



**Summary of Substantive Changes
between the 2007 and 2020 editions of
ASSE 1072 “Performance Requirements for Barrier Type Trap Seal Protection
for Floor Drains”**

Presented to the IAPMO Standards Review Committee on November 15, 2021

General: The changes to this standard may have an impact on currently listed products. The major changes are:

- Revised scope to clarify connection to floor drains or other applicable devices (see Sections 1.2, 1.2.3)
- Added language for clarifying the testing installation procedure (see Section 3.0)
- Added the option to test for floor drains with 4 NPS openings and larger (see Section 3.1.2)
- Revised the weight loss requirement in evaporation testing to 1% instead of 0.01 pounds (see Section 3.2.3)
- Clarified allowable metal alloy requirements to not exceed 8% (see Section 4.1)
- Added application designation labelling requirement to device marking (see Section 4.2)

Section 1.2, Scope: Clarified connection to floor drains or other devices as follows:

1.2 Scope

1.2.2 Size

The device shall be sized according to the ~~outlet size of the floor drain~~ nominal pipe size of the device it installs into, except for the 3-1/2 in (DN 90) device which installs into the inside of a floor drain fitting that complies with ASME A112.6.3. Sizes shall include 1½ NPS through 6 NPS (40 DN through 150 DN).

1.2.3 Flow Capacity

The device shall permit the flow of drainage as stipulated in Table 1 of this standard. If the floor drain size is not listed, perform an interpolation between the values in Table 1 to determine the appropriate flow rate.

1.2.4 Rating

~~The device shall be rated for the type of floor or floor finish in which the floor drain can be installed. Devices intended for use in floor drains receiving the discharge of grease-laden waste shall be rated for grease-laden waste.~~

1.3 Construction

1.3.4 Connections within Floor Drain

The device shall connect within a floor drain that conforms to ASME A112.6.3. Connections shall be in accordance with local authorities having jurisdiction.

1.4 Reference Documents

Referenced industry standards shall be to the revision stated below.

- *ASME A112.6.3-2019, Floor and Trench Drains*
- *ASTM D471-16a, Standards Test Method for Rubber Property – Effect of Liquids*
- *ASTM D543-14, Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents*



- [ASTM D624-00\(2012\), Standard Test Method for Test Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers](#)
- [ASTM D1149-18, Standard Test Methods for Rubber Deterioration – Cracking in an Ozone Controlled Environment](#)
- [ASTM D2137-11\(2018\), Standard Test Methods for Rubber Property – Brittleness Point of Flexible Polymers and Coated Fabrics](#)
- [ASTM E11-17, Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves](#)
- [ASTM G154-16, Standard Practice for Operating Fluorescent Ultraviolet \(UV\) Lamp Apparatus for Exposure of Nonmetallic Materials](#)
- [NSF 61-2018, Drinking Water System Components – Health Effects](#)
- [NSF 372-2016, Drinking Water System Components – Lead Content](#)
- [UL 969-2017, Marking and Labeling Systems](#)

Section II: Clarified sample requirements as follows:

2.0, Test Specimens and Test Laboratory

2.2 Samples Tested

~~The testing agency shall select one (1) of each type or model and size for the testing specified in Sections 3.1 through 3.7. The testing agency shall select an additional one (1) of each type or model and size for the testing specified in Section 3.2. The testing agency shall select another one (1) of each type or model and size for the testing specified in Section 3.8.~~

~~Tests shall be performed, in the order listed in the standard, on one (1) assembly of each size submitted, with the exception of the Life Cycle Test specified in Section 3.8 and the Physical Test of Membrane Material specified in Section 3.9. The second assembly shall be subjected to the Life Cycle Test specified in Section 3.8. The third assembly shall be subjected to the Physical Test of Membrane Material in Section 3.9.~~

~~The device shall have tests performed based on the type of floor in which the floor drain could be installed. The tests are specified in Table 2 for each floor finish. Regardless of floor type, devices rated for installation in floor drains that may receive the discharge of grease-laden waste (AF-GW) shall be tested to all sections of this standard as required by Table 2.~~

