

Internal Use Only

INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS

MATERIAL AND PROPERTY STANDARD

FOR

PVC HYDRAULICALLY ACTUATED DIAPHRAGM TYPE WATER CONTROL VALVES

IAPMO PS 57-2002

1. PURPOSE

- 1.1** The purpose of this standard is to establish a generally acceptable standard for PVC hydraulically actuated diaphragm type water control valves. 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 the valves.
- 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 of this standard.

2. SCOPE

- 2.1** This standard covers valves manufactured for controlling the flow of water actuated by sensing devices with timers, electrical or otherwise actuated. This standard covers physical requirements, method of testing, other significant properties in addition to general description of materials used and the methods of marking and identifications.

3. GENERAL REQUIREMENTS

- 3.1** The valve shall be made of PVC or other approved plastic or metal materials.
 - 3.1.1** PVC valves shall be made of a virgin PVC Type 1 with a cell classification of 12454B conforming to the requirements prescribed in ASTM D 1784.
 - 3.1.2** Clean, rework plastic generated from the manufacturer's own valve production and conforming to the cell requirements may be used provided that the valves produced meet all the requirements of this standard.
- 3.2** The valve shall withstand two hundred fifty (250) psi for a minimum of fifteen (15) minutes at a maximum operating temperature of 110°F.

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- 3.3 The valve shall be in a normally open position and closed by actuation of a device electrical or otherwise.
- 3.4 Valve controls functions shall include a bypass mode, a reset mode, and a "on" and "off" mode.
- 3.5 Installation shall be done according to local code requirements.
- 3.6 A toxicity requirements shall be met as prescribed in NSF 61.

4. PERFORMANCE TESTS

- 4.1 **Sampling.** Two (2) samples of valves shall be selected at random from inventory for testing. Failure of any test by both samples shall be cause for rejection.
- 4.2 A life cycle test shall be performed by cycling the valve for 25,000 cycles at a pressure of sixty (60) psi and temperature of 110°F. One cycle timeframe (Off-On-Off) shall be a maximum of five (5) seconds.

5. MARKINGS & IDENTIFICATIONS

- 5.1 Each valve shall be marked with the following:
 - (a) Company name or trademark;
 - (b) Model Number; and
 - (c) Any other required markings.

Adopted: 1992

Revised: 2002