conduit and fittings. Trade sizes (metric designators) are 1/2 (16) to 6 (155).

Note: The values in parenthesis are metric size designations of conduits and fittings and do not necessarily reflect metric trade sizes

1.5 This Standard covers conduit with designations EB (encased burial) and DB (direct burial), which refer to specific wall thicknesses. EB conduit, is suitable for encasement in concrete. DB conduit is suitable for encasement in concrete and direct burial.

1.6 Fittings specified in this Standard include, but are not limited to, straight couplings, 5° angle couplings, adapters, and elbows with plain ends or integral belled ends at one or both ends.

2 Definitions

2.1 The following definitions apply in this standard:

2.2 Integral belled end – a belled end installed at the factory, either integrally wound or a permanently attached coupling.

2.3 Low-halogen – a material having not more than 0.2% by weight of total halogen content.

2.4 Type BG – conduit and associated fittings that have been evaluated for underground use only, for direct burial with or without being encased in concrete.

Note: For other definitions, refer to NEC and/or CE Code.

3 Reference publications and units of measurement

3.1 Reference publications

3.1.1 This Standard refers to the following publications; where such reference is made to CSA or UL Standards, it shall be considered to refer to the latest edition and all amendments published thereto; and where such reference is made to other publications, it shall be to the edition listed below.