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Revision of
ANSI Z124.3 - 1995

American National Standard for Plastic Lavatories

Secretariat
International Association of Plumbing and Mechanical Officials

Approved September 13, 2005
American National Standards Institute, Inc.

American National Standard

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Foreword

(This Foreword is not a part of American National Standard for Plastic Lavatories)

Production of gel-coated glass-fiber reinforced Plastic Plumbing Fixtures began in 1956. The immediate need for standard specifications was answered by the issuance, in 1959, of Commercial Standards CS 221-59 for bathtubs and CS 222-59 for shower receptors. These standards served as the basis of product acceptance by the Federal Housing Administration (FHA) and code writing agencies.

In 1962 the development of a needed industry standard was undertaken by the NAHB Research Institute and a Reinforced Plastics Industry Advisory Board with the cooperation and assistance of the Society of the Plastics Industry. In July 1963, the NAHB Research Institute issued a new standard for tub-shower units which constituted an extensive revision of CS 221-59 and was the first performance-type standard for such products.

In December 1965, the NAHB Research Foundation, Inc., continuing the work of the NAHB Research Institute, issued a revised standard for bathtub units and a standard for shower receptors and stalls. These standards were considered by those most interested to be worthy of approval as an American National Standard, and the need for their application nationally was self-evident. Accordingly, they were submitted to the Standards Institute in 1965 and approved on April 5, 1967 as American National Standard for Gel-Coated Glass-Fiber Reinforced Polyester Resin Bathtub Units, Z124.1-1967 and Gel-Coated Fiberglass Reinforced Polyester Resin Shower Receptors and Shower Stalls, Z124.2-1967.

The sponsor also asked for the establishment of an American National Standards Committee, which was approved as American National Standards Committee Z124.

Use of American National Standards Z124.1 and Z124.2 has resulted, over the years, in constructive suggestions which have been incorporated in these standards. Many of the requirements given in these standards evolved out of field experience with new materials and manufacturing techniques. Therefore, these standards have been expanded, listing separate areas of pertinent tests and performance requirements for such materials and techniques. They also cover the revision and addition of test methods and performance requirements, and by July 2005, both were harmonized and combined as one American National Standard IAPMO/ANSI Z124.1.2-2005 by the IAPMO Z124 Standards Committee.

Historically, in October 1978, the International Association of Plumbing and Mechanical Officials (IAPMO) assumed the secretariat's position to continue the work already in progress.

The continuation of work resulted in the revision and updating of Z124.1 for Plastic Bathtubs and Z124.2 for Plastic Shower Receptors and Shower Stalls. These standards were forwarded to American National Standards Institute. Formal adoption was May 1, 1980.

Grab bars, slip resistance and fire and smoke are of prime concerns to the Z124 Committee. In 1985, reference to grab bars were included in both the bathtub and shower standards. In 1992, the Committee, after extensive study, decided to add an Appendix to the Z124 standards in regards to fire and smoke. At that time, the 1991 addendum was removed from the standards because no evidence was found that plastic plumbing fixtures contributed to or caused fires. Since the Appendix is not a formal part of the standard, it was kept for information only. The consensus of the Committee was that the combustibility concerns of plastic plumbing fixtures had been adequately addressed by the addition of the Appendix. Work is continuing on slip resistance and fire and smoke requirements.

This standard for Plastic Lavatories, which had been started by a Task Group in early 1975, was also completed and forwarded to American National Standards Institute in September 1979. The formal adoption date was May 21, 1980, and resulted in American National Standard Z124.3 for Plastic Lavatories.

At the request of HUD, a Task Committee developed a standard for Plastic Water Closet Bowls and Tanks. It was completed and forwarded to ANSI and formally adopted May 30, 1983, as American National Standard Z124.4.

The Standard for Plastic Toilet (Water Closet) Seats which was started in November 8, 1983 was completed and forwarded to the American National Standards Institute on February 15, 1989. The formal adoption date was August 24, 1989 and resulted in American National Standards Institute, Standard Z124.5 for Plastic Toilet (Water Closets) Seats.

The Standard for Plastic Sinks which was started in April 1986 was completed and forwarded to American National Standards Institute on July 1989. The formal adoption date was December 13, 1990 and resulted in American National Standard Z124.6 for Plastic Sinks.

The Standard for Plastic Bathtub Liners which was started in 1985 was completed and forwarded to the American National Standards Institute in June, 1990. The formal adoption date was October, 1990 and resulted in American National Standards Institute, Standard Z124.8 for Plastic Bathtub Liners.

The Z124 Committee had grown from the original 1962 Committee of eleven industry members to a consensus Committee of thirty - three members.

Suggestions for improvement of these Z124 standards are always welcome. They should be sent to the American National Standards Institute, 11 West 42nd Street, New York, NY 10036.

