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ANSI/CAN/UL/ULC 1275:2021

JOINT CANADA-UNITED STATES
NATIONAL STANDARD

STANDARD FOR SAFETY

Flammable Liquid Storage Cabinets

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ANSI/UL 1275-2021

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UL Standard for Safety for Flammable Liquid Storage Cabinets, ANSI/CAN/UL/ULC 1275

Fifth Edition, Dated August 26, 2021

Summary of Topics

This new edition of ANSI/CAN/UL/ULC 1275 dated August 26, 2021 has been issued to reflect the latest ANSI and SCC approval dates, and to incorporate the proposals dated January 29, 2021 and May 7, 2021.

The new requirements are substantially in accordance with Proposal(s) on this subject dated January 29, 2021 and May 7, 2021.

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ANSI/UL 1275-2021

AUGUST 26, 2021



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ANSI/CAN/UL/ULC 1275:2021

Standard for Flammable Liquid Storage Cabinets

First Edition – June, 1985
Second Edition – May, 1994
Third Edition – June, 2005
Fourth Edition – September, 2014

Fifth Edition

August 26, 2021

This ANSI/CAN/UL/ULC Safety Standard consists of the Fifth Edition.

The most recent designation of ANSI/UL 1275 as an American National Standard (ANSI) occurred on August 26, 2021. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, Preface or SCC Foreword.

This standard has been designated as a National Standard of Canada (NSC) on August 26, 2021.

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Preface

This is the Fifth Edition of ANSI/CAN/UL/ULC 1275, Standard for Flammable Liquid Storage Cabinets.

UL is accredited by the American National Standards Institute (ANSI) and the Standards Council of Canada (SCC) as a Standards Development Organization (SDO). ULC Standards is accredited by the Standards Council of Canada (SCC) as a Standards Development Organization (SDO).

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

This ANSI/CAN/UL/ULC 1275 Standard is under continuous maintenance, whereby each revision is approved in compliance with the requirements of ANSI and 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.

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 joint American National Standard and National Standard of Canada is based on, and now supersedes, the Fourth Edition of UL 1275 and ULC/ORD-C1275.

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>.

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This Edition of the Standard has been formally approved by the UL Standards Technical Panel (STP) on Flammable Liquid Storage Cabinets, STP 1275.

This list represents the STP 1275 membership when the final text in this standard was balloted. Since that time, changes in the membership may have occurred.

STP 1275 Membership

Name	Representing	Interest Category	Region
Beaver, Lisa	Aerojet Industrial Park	Commercial/Industrial User	USA
Boyland, Richard	N.C Dept. of Insurance	AHJ	USA
Carter, Glen	Justrite Mfg Co, LLC	Producer	USA
Jensen, Randy	Leonard Peterson & Co. Inc.	Producer	USA
Mailvaganam, Miles	Miles Mailvaganam	General Interest	Canada
Marando, Michael	NFPA	Non-voting member	USA

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Prusko, Jeff	Underwriters Laboratories Inc.	Non-voting member (Project Manager)	USA
Romine, Jeff	Shaw Industries Group Inc.	Commercial/Industrial User	USA
Rowe, Robert	Pyrocop Inc.	General Interest	USA
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Schaufele, Markus	Northwestern University	Commercial/Industrial User	USA
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Sinamon, Andrew	Mott Mfg. Ltd.	Producer	Canada
Sutton, David	Scientific Equipment & Furniture Association	General Interest	USA
Torkelson, Michael	Lawrence Berkeley National Laboratory	AHJ	USA
Wade, John	ULC Standards	Non-voting member (STP Chair)	Canada
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This Standard is intended to be used for conformity assessment.

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.

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INTRODUCTION

1 Scope

1.1 The cabinets covered by these requirements are intended for installation in accordance with the National Fire Protection Association Flammable and Combustible Liquids Code, NFPA 30, the Fire Code, NFPA 1, the relevant sections of the "National Fire Code of Canada" or the International Fire Code (IFC) published by the International Code Council.

1.2 A storage cabinet may have a maximum total storage capacity of not more than:

- a) In the United States: 120 US gal (454 L) of flammable and combustible liquids with the maximum capacity rating assigned by the manufacturer.
- b) In Canada: 132 US gal (500 L) of flammable and combustible liquids with the maximum capacity rating assigned by the manufacturer.

1.3 Construction and performance requirements for the cabinet are primarily based on the National Fire Protection Association Flammable and Combustible Liquids Code, NFPA 30, the Fire Code, NFPA 1, and the International Fire Code (IFC) published by the International Code Council.

2 Units of Measurement

2.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

3 Reference Publications

3.1 The documents shown below are referenced in the text of this Standard. Users are encouraged to apply the most recent edition of the reference indicated below.

