

**INTERNATIONAL ASSOCIATION OF PLUMBING
AND MECHANICAL OFFICIALS**

**IAPMO GUIDE CRITERIA
FOR
NON-MECHANICAL WASTE and OVERFLOW DEVICES**

IGC 126-99 (R2013)

1. PURPOSE

- 1.1** The purpose of this IGC is to establish a generally acceptable performance standard for non-mechanical waste and overflow devices. Its purpose is to serve as a guide for producers, distributors, architects, engineers, contractors, installers, inspectors and users; and to promote understanding regarding materials, manufacture, installation and performance. In addition, this IGC will provide a means for identifying non-mechanical waste and overflow devices that comply with this IGC.
- 1.2** The provisions of this IGC are not intended to prevent the use of any alternate materials or methods of construction provided any such alternate meets the intent of this IGC.

2. SCOPE

- 2.1** This IGC covers referenced standards, general requirements, testing requirements, dimensions and markings.

3. REFERENCED STANDARDS

ASTM D 883	Terminology Relating to Plastics
ASTM D 2122	Method for Determining Dimensions of Thermoplastic Pipe and Fittings
ASTM D 2661	Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings
ASTM D 2665	Poly (Vinyl Chloride) (PVC) Schedule 40 Plastic Drain, Waste and Vent Pipe and Fittings

4. GENERAL REQUIREMENTS

- 4.1** A one piece device shall consist of a plastic overflow, drain waterway and adhesive for bonding the device to the bathtub. This product is intended to be used on the outside (unfinished side) of a bathtub for the purpose of diverting water from the overflow to the drain and/or channeling waste water to the P-trap. The adhesion system shall provide permanent attachment for the one-piece waste and overflow that is leakproof.
- 4.2** A two or more component device shall include a drain fitting and an overflow fitting. These components are intended to be used on the outside (unfinished side) of a bathtub for the purpose of diverting water from the overflow to the drain and/or channeling waste water to

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the P-trap. The adhesion system shall provide permanent attachment for the drain and overflow fittings that is leakproof. The fittings are intended to be connected using schedule 40 DWV ABS or PVC plastic pipe and fittings.

- 4.3** The waste/overflow assembly shall be constructed of materials having sufficient strength to comply with the performance requirements detailed in the Testing Requirements Section. In addition, all parts of the product shall be constructed from materials which are capable of resisting deterioration in the environment to which they are exposed during its intended installation and use.

4.4 Materials.

- 4.4.1** PVC components shall be made from virgin PVC compounds that meet or exceed the requirements of class 12454-B as defined in ASTM D 1784. The plastic may contain stabilizers, lubricants and pigments.
- 4.4.2** ABS components shall be made from virgin ABS conforming to the requirements of ASTM D 3965 and shall meet all of the requirements for cell class 3-2-2-2.

5. TESTING REQUIREMENTS

The following tests shall be required and should be conducted in the order described:

- 5.1 Tensile Strength Evaluation of Adhesive.** Specimens of the overflow material measuring 1 inch square and the minimum thickness of the material shall be bonded to 1 inch square specimens taken from the different bathtub materials (fiberglass, cast iron, steel), Twenty (20) specimens from each of the different materials from which the tubs are constructed shall be required along with twenty (20) specimens of the overflow material. They shall be bonded together using an amount of the adhesive to simulate the amount of adhesive used in the final product. After the adhesive is applied, it shall be allowed to cure for 24 hours. Once cured, five samples shall be placed in a tensile testing machine, and the tensile strength of the adhesive shall be determined. The remaining samples shall be conditioned as follows:
- a.** Five samples shall be placed in an air oven at a temperature of 23°C (73.4°F) and 50% relative humidity for a period of 40 hours.
 - b.** Five samples shall be placed in an air oven at a temperature of 70°C (158°F) and 95% relative humidity for a period of 7 days.
 - c.** Five samples shall be placed in a cold chamber at a temperature of 0°C (32°F) for a period of 24 hours.
- 5.2** At the completion of each of the conditioning periods noted above, the samples shall be removed from the conditioning chamber and the tensile strength of the adhesive shall be determined (The samples shall be tested immediately after removal from the conditioning chamber).