

Subject 1647

June 15, 2018

SUMMARY OF TOPICS

The following changes in requirements to the Standard For Safety For Motor-Operated Massage and Exercise Machines, UL 1647, are being proposed:

1. Construction requirement revision or clarification for Wood or Wood Composite Enclosure Materials

STP BALLOTS AND ALL COMMENTS DUE: July 16, 2018

UL's goal is to have no interest category comprise more than one-third of the STP membership balance. To improve the current balance for STP 1647, UL is looking for participants in the AHJ, Commercial/ Industrial Users, Consumers, Government and Supply Chain interest categories. Definitions for these interest categories are available on the Standards STP Internet site:

<http://ulstandards.ul.com/develop-standards/participation/interest-categories/>

If you are interested in applying for STP 1647 membership or are aware of potential candidates for this STP, please contact the STP Project Manager, Wilbert Fletcher, Wilbert.fletcher@ul.com.

For your convenience in review, proposed additions to existing requirements are shown underlined and proposed deletions are shown ~~lined-out~~.

1. Construction requirement revision or clarification for Wood or Wood Composite Enclosure Materials

RATIONALE

Proposal submitted by: MICHELLE ANDERSEN, UL L L C

Nonmetallic enclosure materials are generally covered by 7.1.5. For an enclosure constructed of wood or wood composite materials, additional guidance is needed. With respect to combustion, parts formed of wood or wood composite must be isolated from ignition sources to reduce the risk of ignition. The Impact Test should be conducted to evaluate the resistance to mechanical damage and impact. In addition, the temperatures on the interior surface of the wood enclosure should not exceed 65 °C rise per Table 49.1. These requirements are based on similar requirements in UL 471.

PROPOSAL

7.1.5.1 With respect to resistance to combustion, wood or wood composite materials used to form outer enclosures shall be separated from ignition sources. In addition, the construction shall comply with the following:

- a) The enclosure shall comply with the Impact Test of 66.2 without exposure of live parts, including insulated wiring, or moving parts capable of causing injury; and

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b) Temperatures on the enclosure material during normal operation shall not exceeding the limit specified in Table 49.1 for wood or other combustible material

7.1.5.2 Ignitions sources within line-voltage circuits of the appliance are considered to be:

- a) uninsulated electrical connections, such as splicing wire connectors, quick-connect terminals, terminal connectors and other forms of wire connectors,
- b) printed circuit board traces,
- c) open coils and windings,
- d) open contacts, and
- e) wiring not employing VW-1 insulation.

Exception No. 1: Type S, SE, SO, SOO, ST, STO, STOO, SJ, SJE, SJO, SJOO, SJT, SJTO, AND SJTOO power cords are not considered to be ignition sources.

Exception No. 2: Impedance protected motors employing open-coil or exposed winding constructions are not considered to be ignition sources if they comply with 7.1.7(a)(2) without emission of flames or molten metal from the motor housing.

Exception No. 3: Thermally protected motors having openings in their enclosures are not considered to be ignition sources if they comply with the requirements in 7.1.7(a)(3) or 7.1.7(a)(4).

Exception No. 4: Transformers complying with the Standard for Low Voltage Transformers: General Requirements, UL 5085-1, and the Standard for Low Voltage Transformers: General Purpose Transformers, UL 5085-2, are not considered to be ignition sources.

7.1.5.3 Separation of ignition sources from wood or wood composite materials shall consist of barriers and spacing as illustrated in Figure 7.2 as follows:

- a) A part located vertically below the ignition source and within Space A of Figure 7.2 shall be isolated by means of a barrier located and sized so that the barrier covers 5° beyond each side of the ignition source as illustrated in Fig 7.2.
- b) A part located vertically above the ignition source and within Space B of Figure 7.2 shall be isolated by means of a barrier located and sized so that the barrier covers 30° beyond each side of the ignition source as illustrated in Figure 7.2 and so that the minimum distance between the nonmetallic material and ignition source is no less than 4 inches (102 mm).
- c) A part located horizontally from the ignition source shall be isolated by means of a barrier located and sized so that the minimum straight line distance between the nonmetallic material and the ignition source is no less than 4 inches (102 mm).

Exception: When the only ignition source is wiring not employing VW-1 insulation the minimum distance between the nonmetallic material and the ignition source may be 2 inches (51 mm).

7.1.5.4 The barrier specified in 7.1.5.3 shall be of metal or a nonmetallic material having a flammability class as specified in 7.2.1.

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