

**INTERNATIONAL ASSOCIATION OF PLUMBING
AND MECHANICAL OFFICIALS**

**IAPMO GUIDE CRITERIA
FOR**

**DRAIN TAILPIECE INSERT
IAPMO IGC 208-2005a (R2014)**

1. PURPOSE

- 1.1** The purpose of this standard is to establish a generally acceptable standard for drain tailpiece insert. Its purpose is to serve as a guide for producers, distributors, architects, engineers, contractors, installers, inspectors and users; to promote understanding regarding materials, manufacture and installation; and to provide for identifying drain tailpiece inserts.
- 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 the intent and requirements of this document and changes are amended to this standard.

2. SCOPE

- 2.1** This standard covers minimum standards for materials in the construction of drain tailpiece insert, and to prescribe minimum test requirements for the performance of these inserts, together with methods of marking and identification.
- 2.2** The drain inserts covered by this standard are intended for use in 1 ¼" and 1 ½" drain systems.

3. REFERENCED STANDARDS

- 3.1** All standards referenced herein shall be the current edition of that standard.

ASTM D 4101 Polypropylene Injection and Extrusion Materials

4. GENERAL REQUIREMENTS

- 4.1** **Material.** Tailpiece inserts shall comply with the requirements of ASTM D 4101 for polypropylene and shall have a minimum wall thickness of 1/32 inches.

5. TESTING REQUIREMENTS

5.1 Testing for 1 ¼" Insert. The tests shall be conducted on a lavatory which is equipped with a 2.2 gpm (8.4 liters per minute) maximum flow rate faucet and a pop-up assembly. The tailpiece and trap assembly shall be attached to the waste outlet of the pop-up assembly. The tailpiece insert shall be installed in accordance with the manufacturer's installation instructions.

5.1.1 Flow Rate. The minimum flow rate for the assembly with all component parts installed shall be 7 gpm when a sustained water head of 6 inches is applied above the inlet and when the outlet is open to the atmosphere. The test shall be conducted using water temperature at $120 \pm 3^{\circ}\text{F}$.

5.1.2 Debris Test. The lavatory faucet shall be activated and adjusted to a flow rate of 2.2 gpm (8.4 L/m) at a temperature of $70 \pm 5^{\circ}\text{F}$ ($21.1 \pm 2.8^{\circ}\text{C}$). A hand full of generic shaving cream shall be poured into the lavatory drain with the faucet operating. After sixty (60) seconds, the trap shall be inspected for signs of clogging and debris accumulation. No clogging or debris accumulation shall be permitted and water flowing through trap shall remain at minimum 2.0 gpm.

Repeat the previous procedure using ¾ - 1 inch strip of generic toothpaste. After sixty (60) seconds, the trap shall be inspected for signs of clogging and debris accumulation. No clogging or debris accumulation shall be permitted and water flowing through trap shall remain at minimum 2.0 gpm.

5.1.3 Hair Test. The sink stopper and rod shall be removed from the test assembly and 20-30 strands of 16" to 18" (406.4 mm to 457.2 mm) dry human hair shall be placed randomly around the lavatory drain. The water flow rate from the lavatory faucet shall be temporarily diverted to another vessel and shall be adjusted to 2.2 gpm (8.4 L/m). Once adjusted, the water shall be directed into the bowl and water shall be permitted to flow for a period of thirty (30) seconds. After the time period, the water shall be shut off and the tailpiece with insert shall be disconnected for inspection. All hair shall pass through the trap after the thirty (30) seconds of 2.2 gpm (8.4 L/m) flow.

5.2 Testing for 1 ½" Insert. The tests shall be conducted on a utility or kitchen sink which is equipped with a 2.2 gpm (8.4 liters per minute) maximum flow rate faucet. The tailpiece and trap assembly shall be attached to the waste outlet assembly. The tailpiece insert shall be installed in accordance with the manufacturer's installation instructions.

5.2.1 Flow Rate. The minimum flow rate for the assembly with all component parts installed shall be 7 gpm when a sustained water head of 6 inches is applied above the inlet and when the outlet is open to the atmosphere. The test shall be conducted using water temperature at $120 \pm 3^{\circ}\text{F}$.

5.2.2 Debris Test. The faucet shall be activated and adjusted to a flow rate of 2.2 gpm (8.4 L/m) at a temperature of $70 \pm 5^{\circ}\text{F}$ ($21.1 \pm 2.8^{\circ}\text{C}$). A hand full of food items such as tea leaves, mixed vegetables, rice, pasta, cereals shall be poured into the drain with the faucet operating. After sixty (60) seconds, the trap shall be inspected for signs of