

UNDERWRITERS LABORATORIES INC. CERTIFICATION REQUIREMENT DECISION

This Certification Requirement Decision is prepared by UL LLC. It is normative for the applicable UL Product Certification Program(s); however, it is currently not part of the UL Standard(s) referenced below.

Product Category (CCN): IPWZ

Standard Number: UL 982

Standard Title: Standard for Motor-Operated Household Food Preparing Machines

Edition Date: June 10, 2015

Edition Number: 7

Section / Paragraph Reference: 28.4, 34.3, 69.3.4, 73.2

Subject: Vacuum Blender

DECISION:

4.37 Vacuum blender – A blender that incorporates, or is provided with, a pump to create a vacuum in the blender container during blending.

6.14A Pumps

6.14A.1 A pump provided with a vacuum blender shall comply with the construction and performance requirements of this Standard, unless it complies with the Standard for Motor-Operated Air Compressors, Vacuum Pumps, and Painting Equipment, UL 1450.

19.3 With respect to 19.1(b), a vacuum blender shall be provided with a means to prevent the vacuum pump from picking up liquid in the blender container if it increases the risk of electric shock or fire. The Ingress Test of 38.2.2 shall be conducted to determine if liquid ingress results in a risk of fire or electric shock. If the backflow prevention means is removable without the use of tools or the user is instructed to remove it for cleaning, the blender shall be subjected to the Ingress Test of 38.2.2 without the backflow prevention means in place.

28.4.3.1 An open-top container of a blender or a blender-type drink mixer shall be provided with a cover having one or more openings. Each cover opening shall not have a dimension larger than 2-5/8 in (66.7 mm). At least one opening shall be provided with a minimum 1 in (25.4 mm) dimension for adding ingredients while blending and to serve as a vent when blending hot liquids.

Exception No. 1: For an individual serving size open-top blender container:

- a) The cover drink opening shall have a minimum dimension of less than 1 in (24.5 mm), but no dimension less than 0.5 in (12.7 mm),*
- b) The product shall be subjected to the Overflow Test of 38.1, but the Blender Cover Opening Splash Test is not applicable,*
- c) With the lid in place, the articulate probe of Figure 7.1, when applied through the drink opening, shall not be made to contact moveable parts capable of causing injury, and*
- d) The blender container shall be marked in accordance with 69.3.4.*

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Exception No. 2: A vacuum blender shall be provided with a cover for vacuum blending or a means to block the cover opening when blending with a vacuum in the container. A cover for vacuum blending shall have means to release the vacuum pressure in the blending container when vacuum blending is completed, but is not required to be provided with a cover opening if the cover is marked in accordance with 69.3.4 and:

a) The blender is provided with a separate cover with a suitable cover opening(s),

b) The cover is interlocked to prevent operation without the cover in place, or

c) The top of the blender container is guarded by the vacuum pump assembly external to the blender container such that the maximum distance between the vacuum pump assembly and inside edge of the blender container, with the cover removed, is less than 1 inch (24.5 mm), so ingredients cannot readily be added during operation.

28.4.4.7 To determine if a closed top thermoplastic blender container or a vacuum blender container without an opening in the cover complies with 28.4.4.1, the blender is to be tested as mentioned in 28.4.4.4 - 28.4.4.6 except that the test fixture shown in Figure 28.2 is not to be used. Instead, the ice cubes are to be placed in the container prior to the blender being energized.

34.3.4 For the Input Test, the blender is also to be operated while blending with a vacuum in the blending container. If possible under normal use, the vacuum pump and blender are to be operated simultaneously. Otherwise, the vacuum pump input and blending input are to be measured separately with the blender operated as specified in 34.3.1 after 30 seconds of the blending function. The carrot/water specified in 34.3.2 is to be used, but the capacity shall not exceed the rated capacity for blending under a vacuum.

34.3.5 For the Normal Temperature Test, a vacuum blender is also to be operated as intended for vacuum and blending functions with a vacuum in the blender container as specified in 34.3.1 and 34.3.4. The vacuum pump is to be operated at the beginning of each cycle. The vacuum pump is to be operated for the maximum time allowed when the pump operation is terminated automatically after a set time or pressure is achieved. If the pump operation is not automatically terminated, the vacuum pump is to be operated for 30 seconds or the time specified in the manufacturer's instructions, whichever is greater.

38.2.2 To determine if a vacuum blender complies with 19.3, the blender container is to be filled to maximum capacity with the salt water solution of 38.2.1. The blender cover is to be secured in place, the blender connected to a supply circuit as specified in 29.3 and the vacuum pump operated for one cycle or until water is no longer picked up. If the vacuum pump can operate at the same time as the blender, the test is to be repeated with the blender and the pump operating simultaneously. During the test, the appliance shall comply with the Leakage Current Test, Section 30. Following the test, the appliance shall comply with the Dielectric Voltage-Withstand Test, Section 35.

69.3.4 For a closed top blender; an individual serving size open-top blender container, in accordance with the Exception to 28.4.3.1; and a blender with pour openings on the cover, in accordance with the Exception No. 2 to 28.4.3.2; the container or cover shall be marked "Do Not Blend Hot Liquids." For a vacuum blender, the container or cover shall be marked "Do Not Blend Hot Liquids" or, if provided with a separate cover with an opening in accordance with 28.4.3.1, the cover intended for vacuum blending shall be marked "Do Not Use This Cover When Blending Hot Liquids."

73.2.1 The following shall be included in the Instruction Manual for blending mixers in addition to any other safety instructions required by the standard:

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