~~The testing agency shall select 4 samples of each model and size for testing:~~

- [1 sample for the testing specified in Sections 3.1 through 3.7;](#)
- [1 sample for repeat testing to Section 3.2;](#)
- [1 sample for the testing specified in Section 3.8;](#)
- [1 sample for the testing specified in Section 3.9.](#)

2.3 Drawings

~~Assembly drawings, installation drawings, and other data which are needed to enable a testing agency to determine compliance with this standard shall accompany assemblies when submitted for examination and performance testing under this standard.~~

2.4 2.3 Rejection

~~Failure of the one (1) device being tested sample shall be cause for result in a rejection of that type or model.~~

Section III: Added language for clarifying the testing installation procedure as follows:

3.0 Performance Requirements and Compliance Testing:



Laboratories shall have the option to increase the size of the base opening for water flow on the test assembly for floor drains 4 NPS (100 DN) and larger in diameter. If the water overflows the sides of the test assembly without the device for the larger floor drain sizes, the walls of the test assembly shall be raised to prevent the overflow of water. Once the overflow rate has been established, the sides shall be increased 1.0 inch (25.4 mm) in height for tests with the installation of the device.

When assembling the device on test into the assembly, the top of the device shall be inserted no more than 6 in (15.2cm) from the top of the drain fitting.

Section 3.1, Flow Test: Added the option to test for floor drains with 4 NPS openings and larger as follows:

3.1 Flow Test

3.1.2 Procedure

- a) For testing sizes 1-1/2 NPS through 3 NPS (40 DN through 80 DN),
 1. Laboratories shall have the option to increase the size of the base opening for water flow on the test assembly for floor drains 4 NPS (100 DN) and larger.
 2. Install a floor drain that conforms to ASME A112.6.3 to an assembly measuring 24.0 \pm 1.0 in (609.6 \pm 25.4 mm) by 24.0 \pm 1.0 in (609.6 \pm 25.4 mm) by 1.0 in (25.4 mm) deep at the drain pan edge with the floor sloped to the floor drain as shown within Figure 1.
- b) For testing sizes 4 NPS through 6 NPS (100 DN through 150 DN),
Install a floor drain that conforms to ASME A112.6.3 to an assembly measuring 48.0 \pm 1 in (1219.2 mm) by 48.0 \pm 1 in (1219.2 \pm 25.4 mm) by 1.0 in (25.4 mm) deep at the drain pan edge with the floor sloped to the floor drain as shown within Figure 1.
- c) Install the device in to the floor drain ~~in accordance with~~ according to the manufacturer's instructions. The floor drain grate shall be permitted to be removed to achieve the required flow through the floor drain.
- d) Turn on the water and adjust the flow rate for the given floor drain size to the flow rate in Table 1, or the manufacturer's maximum rated flow per the specification sheet, whichever is greater. Continue running the water for a period of 10 minutes.

Section 3.2, Evaporation Test: Revised the weight loss requirement in evaporation testing to 1% instead of 0.01 pounds as follows:

3.2 Evaporation Test

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3.2.3 Criteria

A weight loss in cylinder B greater than 10 percent of the weight loss in cylinder A shall result in rejection of the device. A weight loss in Cylinder C greater than ~~0.01 pounds (4.5 g)~~ 1% of the weight loss in cylinder A shall result in rejection of the device.

3.6 Floor Wax Test

3.6.1 Purpose

The purpose of this test is to determine if the device will open after being exposed to common liquid floor waxes.

3.6.2 Procedure

- a) Install a floor drain that conforms to ASME A112.6.3 in an assembly as shown in Figure 1. Install the device in the floor drain in accordance with the device manufacturer's instructions.



