UL 858

STANDARD FOR SAFETY

Household Electric Ranges

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UL Standard for Safety for Household Electric Ranges, UL 858

Sixteenth Edition, Dated November 7, 2014

Summary of Topics

This revision of ANSI/UL 858 dated July 2, 2026 includes the following changes in requirements:

– Cooking Appliances Employing a Steam Function; Section 122

– Update to Nichrome Wire Test; 10.24.1, 10.24.3 – 10.24.6, Figure 10.3, Section 77A (title), 77A.1.1, 77A.7 – 77A.11, Table 77A.1, and Figure 77A.1.

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 November 7, 2025.

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The Department of Defense (DoD) has adopted UL 858 on November 9, 1976. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

Comments or proposals for revisions on any part of the Standard may be submitted to ULSE 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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INTRODUCTION

1 Scope

1.1 These requirements cover household cooking equipment that is floor or cabinet supported, wall-mounted, counter mounted, or combinations thereof, rated 600 V or less, for installation in accordance with the National Electrical Code.

1.2 These requirements also cover ventilating hoods that are provided as an integral part of the cooking equipment, or that are separately supported on the building structure but arranged for factory-provided electrical connection to the cooking equipment with which they are intended to be used.

1.3 These requirements do not cover commercial cooking appliances.

1.4 These requirements do not cover special types of household cooking appliances. However, if such appliances are used as a part of a range, oven, surface assembly, or combination thereof, they will be judged on the basis of compliance with the requirements in this standard, insofar as they apply, and further appropriate examination and tests in accordance with the applicable requirements for electric heating appliances. These requirements do not cover all tests required on household cooking appliances having microwave ovens.

1.5 For the purpose of these requirements, cooking equipment includes ranges, ovens, surface assemblies, or combinations thereof. A range is considered to be a combination of a surface assembly with one or more ovens. Wall-mounted cooking equipment is considered to be those appliances intended for mounting in or on a wall or other vertical surface of a building or cabinet. Counter-mounted cooking equipment is considered to be those appliances intended for mounting in or on a counter or other horizontal surface of a building or cabinet.

1.6 In the following text, a requirement that applies only to one, two, or three of the classes of equipment coming within its scope – ventilating hoods, ranges, wall-mounted ovens, counter-mounted cooking units, or combinations thereof – are so identified. In the absence of such specific reference, or if the term appliance is employed, it is to be understood that the requirement applies to all of these classes of equipment.

2 Glossary

2.1 For the purpose of this standard the following definitions apply.

2.1.0 CLOSED LOOP COOKING – A cooking process whereby a feedback device, either wired or wireless, provides a parameter to the appliance control designed to automatically regulate the power of one or more surface units to achieve and maintain a target value.

Note 1: The feedback device of the closed loop cooking system may be integral to the appliance or be a peripheral device designed to work with the appliance control.

Note 2: The feedback parameter can be a sensing value, typically but not restricted to temperature, but also a target value, typically but not restricted to temperature or power level, that is processed by the appliance control(s) integral to the appliance.

2.1.1 COIL SURFACE UNIT – A sheathed heating cooktop element that is intended to directly support and heat a cooking utensil.

2.2 COMPONENT – A device or fabricated part of the appliance covered by the scope of a safety standard dedicated to the purpose. When incorporated in an appliance, equipment otherwise typically field

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installed (e.g. luminaire) is considered to be a component. Unless otherwise specified, materials that compose a device or fabricated part, such as thermoplastic or copper, are not considered components.

2.3 CONTINUOUS-CLEANING OVEN – An oven that utilizes treated surfaces on the interior of the oven and on insert panels of the oven to gradually reduce oven soil during normal baking or roasting operations.

2.3.1 COOKTOP – A combination of multiple cooktop elements and which may include controls on the top surface of an appliance.

2.4 COOKTOP ELEMENT – Any grill, griddle, deep-fat fryer, surface unit, or the like, on the top surface of an appliance, that is used as a source of heat.

2.4.1 ELECTRICAL CONNECTION – The physical interface between two points in a circuit such as spade terminals, pin terminals, micro switch contacts, relay contacts, timer contacts, crimped connections, and connections that are welded or soldered.

2.4.2 FLAME CYLINDER – A projection of a vertical cylinder having a diameter of 20 mm and a height of 50 mm.

2.5 HIGH-VOLTAGE CIRCUIT – A circuit involving a potential of not more than 600 V and having circuit characteristics in excess of those of a low-voltage circuit.

2.5.1 INDUCTION COOKTOP APPLIANCES – Appliances having single or multiple induction cooktop surface units that can heat at least one metallic vessel by means of eddy currents. The eddy currents are induced to the cooking vessel by the electromagnetic field of a coil.

2.5.2 INDUCTION WOK – Cooktop surface unit with concaved shaped surface unit to accept and heat a wok container.

2.6 LOW-VOLTAGE CIRCUIT – A circuit involving a potential of not more than 30 V and supplied by a primary battery, by a standard Class 2 transformer, or by a combination of a transformer and a fixed impedance that, as a unit, complies with all of the performance requirements for a Class 2 transformer. A circuit derived from a high-voltage circuit, by connecting resistance in series with the supply circuit as a means of limiting the voltage and current, is not considered to be a low-voltage circuit.

2.7 OVEN-DOOR INTERLOCK – An automatically-operated device that prohibits access to the interior of the oven during the high-temperature portion of the self-cleaning cycle.

2.7A REMOTE CLOSED LOOP COOKING – A closed loop cooking process whereby the target setting can be adjusted by an external device, such as a smart phone or computer.

2.8 SELF-CLEANING OVEN – An oven that utilizes elevated temperatures during a separate high-heat cycle to reduce oven soil to light ash.

2.9 SURFACE UNIT – A cooktop element intended to support and heat a cooking utensil.

2.10 TEMPERATURE-LIMITING CONTROL – A control that functions only under conditions that produce abnormal temperatures.

2.11 TEMPERATURE-REGULATING CONTROL – A control that functions to regulate the temperature of the appliance under normal conditions of use.

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2.12 THERMAL CUTOFF – A temperature or temperature and current sensitive device incorporating a thermal element for protecting a circuit by opening the protected circuit when the device reaches a predetermined temperature. It is intended to:

a) Reduce the risk of fire due to overheating of a product during abnormal operation; and

b) Operate only once, that is it can not be reset or reconditioned for reuse.

2.13 WARMING ELEMENT – A surface element intended for keeping previously cooked foods warm but not intended to continue the cooking process. Typically, a warming element is low wattage with a wattage rating of approximately 10 percent of a surface cooking element.

3 Units of Measurement

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

4 References

4.1 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.

CONSTRUCTION

5 General

5.1 An appliance shall employ materials and components throughout that are acceptable for the use, and shall be made and finished with the degree of uniformity and grade of workmanship practicable in a well-equipped factory.

5.2 A material of asbestos composition shall not be used.

5.3 For an appliance provided with casters, the casters shall be adjustable so that when they are in the locked position, the appliance rests on feet or the equivalent on the floor.

5.4 A component of a product covered by this Standard shall:

a) Comply with the requirements for that component as indicated in the individual section covering that component;

b) Be used in accordance with its rating established for the intended conditions of use;

c) Be used within its established use limitations or conditions of acceptability; and

d) Additionally comply with the applicable requirements of this end product Standard.

Exception No. 1: A component of a product covered by this Standard is not required to comply with a specific component requirement that:

a) Involves a feature or characteristic not required in the application of the component in the product;

b) Is superseded by a requirement in this Standard; or

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