UL Standards

UL 10B, *Fire Tests of Door Assemblies*

UL 33, *Heat Responsive Links for Fire-Protection Service*

ULC Standards

CAN/ULC-S104, *Standard Method for Fire Tests of Door Assemblies*

ULC-S505, *Standard for Fusible Links for Fire-Protection Service*

Other Standards

IFC, *International Fire Code*

NFC, *National Fire Code of Canada*

NFPA 1, *Fire Code*

NFPA 30, *Flammable and Combustible Liquids Code*

CONSTRUCTION

4 General

4.1 Cabinet construction shall comply with either Metal, Section 5, Wood or Section 6. Any cabinet type shall be subject to all the performance tests in this standard.

4.2 For all construction methods, a cabinet may be provided with a means for attaching a ground lug, ground wire, bond wire, or other device at the base of the cabinet on the outside to provide static electric charges with a discharge path to the building ground.

4.3 For all construction methods, a cabinet may be provided with vents as specified in (a), (b), or (c). If included, such vents shall be provided with removable plugs that shall remain in place unless the cabinet is connected to a ventilation system. When provided the vent location(s) shall be:

- a) Two diametrically opposed side vents located on opposite sides of the cabinet,
- b) Two vents located on opposite sides of the back,
- c) Two vents, one upper and one lower, or
- d) A single bottom rear vent.

4.4 The heat responsive link for self-closing doors shall comply with the Standard for Heat Responsive Links for Fire-Protection Service, UL 33, or the Standard for Fusible Links for Fire-Protection Service, ULC-S505 and be rated for a low or ordinary temperature classification.

4.5 Cabinets shall have self-closing doors.

4.6 Adjustable shelf support brackets shall be secured, double locked, or screwed in.

5 Metal

5.1 The bottom, top, door and sides of the cabinet shall be at least 0.042 in (1.07 mm) thick sheet metal.

5.2 The construction shall be double walled with a 1-1/2 in (38 mm) air space.

5.3 All joints shall be riveted, welded, or of an equally effective construction.

5.4 Doors shall be provided with a three-point locking arrangement and the door sill shall be located at least 2 in (51 mm) above the bottom of the cabinet.

6 Wood

6.1 The bottom, sides, and top shall be constructed of exterior grade plywood at least 1 in (25 mm) thick of a type that resists breakdown or delamination under fire conditions.

6.2 All joints shall be rabbeted and fastened in two directions with wood screws and where more than one door is used, there shall be rabbeted overlap of not less than 1 in (25 mm).

6.3 Doors shall be equipped with a means of latching and hinges shall be constructed and mounted in such a manner as to not lose their holding capacity when subjected to fire exposure.

6.4 A raised sill or pan capable of containing 2 in (50 mm) depth of liquid shall be provided at the bottom of the cabinet to retain spilled liquid within the cabinet.

PERFORMANCE

7 General

7.1 A different sample may be used for each test.

8 Fire Endurance Test

8.1 A storage cabinet is to be tested as described in [8.2](#) – [8.14](#). For all construction methods a cabinet shall limit the internal temperature to not more than 325 °F (163 °C) for a period of at least 10 min. All joints and seams shall remain tightly closed and any vents shall be plugged both internally and externally during the test. No conditions shall develop that indicate disintegration of parts or materials likely to affect the tightness of closure.

8.2 Representative samples of each product line are to be subjected to the test. If a given line of cabinets differ only in size, and not in such details as wall thickness, hinge constructions, and the like, the largest size is to be selected for test. Intermediate sizes might be required for test if the interior dimensions vary from those of the largest cabinet to result in a reduction of the volume by more than 50 %.

8.3 The test enclosure is to consist of six 4 ft by 8 ft (1.2 m by 2.4 m) panels. Each panel is to be made of 18 gauge (1.02 mm) steel. Two panels are to be used for the front of the test enclosure, two panels for the back of the test enclosure and one panel for each side. The bottom of the enclosure is to be a concrete floor and the top is to be open.

8.4 Angle irons are to be used to stiffen the test panels and raise the panels 6 in (152.4 mm) from the floor. To secure adjacent panels together C-clamps are to be used at the top and bottom.

8.5 Holes are to be cut into the test enclosure for lighting the pilot piping and for locating thermocouples that will measure the enclosure temperature.

8.6 The piping manifold is to have two main branches. Each branch is to consist of four legs. Each leg is to have one burner assembly. Three burner assemblies are to be on each long side of the test enclosure. One burner assembly is to be on each short side of the test enclosure. The test enclosure is to have a total of 8 burner assemblies. See [Figure 8.1](#).

Figure 8.1
Pipe assembly

