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INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS

MATERIAL AND PROPERTY STANDARD

FOR

POROUS FILTER PROTECTOR FOR SUB-DRAIN WEEP HOLES

IAPMO PS 100-96

1. PURPOSE

- 1.1** The purpose of this standard is to establish a generally acceptable standard for porous filter protector for sub-drain weep holes. Its purpose is to serve as a guide for producers, distributors, architects, engineers, contractors, installers, inspectors and users; to promote understanding regarding design, materials, and the installation; and to provide for identifying porous filter protector for sub-drain weep holes that conform to this standard.
- 1.2** The provisions of this Standard are not intended to prevent the use of any alternate material, or method of construction, provided any such alternate meets or exceeds the intent of this Standard.

2. SCOPE

- 2.1** This Standard covers the requirements for porous filter rings installed in the field or supplied by factory as a component of a sub-drain. This Standard covers methods of testing and other significant properties, in addition to the method of marking and identification.

3. DEFINITIONS

- 3.1** Porous filter ring is used to protect the top surface of a sub-drain (in a shower drain or floor drain installation) from mortar blockage, for the purpose of maintaining an easy flow path for water from the mortar bed to flow to the weep holes.

4. GENERAL REQUIREMENTS

- 4.1** The porous filter structure shall be such as to strain mortar particles from entering upon the sub-drain flange, yet shall allow water flow to permeate into and through the filter from any location of the overlying mortar, subsequently allowing flow into the weep holes.

The filter shall lie flat upon the sub-drain surface, so as to prevent mortar particles from entering the sub-drain flange area by intruding under the edges of the filter. The filter may

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contain interior openings located to allow the placement of the filter over any bolt heads that may be protruding above the flange of the sub-drain, for the purpose of allowing the filter to lie in contact with the flange surface.

The filter shall cover substantially all of the surface of the sub-drain flange, (from contact with the drain neck to within 1/4" (6.4 mm) from the outside edge of the flange) straining the particles from entering that area. The porous filter shall be constructed of materials that will not disintegrate in water.

5. TESTING REQUIREMENTS

5.1 Laboratory Test preparation For Water permeability. This test shall be performed on a 16" x 16" (406.4 mm x 406.4 mm) swatch of filter material. A wooden form composed of four (4) pieces of nominal 1" x 2" (25.4mm x 50.8 mm) lumber shall be constructed as a 14" (355.6 mm) (inside dimensions) square. The filter swatch shall be placed on a smooth, level, flat, waterproof surface. The wooden form shall be placed centrally upon the swatch. Insert a piece of 2" (50.8 mm) ID x 6" (152.4 mm) long pipe standing on end upon the center of the filter swatch. Following requirements for mortar mixture and placement as set forth in ANSI 108.1, Installation of Ceramic Tile (A-4.1.2.3), place mortar over the filter swatch and around the pipe to a level flush with the top of the form. Care should be taken to prevent mortar from entering the pipe. Mortar shall be allowed to cure for a minimum of thirty-six (36) hours prior to testing.

5.1.1 Test Method. Water shall be poured onto the mortar bed and into the pipe until the mortar bed and filter reach saturation. Once saturation is complete and pipe is drained completely, begin pouring 0.25 gallon (0.95 liters) of water into the pipe. Maintain the water level above halfway up the pipe until all of the water has been poured into the pipe. Upon beginning the pour, immediately start timing the amount of time it takes for the pipe to become empty. Stop the timer when the top of the filter material first becomes visible above the water. Repeat this test five (5) times, recording each time.

5.1.2 Performance Requirement. The permeable filter shall be able to dissipate the 0.25 gallon (0.95 liters) of water in under one (1) minutes. Failure to dissipate this water volume in under one (1) minutes (average) shall be cause for rejection.

6. MARKING AND IDENTIFICATION

- 6.1** Each filter label shall be marked with at least the following:
- (a) Manufacturer's name or trademark;
 - (b) Filter model number;
 - (c) Model number of the drain(s) on which the filter is designed to be installed;
 - (d) Any other required marking.

Adopted: 1996

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