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NATIONAL STANDARD

ANSI/CAN/UL/ULC 1275:2024

STANDARD FOR SAFETY

Flammable Liquid Storage Cabinets

Approved American National Standard
ANSI
ANSI/UL 1275-2024

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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 revision of ANSI/CAN/UL/ULC 1275 dated June 14, 2024 includes the following changes in requirements:

– Editorial Changes; 5.2

– Requirements Changes for ANSI/CAN/UL/ULC 1275; 4.1, Section 6A

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

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated March 29, 2024.

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ANSI/CAN/UL/ULC 1275:2024

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 including revisions through June 14, 2024.

The most recent designation of ANSI/UL 1275 as an American National Standard (ANSI) occurred on June 14, 2024. 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 June 14, 2024.

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CONTENTS

No Text on This Page

Preface

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

ULSE 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 Fifth Edition 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.

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.

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 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 Technical Committee (TC) on Flammable Liquid Storage Cabinets, TC 1275.

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

TC 1275 Membership

NAME	AFFILIATION	CATEGORY	REGION
Beaver, Lisa	Aerojet Industrial Park	Commercial / Industrial User	USA
Jensen, Randy	Leonard Peterson & Co. Inc.	Producer	USA
Mailvaganam, Miles	Standards Individuals	General Interest	Ontario
Minister, Andrew	Pacific Northwest National Laboratory	Commercial / Industrial User	USA
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TC 1275 Membership Continued on Next Page

TC 1275 Membership Continued

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International Classification for Standards (ICS): 23.020.99, 75.200

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, Section 6 or Alternate Section 6A. 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. The air space may be filled with insulation or other materials to meet the requirements in the fire endurance test.

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.

6A Alternate

6A.1 Alternatives to the combinations of materials, designs, and constructions described in Metal, Section 5, and Wood, Section 6, shall be permitted, provided the cabinet complies with the performance tests in Sections 8, 9, 10 and 11 of this Standard.

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