

Primary Standard: CSA B45.5-17/IAPMO Z124-2017. Sections Tested / Evaluated:

- 4.1 General
- 4.2 Waste Fitting Openings, Drainage and Overflows
- 4.4 Bathtubs and Shower Bases
- 5 Test Requirements
- 5.2 Stress Tests for Grab Bars and Grip Rails
- 5.3 Warpage Tolerance Test
- 5.4 Surface Examination Test
- 5.5 Subsurface Test
- 5.6 Waste Fitting Connection Test
- 5.7 Point Impact Test
- 5.8 Structural Integrity Test
- 5.9 Radii Load Test for Water Closets, Urinals, Bathtubs, and Showers

Note: Sections not specifically listed above were considered not applicable to the subject product.

Test Results: All tests and evaluations were conducted per the written procedures as specified in the standards.

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4.1 General

4.1.2 Surface Finish – COMPLIED

The fixture surfaces were free from defects to the extent specified in the standard when evaluated per clause 5.4. Refer to section 5.4 of this report.

4.1.3 Coated Parts – NOT APPLICABLE

Coated parts other than those covered in Clause 4.3.1.2 shall comply with the applicable requirements of ASME A112.18.1/CSA B45.1.

Findings: The shower base did not contain any coated parts.

4.1.4 Different Materials – NOT APPLICABLE

Fixtures made of a combination of plastic and other materials shall comply with the applicable requirements of ASME A112.19.1/CSA B45.2, ASME A112.19.2/CSA B45.1, or ASME A112.19.3/CSA B45.4.

Findings: The shower base was made of plastic only.

4.1.5 Accessible Design Fixtures – NO TESTING CONDUCTED

Fixtures designed to be accessible shall comply with the dimensional requirements specified in CAN/CSA-B651 or ICC/ANSI A117.1.

Findings: The shower base was not evaluated for accessible design.

4.2 Waste Fitting Openings, Drainage and Overflows

4.2.1 Openings and Drainage

4.2.1.1 COMPLIED

The fixture:

- (a) Had a waste fitting outlet the center of which was located at the lowest point of the fixture.
- (b) Drained to the waste outlet

4.2.1.2 REFERENCE ONLY

Except when proprietary (i.e. non-standard) waste fittings are provided by the manufacturer, the dimensions of the waste outlet shall be as shown in Figure 1.

Findings:

Required Outlet Dimension (in)	Observed Outlet Dimension (in)
Reference Only	3.3

4.2.1.3 NOT APPLICABLE

Factory-supplied waste fittings shall comply with ASME A112.18.2/CSA B125.2.

Findings: The shower base was not provided with a waste fitting.

4.4 Bathtubs and Shower Bases

4.4.1 Flanges – COMPLIED

Shower bases intended for installation against a wall shall incorporate a continuously raised flange at least 1.0 in above the threshold as shown in Figure 8. The flange shall be

- (a) integral with the bathtub or shower base;
- (b) added to an island tub or shower base in the factory; or
- (c) field-installed using a flange kit that complies with Clause 5.18 and includes all necessary parts and fasteners.

Bathtubs and shower bases using field-installed flanges shall be marked in accordance with Clause 6.3. In addition, the bottom of any hole in the flange or corner treatment shall be not less than 0.3 in above the rim.

Findings: The shower base had a 1.1” integral continuously raised flange.

4.4.2 Slope to the Waste Outlet – COMPLIED

Bathtubs and shower bases shall have a maximum slope of 4% to the waste outlet.

Findings:

Min. Slope Measured (%)	Max. Slope Measured (%)
2.27	2.97

4.4.3 Shower Base Thresholds – CONMPLIED

Except for accessible designs, when provided, shower base threshold shall be at least 2 in. above the top of the waste outlet, as shown in Figure 8.

Findings: The shower base provided a threshold that was 3.5” above the top of the waste outlet.

4.4.4 Diameter, Spacing, and Grippable Length of Grab Bars – NOT APPLICABLE

Findings: The shower base was not provided with a grab bar.

5 Test Requirements

5.2 Stress Tests for Grab Bars and Grip Rails – NOT APPLICABLE

Findings: The shower base was not provided with a grab bar or grip rail.

5.3 Warpage Tolerance Test – COMPLIED

The fixture met the warpage requirements in Clause 5.3.2 when tested in accordance with paragraph 5.3.1 of the standard.

Findings: The feeler gauge with a thickness equal to the total warpage allowed in Clause 5.3.2 did not slide under the specimens tested. Warpage at the edges of the fixture that set against a wall or floor, or into cabinets, or countertops did not exceed 0.06 in/ft. Warpage at all other edges of the fixture did not exceed 0.09 in/ft. Total warpage of any linear dimension did not exceed 0.63 in.

5.4 Surface Examination Test – COMPLIED

When evaluated in accordance with Clause 5.4.1, the unit was free from cracks, chipped areas, and blisters. There were no other defects that exceeded those allowed by Table 1.

5.5 Subsurface Test – COMPLIED

When evaluated in accordance with Clause 5.5.1, no voids larger than 0.063 in and no more than eight voids less than 0.063 in were found.

5.6 Waste Fitting Connection Test – COMPLIED

The waste fitting connection was tested in accordance with Clause 5.6.1 using a 50 lbf load with a 24 in. lever arm connected as shown in Figure 9. The load was applied and examined for cracks with the load in place. Two additional radial locations were applied at approximately 180° apart and examined for cracks with the load in place.

Findings: There were no visible cracks in the bottom surface of the specimen.

5.7 Point Impact Load Test – COMPLIED

When tested in accordance with Clause 5.7.1.2, a 1-1/2 inch diameter, 1/2 pound steel ball was dropped three times from a height of 36 inches to strike at three different points on flat areas on the specimen and at three different locations on the rim or threshold. The 1-1/2 inch diameter 1/2 pound ball was also dropped from 24 inches to strike 3 different points on the radii in the bottom of the specimen with at least one strike in a corner.

Findings: There were no cracks or chips on the surface of the specimen when examined in accordance with items (b) to (d) of clause 5.4.1.

5.8 Structural Integrity Test

5.8.2 Load Test for Bathtub Rims and Bottoms and Shower Thresholds and Bottoms – COMPLIED

When tested to clauses 5.8.2.2.1 and 5.8.2.2.3 with 300 lbf load, there shall be no damage to the fixture. The deflection under load shall be less than 0.150” maximum and the residual deflection shall be less than 0.008”.

Findings: There was no cracks in the surface of the specimen when examined in accordance with items (b) to (d) of clause 5.4.1.

Load Area	Load Deflection (in)		Residual Deflection (in)	
	Required	Observed	Required	Observed
Bottom	0.150 max	0.087	0.008 max	0.001

5.9 Radii Load Test for Water Closets, Urinals, Bathtubs, and Showers – COMPLIED

The outside radii of finished surfaces were tested with a 0.5 in. diameter nylon rod with 10 lbf of applied load at an angle tangent to the radius.

Findings: The shower pan showed no signs of cracks when examined in accordance with items (b) to (d) of clause 5.4.1.

Photograph of the Sample Tested:

