UL 2255

STANDARD FOR SAFETY

Receptacle Closures

UL Standard for Safety for Receptacle Closures, UL 2255

Third Edition, Dated May 17, 2021

SUMMARY OF TOPICS:

This new edition of ANSI/UL 2255, Standard for Receptacle Closures, dated May 17, 2021, incorporates editorial changes including renumbering and reformatting to align with current style.

The requirements are substantially in accordance with Proposal(s) on this subject dated February 26, 2021.

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UL 2255

Standard for Receptacle Closures

First Edition – February, 1999
Second Edition – February, 2011

Third Edition

May 17, 2021

This ANSI/UL Standard for Safety consists of the Third Edition.

The most recent designation of ANSI/UL 2255 as an American National Standard (ANSI) occurred on May 17, 2021. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

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

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INTRODUCTION

1 Scope

1.1 These requirements cover products which are molded of insulating material and are intended to cover the outlet slots of receptacles having 1-15R and 5-15R configurations in accordance with Wiring Devices-Dimensional Specifications, ANSI/NEMA WD6.

1.2 These requirements do not cover insulating devices provided to cover the unused outlets of a multi-outlet cord connector employed on a general-use cord set. The requirements for these devices are contained in the Standard for Cord Sets and Power-Supply Cords, UL 817.

1.3 These requirements do not cover receptacle closures provided as part of a flush device cover plate. These devices are covered by the requirements in the Standard for Metallic Outlet Boxes, UL 514A, or in the Standard for Nonmetallic Outlet Boxes, Flush-Mounted Boxes, and Covers, UL 514C.

2 Glossary

2.1 For the purposes of this Standard, the following definition applies.

2.2 RECEPTACLE CLOSURE – A product molded of insulating material intended to be used to cover the outlet slots of a receptacle to:

a) Reduce drafts through a receptacle on an outside wall of a dwelling, or

b) Restrict a child's access to energized contacts.

3 Components

3.1 Except as indicated in 3.2, a component of a product covered by this Standard shall comply with the requirements for that component.

3.2 A component is not required to comply with a specific requirement that:

a) Involves a feature or characteristic not required in the application of the component in the product covered by this standard, or

b) Is superseded by a requirement in this standard.

3.3 A component shall be used in accordance with its rating established for the intended conditions of use.

3.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

4 Units of Measurement

4.1 When a value for measurement is followed by a value in other units in parentheses, the second value may be only approximate. The first stated value is the requirement.

5 Referenced Publications

5.1 Any undated reference to a code or standard appearing in the requirements of this Standard shall be interpreted as referring to the latest edition of that code or standard.

5.2 The following publications are referenced in this Standard:

Code of Federal Regulations 16 Part 1501, *Method for Identifying Toys and Other Articles for Use by Children Under 3 Years of Age Which Present Choking, Aspiration, or Other Ingestion Hazards Because of Small Parts*

NEMA WD6, *Wiring Devices – Dimensional Specifications*

UL 514A, *Metallic Outlet Boxes*

UL 514B, *Conduit, Tubing, and Cable Fittings*

UL 514C, *Nonmetallic Outlet Boxes, Flush-Mounted Boxes, and Covers*

UL 746C, *Polymeric Materials – Use in Electrical Equipment Evaluations*

UL 817, *Cord Sets and Power-Supply Cords*

CONSTRUCTION

6 General

6.1 A receptacle closure shall not have any colors, pictures, brightly colored patterns, or other markings that attract a child's attention or encourage exploration.

6.2 A receptacle closure that is also intended to reduce drafts through a receptacle on an outside wall of a dwelling and that is not intended to restrict a child's access to energized contacts shall be packaged together with an insulating gasket to be fitted behind the receptacle cover plate. The gasket shall comply with UL 514B.

7 Insulating Materials

7.1 A receptacle closure shall employ an insulating material with the following minimum ratings:

a) Hardness of 70 or greater on the Shore Durometer D scale (when measured for 5 seconds at an ambient temperature of 23 ±2 °C [73.4 ±3.6 °F]);

b) Flame class of HB;

c) Relative thermal index (RTI) ratings of 60 °C for the electrical, mechanical with impact and mechanical without impact parameters;

d) Minimum dielectric strength of 5 kV at the use thickness; and

e) Hot-wire ignition (HWI) ratings based upon the flame class of the material as shown in Table 7.1.

Exception: An insulating material is not required to comply with the HWI requirements when it complies with the Glow-Wire End-Product Test at 750 °C as described in UL 746C. The glow-wire probe shall not be applied to the closure directly behind either of the closure blades during the test.

