

## STANDARD INFORMATION

**Standard Number:** UL 94  
**Standard Name:** Tests for Flammability of Plastic Materials for Parts in Devices and Appliances  
**Standard Edition and Issue Date:** 6<sup>th</sup> Edition Dated March 28, 2016  
**Date of Revision:** September 26, 2017  
**Date of Previous Revision of Standard:** February 17, 2017

## EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

**Effective Date:** **September 30, 2019**

## IMPACT, OVERVIEW, AND ACTION REQUIRED

**Impact Statement:** A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

**Overview of Changes:** Revisions for Horizontal Burning Foamed Material Test. Specific details of new/revised requirements are found in table below.

**If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).**

### Client Action Required:

**Information** – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

***Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.***



## STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		<i>Additions to existing requirements are underlined and deletions are shown lined out below.</i>
12	Info	<b>Horizontal Burning Foamed Material Test; HBF, HF-1, or HF-2</b>
12.5	Info	<b>Procedure</b>
12.5.1		<p>The specimen support gauze is to be held in a support fixture similar to Figure 12.1 such that the major section is horizontal and <math>13 \pm 1</math> mm above the tip of the burner wing tip, and <math>175 \pm 25</math> mm above a horizontal layer of <u>maximum 0.08 g</u> each of absorbent 100 percent cotton, thinned to approximately <del>50</del> <u>75</u> x <del>50</del> <u>75</u> mm and a maximum thickness of 6 mm. The cotton is to be located under <del>the front upturned portion of the wire cloth</del> <u>such that it is below the front end of the specimen and extends at least up to 60 mm reference mark on the specimen.</u></p>
		<p>The test specimen is to be placed flat on the wire cloth with the gauge marks facing up. The end closer to the 60 mm mark is to be placed <del>in contact with the upturned end of the wire cloth</del> <u>on the wire cloth such that the edge of the specimen width is between the 2<sup>nd</sup> and 3<sup>rd</sup> vertical wire (from the left) of the rectangular wire cloth when the set-up is viewed from the top (refer to the top-view of the set-up in Figure 12.2).</u></p>
12.5.3		<p>Note 1: Specimens with a high density exterior on one side are to be tested with that side facing down. Specimens with adhesive on one side are to be tested with that side facing up.</p> <p>Note 2: If a new wire cloth is not used for each test, any material remaining on the cloth from previous tests is to be burned off, and the cloth is to cool before conducting the test.</p> <p><u>Note 3: To fix the position of the specimen on the wire mesh, stoppers may be used as references on the frame.</u></p>
12.5.4		<p>The Methane gas supply to the burner (without the wing tip) shall be adjusted to <u>produce a gas flow rate of <math>965 \pm 30</math> ml/min with a back pressure of <math>50 \pm 10</math> mm water.</u> The <del>burner with</del> wing tip is then to be placed on the burner remote from the specimen support, burner ignited, and adjusted to provide a blue flame <math>38 \pm 2</math> mm high, when measured in subdued light. The flame is to be obtained by adjusting the gas supply, <u>back pressure</u> and the air-port of the burner until a <math>38 \pm 2</math> mm yellow-tipped blue flame is produced. The air supply is increased until the yellow tip disappears. The height of the flame is to be measured again and readjusted, if necessary. The flame height measurement should be made from the outside edges of the curved wingtip.</p> <p><u>Note: A mass flow meter is the preferred means of controlling accurately the input flow rate of gas to the burner. Other methods may be used if they can show equivalent accuracy and demonstrate that the final gas flow rate remains in the range of <math>965 \pm 30</math> ml/m. Refer to the side-view of the set-up in Figure 12.2.</u></p>



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12.5.5		<p>The burner is then to be quickly placed in position <del>beneath the wire gauze under the upturned end of the specimen support so that one edge of the flame is in line with the upturned end of the wire gauze and the other edge of the flame extends into the front end of the specimen. See Figure 12.2 under the foam specimen so that the inner edge of the burner wing-tip is in line with the outer edge of the specimen as shown in Figure 12.2.</del> <u>The distance from the burner wing tip to the lower surface of the wire cloth shall be <math>13 \pm 1</math> mm.</u></p> <p>Note 1: The center of the width of the wing tip is to be in line with the longitudinal axis of the specimen.</p> <p>Note 2: <u>The burner movement may happen in a direction which is either parallel or perpendicular to the flame-application end of the specimen as shown in Figure 12.1.</u></p>
<p><b>CUSTOMERS PLEASE NOTE: This Table and column "Verdict" can be used in determining how your current or future production is or will be in compliance with new/revised requirements.</b></p>		