ASME A112.1.3-2000
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AIR GAP FITTINGS FOR USE WITH PLUMBING FIXTURES, APPLIANCES, AND APPURTENANCES

AN AMERICAN NATIONAL STANDARD

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FOREWORD

Industry has often incorporated air gaps into commercial fitting to provide back siphonage and backflo protection for the water supply systems to which the fitting are connected. Designers of such fitting took guidance from documents such as ASME A112.1.2, but there was not a national standard specificall directed toward fitting that included air gaps. In response to requests to modify ASME A112.1.2 to specificall cover fitting with air gaps, the ASME A112 Main Committee determined that the better course was to develop a separate standard for this purpose. A Project Team was created, and this Standard is the result of that work.

Suggestions for improvement of this Standard are welcomed. They should be sent to The American Society of Mechanical Engineers; Attn: Secretary, A112 Main Committee; Three Park Avenue, New York, NY 10016.

This Standard was approved as an American National Standard on July 5, 2000.

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AIR GAP FITTINGS FOR USE WITH PLUMBING FIXTURES, APPLIANCES, AND APPURTENANCES

1 GENERAL

1.1 Scope

This Standard establishes physical requirements and methods of testing for air gap fitting for protecting against back siphonage and back pressure backflow

1.2 Units of Measurement

Values are stated in U.S. Customary Units and the International System of Units (SI). The U.S. Customary Units shall be considered as the standard.

In this Standard, gallons (U.S. Liquid) per min is abbreviated gpm and liters (metric liquid) per min is abbreviated L/min.

2 REFERENCE STANDARDS

The following document forms a part of this Standard to the extent specifie herein. The latest issue shall apply.

NSF 61, Drinking Water System Components–Health Effects

Publisher: National Sanitation Foundation (NSF International), 3475 Plymouth Road, Ann Arbor, MI 48105

3 DEFINITIONS

The following definition apply in this Standard.

air gap: a vertical distance through the atmosphere between the lowest potable water outlet and the highest level of the source of flui contamination.

air gap fitting a device with an integral air gap.

critical level: the location on an air gap fitting determined by test, where presence of contaminated flui not exceeding this elevation will not allow back siphoning.

checking member: a device intended to allow flo in one direction and to prevent flo in the opposite direction.

4 REQUIREMENTS

4.1 Performance Tests

The air gap fittin shall pass the performance tests as define in Section 5 of this Standard with all checking members removed.

4.2 Materials

The component materials of the portions of air gap fitting designed for the delivery of water from sources that also supply water for human ingestion and are upstream from the air gap openings covered by the scope of NSF 61, section 9, shall conform to NSF 61, section 9 for endpoint devices. Joining and sealing materials used in these same portions of air gap fitting shall conform to NSF 61, section 6 for joining and sealing materials.

Solders and fluxe containing lead in excess of 0.2% by mass shall not be used where they will be in contact with potable water.

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

5 TESTING

5.1 Critical Level

5.1.1 With the device installed in accordance with Fig. 1 and with the manufacturer's installation instructions, submerge the device for at least 1 min, agitating the device during submersion so that all of its openings and exterior and interior surfaces are thoroughly wetted and to remove entrained air.