Table 7.1
Hot Wire Ignition (HWI) Ratings

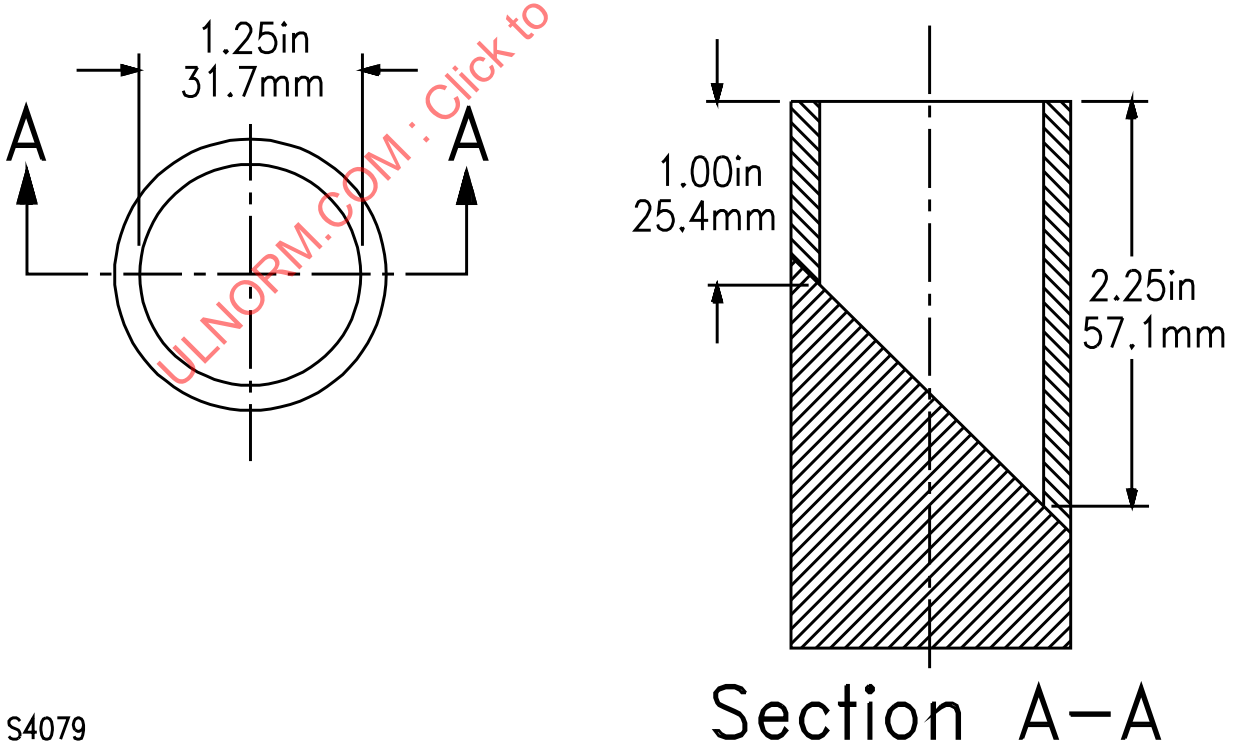
Flame class	HWI performance level class
HB	2
V-2	3
V-1	3
V-0	4

8 Dimensions

8.1 The overall dimensions of a receptacle closure shall be sized so that the closure will not fit entirely into the small parts cylinder shown in Figure 8.1. Receptacle closures that have separable parts, such as the foam-gasket type, shall have each part individually tested for insertion into the small parts cylinder. Separable foam gaskets or separable parts intended to be slipped onto the blade length of a receptacle closure as identified in 2.2 (b), shall also be individually tested without being frictionally secured to the receptacle closure. The closure is not to be compressed during this evaluation.

Exception: Packaging; any separable parts that the user is specifically instructed to discard either prior to or upon completion of the installation (with the flush-device cover plate installed); and any part or parts that are not separable (i.e. reliably captive upon completed installation of flush-device cover plate) shall not be subjected to the small parts cylinder test. Compliance is checked by review of the smallest unit packaging instruction.

Figure 8.1
Small Parts Cylinder[a]



[a] Small parts cylinder described in Figure 1 of the Code of Federal Regulations 16 Part 1501, "Method for Identifying Toys and Other Articles for Use by Children Under 3 Years of Age Which Present Choking, Aspiration, or Other Ingestion Hazards Because of Small Parts"

8.2 The perimeter of the face of a receptacle closure shall encompass an area equal to or larger than that indicated in Figure 8.2.

8.3 The blades of a receptacle closure shall comply with the blade dimensions specified for the 1-15P configuration in Wiring Devices – Dimensional Specifications, ANSI/NEMA WD6. A closure provided with a slight taper in the separation between the closure blades at the tip (either toward or away from each other) to increase the ability of the closure to remain seated in an outlet is considered to comply with this requirement.

Exception: The blade thickness of a receptacle closure ranging between 0.050 to 0.075 inches (1.3 to 1.9 mm) outside the minimum blade contact area as shown in Figure 8.3 meets the intent of the requirement.

Figure 8.2

Minimum Closure Face Dimensions

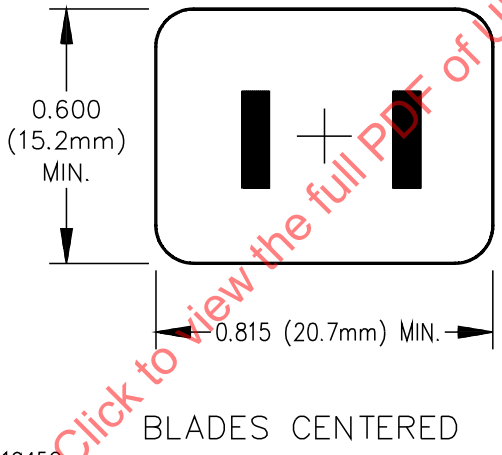


Figure 8.3

Minimum Blade Contact Area and Blade Dimensions