This standard was processed and approved for submittal to ANSI by American National Standards Committee on Synthetic Organic Materials in Plumbing Fixtures, Z124. Committee approval of the standard does not necessarily imply that all Committee members voted for its approval. At the time it approved this standard, the Z124 Committee had the following members:

Charles Gross, Chairman
Steve Rouleau, Vice Chairman

Organization Represented	*Name of Representative*
American Institute of Architects	W. W. Aird
American Society of Plumbing Engineers	J. Ballanco
	S. Wolfson (Alt.)
American Society of Sanitary Engineers	S. Hazzard
American Standard Inc.	P. DeMarco
Aqua Bath Co.	G. McAllister
	W. Yeager (Alt.)
Aristech Chemical Corporation	E. Minghetti
	Dr. R. Tieman (Alt.)
ARKEMA.	R. Banyay
	E. Haswell (Alt.)
Better Bath Co.	B. Mitchell
Consultant	C. T. Hicks
Consumer	M. Klimboff
Fiat/Crane Plumbing	J. Murray
General Electric	G. P. Diehl
Gruber Systems	L. Garasi
Independent	S. Cavenaugh
International Cast Polymer Association	H. P. Toner
	B. Brody (Alt.)
Industrial Testing Laboratory	J. Zivic
International Association of Plumbing and Mechanical Officials	C. Gross
	M. Kobel (Alt.)
Koeller and Co. Consultants	J. Koeller
Kohler Co.	S. Rawalpindiwala
Lucite® Sheet Division	R. Gano
	P. Hindle (Alt.)
MAAX	S. Rouleau
Masco Corporation	W. Pan
	S. Kapelanski (Alt.)
National Association of Home Builders	C. Arnold
	T. Kenny (Alt.)

Organization Represented	*Name of Representative*
National Association of Plumbing, Heating, and Cooling Contractors	R. E. White
National Association of Thermoformers for Manufactured Housing Industry	S. Richardson
National Sanitation Foundation	A. Ciechanowski
PSI Testing Lab	P. Medwig
P. W. Meikle Consultants	P. Meikle
SGS US Testing Co.	D. Holloway J. Simmons (Alt.)
Spartech	J. L. Payne
Taylor Industries	B. W. Taylor R. Taylor (Alt.)
Underwriters Lab	M. Carroll
Waterless Co.	K. Reichardt

Subcommittee Z124.3 on Plastic Lavatories, which developed this standard had the following members:

M. Kobel, Acting Chairman
B. Taylor, Secretary

C. Arnold
B. Baker
M. Banks
R. Banyay
B. Brody
A. Ciechanowski
P. DeMarco
G. Diehl
R. Gano
L. Garasi
G. McAlister
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E. Minghetti
B. Mitchell
J. Murray
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S. Richardson
S. Rouleau
D. San Miguel
J. Simmons
K. Stanley
H. Toner
J. Winfrey
J. Zivic

AMERICAN NATIONAL STANDARD FOR PLASTIC LAVATORY UNITS

1. Scope and purpose

1.1 Scope. This standard covers requirements and test methods for performance of materials and workmanship, and finish of plastic lavatory units manufactured as a separate bowl or a bowl with integral top.

While this standard covers the performance requirements of plastic lavatory units and describes these performance requirements in terms of methods of test applicable to all such units, a number of different materials and methods of manufacture shall be permitted to be used to meet these requirements. Each of these materials and methods have different properties which will affect its end performance and suitability for the intended use. For this reason, portions of the standard are broken into separate requirements designed to identify these individual characteristics.

The materials and equipment which are listed as having been used to conduct the testing procedures in this standard are provided solely for informational reference. Materials and equipment of similar design, composition and specification shall only be used to conduct these testing procedures when they produce equivalent results.

1.2 Purpose. The purpose of this standard is to establish minimum performance requirements for plastic lavatory units.

Conformance to this standard and test procedures herein shall indicate the acceptability of a plastic lavatory unit as a plumbing fixture.

1.3 Normative references. The following standards contain provisions which, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying most recent editions of the standards indicated below.

ASME A112.19.1M-94 (Supplement 1-98), *Enameled Cast Iron Plumbing Fixtures*

ASME A112.19.2-03, *Vitreous China Plumbing Fixtures and Hydraulic Requirements for Water Closets and Urinals*

ASTM D 883-00, *Standard Terminology Relating to Plastics*

ASTM D 2244-02^{e1}, *Standard Practice For Calculation Of Color Tolerances And Color Differences From Instrumentally Measured Color Coordinates*

ASTM D 2565-99, *Standard Practice for Xenon Arc-Exposure of Plastics Intended for Outdoor Applications*

ASTM E 84-05^{e1} *(NFPA 255-00), Standard Test Method for Surface Burning Characteristics of Building Materials*

ASTM E 162-98, *Standard Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source*

ASTM E 662-03^{e1}, *Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials*

NFPA 255-00, *(See ASTM E 84)*

NFPA 258-97, *Research Test Methods for Determining Smoke Generation of Solid Materials*

2. General requirements

2.1 Materials

2.1.1 Composition. The units shall be made of suitable grades of plastic resins and any such other filling, coloring, reinforcing, and coating materials as will meet the performance requirements of this standard.

2.1.2 Finish. The finished surface of the unit shall be of a quality which meets all of the applicable requirements of the standard. Five common types of plastic finishes shall be as defined:

(1) Type 1 - No separate surface finish: The surface finish is the same as, and is usually integral with, the structural base. (Excluding Types 4.)

(2) Type 2 - Coated surface finish: These units are characterized by the presence of a surface coating which is applied to the structural base either prior to or after the molding process. (Excluding Type 4.)

(3) Type 3 - Shell-coated surface finish: These units are characterized by the presence of a thermoplastic sheet material which is thermoformed and to the back of which a structural base is applied.

(4) Type 4 - Cast filled polymers: These units are char-