ASME A112.4.3-1999

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# PLASTIC FITTINGS FOR CONNECTING WATER CLOSETS TO THE SANITARY DRAINAGE SYSTEM

AN AMERICAN NATIONAL STANDARD

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# FOREWORD

The axiom "a chain is only as strong as its weakest link" can be applied to the sanitary drainage system. Modern manufacturing practices, along with material, dimensional, and performance standards, have resulted in sanitary drainage systems that safely convey sanitary waste to the collection system. While major improvements have been made in the systems, materials, and connections methods, however, a "weak link" still exists: the connection between the water closet and the sanitary drainage system.

Historically, the connection has been made with "plumbers putty" and, in more recent years, a pre-formed wax-type mastic. The joint connection is on the sewer side of the water closet trap where the material and performance standards of the soil, waste, and vent system apply. However, no existing standard addresses the water closet to drain connection. Since any leak in this connection would allow sewer gas and micro-organisms to enter a building, and any leaking waste would contaminate the surrounding area and damage floors and ceilings, there is a need for requirements to cover this joint connection.

This Standard establishes the performance criteria necessary to insure a safe water and air-tight connection between the water closet and sanitary drainage system, consistent with present day plumbing material and performance standards.

Suggestions for improvement of this Standard will be welcomed. They should be sent to The American Society of Mechanical Engineers; Secretary, A112 Main Committee; Three Park Avenue; New York, NY 10016-5990.

This revision was approved as an American National Standard on January 28, 1999.

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**C. R. Adorjan,** *Project Team Leader,* PREDCO
**R. H. Ackroyd,** Consultant
**P. V. DeMarco,** American Standard, Inc.
**P. J. Higgins,** P. J. Higgins & Associates
**S. Rawalpindiwala,** Kohler Co.
**J. A. Sargent,** Consultant

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# PLASTIC FITTINGS FOR CONNECTING WATER CLOSETS TO THE SANITARY DRAINAGE SYSTEM

## 1 GENERAL

### 1.1 Scope

This Standard establishes physical, performance, and testing requirements applicable to the joint that connects a water closet to the sanitary drain piping of a plumbing system.

The use of alternate materials or methods are permitted, provided the proposed material and method complies with the performance requirements and intent of this Standard.

### 1.2 Units of Measurement

Values are stated in U.S. Customary units, followed in parentheses by values stated in the International System of Units (SI). The U.S. Customary units shall be considered as the standard.

### 1.3 References

The following is a list of publications referenced in this Standard.

ASME A112.19.2M, Vitreous China Plumbing Fixtures

Publisher: The American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990; Order Department: 22 Law Drive, Box 2300, Fairfield, NJ 07007-2300

ASTM A 53-97, Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless

ASTM A 888-96, Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications

ASTM B 302-97, Specification for Threadless Copper Pipe

ASTM D 1784-97, Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds

ASTM D 1785-96b, Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120

ASTM D 2949-97, Specification for 3.25-in. Outside Diameter Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings

ASTM D 3965-94, Specification for Rigid Acrylonitrile-Butadiene-Styrene (ABS) Compounds for Pipe and Fittings

ASTM D 5926-96, Specification for Poly(Vinyl Chloride) (PVC) Gaskets for Drain, Waste, and Vent (DWV) Sewer, Sanitary, and Storm Plumbing Systems

Publisher: American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428

CISPI 310, Specification for Couplings Used to Connect Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications

Publisher: Cast Iron Soil Pipe Institute (CISPI), 5959 Shallowford Road, Chattanooga, TN 37421

CSA B70, Cast Iron Soil Pipe, Fittings, and Means of Joining

CSA B181.1, ABS Drain, Waste, and Vent Pipe and Pipe Fittings

CSA B181.2, PVC Drain, Waste, and Vent Pipe and Pipe Fittings

CSA B602, Mechanical Couplings for Drain, Waste, and Vent Pipe and Sewer Pipe

Publisher: Canadian Standards Association (CSA), 178 Rexdale Boulevard, Etobicoke (Toronto), Ontario, Canada MW 1R3

## 2 PHYSICAL REQUIREMENTS

### 2.1 Size

The joint (connection method, device, or fitting) shall accommodate all water closets that comply with the