CAN/ULC-S640:2016 (R2022)

STANDARD FOR LINING SYSTEMS FOR NEW MASONRY CHIMNEYS

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The intended primary application of this standard is stated in its scope. It is important to note that it remains the responsibility of the user of the standard to judge its suitability for the particular application.

Copies of this National Standard of Canada may be ordered from ULC Standards.

CETTE NORME NATIONALE DU CANADA EST DISPONIBLE EN VERSIONS FRANÇAISE ET ANGLAISE

Standard for Lining Systems for New Masonry Chimneys, CAN/ULC-S640

Second Edition, Dated August 1, 2016

Summary of Topics

This revision of CAN/ULC-S640 dated April 7, 2022 is being issued to update the title page to reflect the reaffirmation of this Second Edition National Standard of Canada. No changes in requirements are involved.

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

The requirements are substantially in accordance with Proposal(s) on this subject dated September 24, 2021.

PLEASE NOTE THAT CERTAIN CODES MAY REFER TO A SUPERSEDED VERSION OF THIS STANDARD. IN THOSE INSTANCES, THE RELEVANT VERSIONS ARE AVAILABLE FOR PURCHASE.

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CAN/ULC-S640:2016 (R2022)

STANDARD FOR LINING SYSTEMS FOR NEW MASONRY CHIMNEYS

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PREFACE

This is the Second Edition of the Standard for Lining Systems for New Masonry Chimneys, CAN/ULC-S640.

This Edition of the Standard has been formally approved by the ULC Standards Committee on Factory-Built Fireplaces, Chimneys and Vents.

This Standard has been developed in compliance with the requirements of SCC for accreditation of a Standards Development Organization.

Only metric SI units of measurement are used in this Standard. If a value for measurement is followed by a value in other units in parentheses, the second value may be approximate. The first stated value is the requirement.

In Canada, there are two official languages, English and French. All safety warnings must be in French and English. Attention is drawn to the possibility that some Canadian authorities may require additional markings and/or installation instructions to be in both official languages.

This Second Edition National Standard of Canada is based on, and now supersedes, the First Edition.

Attention is drawn to the possibility that some of the elements of this Canadian standard may be the subject of patent rights. ULC Standards shall not be held responsible for identifying any or all such patent rights.

Requests for interpretation of this Standard should be sent to ULC Standards. The requests should be worded in such a manner as to permit a “yes” or “no” answer based on the literal text of the requirement concerned.

This CAN/ULC-S640 Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of SCC for accreditation of a Standards Development Organization. In the event that no revisions are issued for a period of four years from the date of publication, action to revise, reaffirm, or withdraw the standard shall be initiated.

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

This Standard is intended to be used for conformity assessment.

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1 SCOPE

1.1 These requirements cover lining systems for new *masonry chimneys*.

1.2 Liners are for use with gas, liquid and solid fuel fired residential *appliances* and building heating equipment, where the *flue gas* temperatures normally do not exceed 650 °C. They are intended for use in accordance with the National Building Code of Canada, CSA B139 – Installation Code for Oil Burning Equipment, CSA B149.1 – Natural Gas and Propane Installation Code Gas Burning Equipment, CSA B365 – Installation Code for Solid Fuel Burning Appliances and Equipment, and CAN/CSA A405, Design and Construction of Masonry Chimneys and Fireplaces.

1.3 Liners are intended for field installation in *masonry* or *concrete chimneys* located inside or outside of buildings to provide an essentially vertical conduit or passageway for conveying *flue gases* to the outer air from the above described class of *appliances*.

1.4 Liners as covered by this Standard are intended for installation in accordance with the manufacturer's Installation Instructions.

1.5 Liners, as covered by this Standard, are not intended for use with high efficiency *appliances* that require type BH gas venting systems, or that create positive pressures in the *chimney*, unless specifically listed for such application.

2 REFERENCE PUBLICATIONS

2.1 The documents shown below are referenced in the text of this Standard. Unless otherwise stated elsewhere in this Standard such reference shall be considered to indicate the edition and/or revisions of the document available at the date on which the Committee approved this ULC Standard.

Documents Published by the American Society for Testing and Materials (ASTM International)
100 Barr Harbour Drive, PO BOx C700, West Conshohocken, PA 19428-2959 U.S.A.
Telephone: (610) 832-9585
www.astm.org

• ASTM A653/A653M-15, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot Dip Process

• ASTM C516-08 (R2013), Standard Specification for Vermiculite Loose Fill Thermal Insulation

• ASTM C549-06 (R2012), Standard Specification for Perlite Loose Fill Insulation

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Documents Published by the Canadian General Standards Board (CGSB)
Phase III, 6B1, 11 Laurier Street, Gatineau, QC K1A 1G6
Telephone: 819-956-0425 or 1-800-665-2472
www.pwgsc.gc.ca/cgsb

• CGSB 10.3-92, Air Setting Refractory Mortar

Documents Published by CSA Group
178 Rexdale Blvd., Toronto, ON M9W 1R3
Telephone: 1-800-463-6727
www.csagroup.org

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• CAN/CSA-A405-M87, Design and Construction of Masonry Chimneys and Fireplaces

• CSA-B139-15, Installation Code for Oil Burning Equipment

• CSA B149.1-15, Natural Gas and Propane Installation Code

• CSA B365-10 (R 2015), Installation Code for Solid Fuel Burning Appliances and Equipment

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171 Nepean Street, Suite 400, Ottawa, ON K2P 0B4 Canada
Telephone: (416) 757-3611, ext. 61744; Fax (613) 231-5977, “ATTN: Publications”
E-mail: publications@ulc.ca
www.ulc.ca

• CAN/ULC-S114-05, Standard Method of Test for Determination of Non-Combustibility in Building Materials

• CAN/ULC-S702-14, Standard for Mineral Fibre Thermal Insulation for Buildings

3 GLOSSARY

Note: Terms used in this Standard that are in *italic* print are defined as follows:

3.1 *APPLIANCE* – A device to convert the energy in fuel into heat, and includes all accessories, components, controls, wiring, piping or tubing required to be part of the device.

3.2 *BREECH* – The hole at or near the base of a *chimney* for receiving *flue gases*.

3.3 *CHIMNEY* – A primarily vertical shaft enclosing at least one *flue* for conducting *flue gases* to the outdoor atmosphere.

3.4 *CHIMNEY CONNECTOR (FLUE PIPE)* – The pipe that connects a fuel burning *appliance* to a *chimney*.

3.5 *CHIMNEY, MASONRY OR CONCRETE* – A field constructed *chimney* of brick, stone, concrete or masonry units built in accordance with applicable building code requirements.

3.6 *CHIMNEY LINER* – A *chimney* lining system that is constructed from metallic or nonmetallic materials that are factory made, or packaged by the manufacturer to be mixed in the field, and that is assembled in the field to form a complete functional means for conveying products of combustion to the outside.

3.7 *COMBUSTIBLE* – Material failing to conform to CAN/ULC-S114, Standard Method of Test for Determination of Non Combustibility in Building Materials.

3.8 *FIRE STOP* – A barrier within or between construction assemblies that acts to retard the passage of smoke and flame.

3.9 *FLUE* – An enclosed passageway for conveying *flue* gases.

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