- b) Remove the top grate of the floor drain. Pour 1 cup 8 fl oz (~~236.8~~ 237 mL) of an acrylic co-polymer floor finish with $\geq 20\%$ solids into the center of the device. Reinstall the top grate on the floor drain. Maintain the test assembly undisturbed at ambient room temperature until the wax is dry.

NOTE: an example acceptable floor finish is Diversey Signature® Ultra High Speed floor finish.

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Section 4, Detailed Requirements: Clarified allowable metal alloy requirements to not exceed 8% as follows:

4.0 Detailed Requirements

4.1 Materials

Materials used in devices shall conform to the requirements of this standard.

Metal alloys in contact with potable water shall not exceed 8% lead content.

4.1.1 Dissimilar Metals

~~Where dissimilar metals are used in the construction of devices, materials that are close to each other in the electromotive series shall be used to reduce the corrosion potential.~~

4.1.2 Internal Metallic Parts

~~Internal parts of metallic construction shall be of material having a corrosion resistance at least equal to stainless steel series 300 or greater.~~

4.1.3 Non-Metallic Parts

~~Nonmetallic parts shall be designed for the rated operating temperature of the device without change in physical characteristics that would prevent full compliance with all requirements of this standard.~~

Section 4.2, Identification and Markings: Added application designation labelling requirement to device marking as follows:

4.2 Identification and Markings

4.2.1 Marking of Devices

Each device shall have the following information marked on it by a permanent method where it will be visible:

- a) Name of manufacturer or trademark
- b) ~~AF-GW~~ Application designation (per Table 2).

4.2.2 Packaging

Each device shall have the following information marked on the packaging:

- a) Name of manufacturer or trademark.
- b) Model number or description of the device.
- c) ~~Rating for type of floor AF-GW~~
- d) ~~Rated for grease-laden waste, if applicable.~~
- e) Floor drain size.

Labels shall comply with UL 969 for permanence.

4.3 Installation Instructions

Instructions for installation of the device shall be on the packaging or packaged with the device.

Instructions may include an illustrative calculation providing information on evaporation rates to purchasers or installers.

Section V:



5.0 Definitions

Definitions [not located in this section](#) are located in the Plumbing Dictionary, Sixth Edition, published by ASSE International.

AF-GW

Refers to "any floor finish and grease-laden waste", with respect to the type of incoming materials that a device may receive.



Table 1 was revised to add the 3 ½ Floor Drain Size and flow rate requirements.

Table 2 was deleted.

Table 32: ~~Physical Tests of Membrane Material~~ Minimum Flow Rate through Floor Drains

Property	Conditions	ASTM Method	Test Performance Requirements
<i>Ozone Resistance</i>	<i>72 hours at 104.0 °F (40.0 °C) and 25 ppm ozone</i>	<i>ASTM D1149</i>	<i>No visible cracks</i>
<i>Water Absorption</i>	<i>48 hours at 158.0 °F (70.0 °C)</i>	<i>ASTM D471</i>	<i>Maximum weight gain of 20%</i>
<i>Chemical Reagents</i>	<i>Complete immersion for 72 hours</i>	<i>ASTM D543</i>	<i>Gain in weight no greater than 10%. No weight loss.</i>
<i>Weather-o-meter</i> <i>UV Weathering</i>	<i>1 cycle 4 hours UV* at 140.0 °F (60.0 °C). 4 hours Condensation at 122.0 °F (50.0 °C) 500 hours.</i>	<i>G-53</i> <i>ASTM G154</i>	<i>Maximum 50% loss in tensile strength and ultimate elongation</i>
<i>Split Tear</i>	<i>Die C Sample</i>	<i>ASTM D624</i>	<i>Minimum 0.25 kN/m. Minimum 0.17 kN/m (Silicone Rubber) Low Temperature</i>
<i>Non-brittle Brittleness</i>	<i>3 minutes</i>	<i>ASTM D2137 Method A</i>	<i>Non-brittle at -40.0 °F (-40.0 °C)</i>

Figure 1 was revised and language from note was relocated to Section 3.0.