ED01 – TESTS FOR FLAMMABILITY OF PLASTIC MATERIALS – UL 94

TECHNICAL DATASHEET

The method described in the UL 94 standard involves standard size specimens and are intended to be used solely to measure and describe the flammability properties of materials, used in devices and appliances, in response to heat and flame under controlled laboratory conditions. The actual response to heat and flame of materials depends upon size and form, and also on the end-use of the product using the material. Assessment of other important characteristics in the end-use application includes, but is not limited to, factors such as ease of ignition, burning rate, flame spread, fuel contribution, intensity of burning, and products of combustion.
The final acceptance of the material is dependent upon its use in complete equipment that conforms with the standards applicable to such equipment. The flammability classification required of a material is dependent upon the equipment or device involved and the particular use of the material.

The bench-model test chamber can be used to perform the following flammability tests:

- 94HB (ASTM D 635, ISO 1210) Horizontal test
- 94 V-0 V-1-V-2 (ASTM D 3801) Vertical test
- 94 5VA - 5VB (ASTM D 5048, ISO 9772) 125 mm flame
- VTM-0-1-2 (ASTM D 4804, ISO 9773) Vertical test for non stiff materials
- HBF – HF 1-2 (ASTM D 4986, ISO 9772) Horizontal test for foamed polymeric materials

Technical features:

- Bench-model test chamber with front doors to open for inspection and cleaning.
- Front panel with two inlets to allow sample and test tools handling inside the chamber.
- Fume aspirator (mm. 100) to actuate at the end of the test.
- Methane gas feeding panel complete with flow meter with adjusting tap and pressure gauge.
- Built-in starting and timing system.
- Flame measuring and adjusting system according to ASTM D 5207

Cabin dimensions: volume 1,2 cu.m. (1200 x 800 x 1400 h mm) / Weight:95 Kg.
Overall dimensions: 1400 x 900 x 1650 h mm
Size for transport packaging: 1500 x 1000 x 1650 h mm

Supply:

- Timing system for flame application, post-combustion and priming.
- Thermometer connected to the thermocouple for flame temperature measurement.

- Burner according to ASTM D 5025
- two thermocouples with copper block (5mm/9mm)
- 20°, 45°, 90° burner supports
- Laboratory stand complete with joints and clamp
- 20 mesh stainless steel wire gauze, approx. 125 mm²
- Support for soft specimens
- 12.7 mm Ø. Mandrel for specimen winding

Accessories:

HBF kit

Optional kit for tests according to HBF standard including:
- 1 height-adjustable structure to support the sample-support wire gauze
- 1 6.4-mesh, 215x75 mm, stainless steel wire gauze, right angle bent
- 1 48-mm choke for Bunsen
- 470x200 mm support with sliding rod for the burner

Code	Description
10095401	UL 94 test chamber with accessories
10101104	Kit for tests according to HBF standard

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