

**NATIONAL
STANDARD
OF CANADA**

CAN/ULC-S629:2016

STANDARD FOR 650 °C FACTORY- BUILT CHIMNEYS

Prepared and Published by:



Approved by:



This is a preview. [Click here to purchase the full publication.](#)

Underwriters Laboratories of Canada (ULC) was established in 1920 by letters patent issued by the Canadian Government. It maintains and operates laboratories and certification services for the examination, testing and certification of appliances, equipment, materials, constructions and systems to determine their relation to life, fire and property hazards as well providing inspection services.

Underwriters Laboratories of Canada is accredited by the Standards Council of Canada as a Certification Organization, a Testing Organization, and an Inspection Body under the National Standards System of Canada.

ULC Standards develops and publishes standards and other related publications for building construction, security and burglar protection, environmental safety, electrical equipment, fire protection equipment, gas and oil equipment, thermal insulation products, materials and systems, energy use in the built environment and electrical utility safety.

ULC Standards is a not-for-profit organization and is accredited by the Standards Council of Canada as a Standards Development Organization.

National Standards of Canada developed by ULC Standards conform to the criteria and procedures established by the Standards Council of Canada. Such standards are prepared using the consensus principle by individuals who provide a balanced representation of interests relevant to the subject area on a national basis.

ULC is represented across Canada as well as many countries worldwide. For further information on ULC services, please contact:

Customer Service: 1-866-937-3852

National Standard of Canada

A National Standard of Canada is a standard developed by an SCC-accredited Standards Development Organization (SDO), and approved by the Standards Council of Canada (SCC), in accordance with SCC's: *Requirements and Guidance-Accreditation for Standards Development Organizations*, and *Requirements and Guidance-Approval of National Standards of Canada Designation*. More information on National Standard requirements can be found at www.scc.ca.

An SCC-approved standard reflects the consensus of a number of experts whose collective interests provide, to the greatest practicable extent, a balance of representation of affected stakeholders. National Standards of Canada are intended to make a significant and timely contribution to the Canadian interest.

SCC is a Crown corporation within the portfolio of Industry Canada. With the goal of enhancing Canada's economic competitiveness and social well-being, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts. Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at www.scc.ca.

Users should always obtain the latest edition of a National Standard of Canada from the standards development organization responsible for its publication, as these documents are subject to periodic review.

CORPORATE HEADQUARTERS

Underwriters Laboratories of Canada
7 Underwriters Road
Toronto, Ontario M1R 3A9
Telephone: (416) 757-3611
Fax: (416) 757-9540

REGIONAL OFFICES

PACIFIC OFFICE

13775 Commerce Parkway, Suite 130
Richmond, British Columbia V6V 2V4
Telephone: (604) 214-9555
Fax: (604) 214-9550

EASTERN OFFICE

6505, Rte Transcanadienne, Suite 330
St-Laurent, Québec H4T 1S3
Telephone: (514) 363-5941
Fax: (514) 363-7014

For further information on ULC standards, please contact:

ULC STANDARDS

171 Nepean Street, Suite 400
Ottawa, Ontario K2P 0B4
Telephone: (613) 755-2729

To purchase ULC Standards, visit: www.ulc.ca/ulcstandards

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 this 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 650 °C FACTORY- BUILT CHIMNEYS

ICS 91.060.40

Prepared and Published by:



Approved by:



First Edition April 1984
Second Edition April 1987
Amended January 1994
Amended October 1994
Amended June 1996
Amended May 1997
Amended October 1998
THIRD EDITION DECEMBER 2016

Copyright © 2016

ULC Standards

All rights reserved. No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without prior permission.

TABLE OF CONTENTS

ULC STANDARDS COMMITTEE ON FACTORY-BUILT FIREPLACES, CHIMNEYS AND VENTS	..I
ULC STANDARDS TASK GROUP ON CHIMNEYS AND VENTS	..II
PREFACE	..III
1 SCOPE	1
2 REFERENCE PUBLICATIONS	1
3 CONSTRUCTION	2
3.1 MATERIALS	2
3.2 ASSEMBLY	3
3.3 JOINTS	4
3.4 FIRESTOP-SPACERS	4
3.5 SUPPORTS	5
3.6 RADIATION SHIELDS	5
3.7 ATTIC INSULATION SHIELDS	6
3.8 CAPS	6
3.9 ROOF ASSEMBLIES	7
3.10 DRAFT	7
4 PERFORMANCE	7
4.1 GENERAL	7
4.2 TEST INSTALLATION	8
4.3 TEMPERATURE MEASUREMENT	10
4.4 TEST NO. 1 – THERMAL SHOCK	12
4.5 TEST NO. 2 – FLUE SPRAY – MASONRY CHIMNEYS	12
4.6 TEST NO. 3 – TEMPERATURE – 650 °C FLUE GASES	12
4.7 TEST NO. 4 – TEMPERATURE – 925 °C FLUE GASES	13
4.8 TEST NO. 5 – TEMPERATURE – CREOSOTE BURNOUT	13
4.9 TEST NO. 6 – SWEEPING – NONMETAL CHIMNEYS	14
4.10 TEST NO. 7 – DRAFT	14
4.11 TEST NO. 8 – SUPPORT	14
4.12 TEST NO. 9 – STRENGTH	15
4.12.1 General	15
4.12.2 Impact Test	15
4.12.3 Longitudinal Force Test	16
4.12.4 Chimney Joint Load Test	16
4.12.5 Chimney Tee Extension Load Test	16
4.13 TEST NO. 10 – WIND LOAD	16
4.14 TEST NO. 11 – RAIN	17
4.15 TEST NO. 12 – CRUSHING OF NONMETALLIC CHIMNEY LINER	18
4.16 TEST NO. 13 – RESISTANCE TO ACTION OF ACIDS OF NONMETALLIC CHIMNEY LINER	19
4.17 TEST NO. 14 – FREEZING AND THAWING OF NONMETALLIC MATERIALS ABSORBING WATER	19
4.18 TEST NO. 15 – CEMENTED JOINTS OF FLUE-GAS CONDUIT	19

4.19	TEST NO. 16 – SULPHURIC ACID EXTRACTION FOR PORCELAIN-ENAMELLED STEEL USED FOR LINERS	20
4.20	TEST NO. 17 – CONDENSING SULPHUR DIOXIDE	20
4.21	TEST NO. 18 – VIBRATION (FOR LOOSE FILL INSULATED CHIMNEYS)	21
4.22	TEST NO. 19 - ACCELERATED CORROSION	21
4.23	TEST NO. 20 – ATTIC INSULATION SHIELD VENTILATION OPENING	22
5	INSTALLATION INSTRUCTIONS	22
6	USE AND MAINTENANCE INSTRUCTIONS	24
7	MARKING	25
	TABLES	27
	FIGURES	29

ULC STANDARDS COMMITTEE ON FACTORY-BUILT FIREPLACES, CHIMNEYS AND VENTS

NAME	AFFILIATION	REGION	CATEGORY
J. Wade (Chair)	ULC Standards	Canada	Non-voting
M. Brunt	Flexmaster Canada Ltd.	Canada	Producer
M. Byle	Stove Parlour and Gallery Inc.	Ontario	Producer
Q. Choudry	Office of the Ontario Fire Marshal	Ontario	Regulator
L. Cleroux	I.C.C. Industrial Chimney Company Inc.	Canada	Producer
E. Dufour	Security Chimneys International Ltd.	Canada	Producer
G. Faber	SCM Risk Management Services	Canada	General Interest
Z. Gadowski	Wood Energy Technicians of British Columbia	British Columbia	User
T. Gottschalk	Hearth, Patio and Barbecue Association Canada	Canada	User
J. Herald	J & D Herald Consulting Inc.	Ontario	User
M. Hladysh	Selkirk Canada Corp	Canada	Producer
N. Khan	Technical Inspection Network	Canada	General Interest
M. Kulik	Technical Standards & Safety Authority	Ontario	Regulator
A. Marcakis	Association des professionnels du chauffage (APC)	Quebec	User
L. Gill (Associate)	IPEX	Canada	Non-voting
S. Scott (Associate)	Royal Pipe	Canada	Non-voting
B. Zeigler (Associate)	Intertek Testing Services	Canada	Non-voting
G. Ottley (Project Manager)	ULC Standards	Canada	Non-voting

This list represents the membership at the time the Committee balloted on the final text of this edition. Since that time, changes in the membership may have occurred.