Home Innovation
RESEARCH LABS™

TEST REPORT

SHOWER UNIT

REPORT SUMMARY

GRIFform Innovations, Inc. (CR-6532)
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Inspection Month:	February 2025
Test Type:	Full Series
Report Date:	06/28/2025
Report Number:	6532-0225-642

Manufacture Date:	03/20/2025
Unit Received:	04/02/2025
Testing Completed:	06/26/2025
Unit Description:	Solid Surface Shower Base

Inspection Date:	03/21/2025
Inspected By:	Chase Bowman
Unit Model Style:	SQC2424
Unit Serial Number:	Not Provided

Comments:

The specimen was randomly selected from finished goods by Home Innovation Research Labs and marked for traceability. The specimen was assessed for tampering and shipping damage prior to releasing it for testing. Shipping damage, if any, did not influence test results. These tests were performed under the direct and continuous supervision of laboratory personnel. The specimen, as selected, **PASSED** those sections of the CSA B45.5-22 / IAPMO Z124-2022, *Plastic Plumbing Fixtures* standard detailed in this report.

NOTE: ID and calibration of test devices used for the evaluation are available upon request.

Deanna Seale, PE
Director Laboratory Services
Home Innovation Research Labs

A2LA ACCREDITED
CERT # 6754.01, 6754.02, & 6754.03

TESTS PERFORMED IN ACCORDANCE WITH CSA B45.5 / IAPMO Z124

PASS and FAIL conformity results in this report were determined using the Simple Acceptance decision rule, where PASS is within the standard's limit or meets specification and FAIL is outside the standard's limit or does not meet specification. Measurement uncertainty is not considered when applying the Simple Acceptance decision rule.

Please note the numbering system used in this report correlates to the CSA B45.5 / IAPMO Z124 standard and the sections that are pertinent to the fixture tested.

4. General Requirements

PASS **4.1.2 Surface finish**
Fixture surfaces shall be free from defects to the extent specified in this Standard when inspected in accordance with Clause 5.4.

4.2.1 Openings and drainage
Openings and drainage shall comply with 4.2.1.1, 4.2.1.2, 4.2.1.3.

PASS **4.2.1.1** Fixtures shall a) have a waste fitting opening (outlet), the centre of which shall be located at the lowest point of the fixture; and b) drain to the waste outlet.

STANDARD **4.2.1.2** Except when proprietary (i.e., non-standard) waste fittings are provided by the manufacturer, the dimensions shall match Figure 1 (CSA B45.5/IAPMO Z124).

N/A **4.2.1.3** Factory-supplied waste fittings shall comply with ASME A112.18.2/CSA B125.2.

4.4 Bathtubs and shower bases
Bathtubs and shower bases shall comply with 4.4.1-4.4.5.

PASS **4.4.1 Flanges.** Bathtubs intended for installation against a wall shall incorporate a flange raised at least 8 mm (0.3 in) above the rim, as shown in Figure 7 (CSA B45.5/IAPMO Z124). Shower bases intended for installation against a wall shall incorporate a continuously raised flange at least 25 mm (1.0 in) above the threshold, as shown in Figure 8 (CSA B45.5/IAPMO Z124). 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 8 mm (0.3 in) above the rim.

PASS **4.4.2 Slope to the waste outlet.** Bathtubs and shower bases shall have a maximum slope of 4% to the waste outlet. Note: There should be a minimum slope of 1% to the waste outlet.

N/A **4.4.3 Diameter, spacing, and grippable length of grab bars.** Grab bars intended for residential and commercial installations shall have a a) diameter of between 22 and 40 mm (0.9 and 1.6 in) or an equivalent cross-sectional area; b) spacing of 38 mm (1.5 in) between the finished wall and the inside grippable surface of the grab bar; and c) minimum grippable length of i) 228 mm (9.0 in), for bars mounted horizontally (see Figure 18(a) [CSA B45.5/IAPMO Z124]); and ii) 152 mm (6.0 in), for bars mounted vertically (see Figure 18(b) [CSA B45.5/IAPMO Z124]).

This requirement is not applicable to the product tested.

N/A **4.4.5 Supply Fittings.** Factory-supplied supply fittings shall comply with ASME 112.18.1/CSA B125.1.

This requirement is not applicable to the product tested.

5. Test Requirements

N/A **5.2 Stress tests for grab bars and grip rails**
The unit is evaluated in accordance with 5.2.1.1 and 5.2.2.1 and must meet the performance criteria in 5.2.1.2 and 5.2.2.2.

This requirement is not applicable to the product tested.

PASS **5.3 Warpage tolerance test**
When specimen is measured, the a) warpage at the edges of the fixture that set against a wall or floor, or into cabinets or countertops, shall not exceed 5 mm/m (0.06 in/ft); b) warpage at all other edges of the fixture shall not exceed 7.5 mm/m (0.09 in/ft); and c) total warpage of any linear dimension shall not exceed 16 mm (0.63 in). Curves that are part of the design shall not be considered warpage.

PASS **5.4 Surface examination test**
The specimen shall be free from cracks, chipped areas, and blisters. Other defects shall not exceed the maximums specified in Table 1 (CSA B45.5/IAPMO Z124).

PASS **5.5 Subsurface test**
There shall be no visible voids larger than 1.6 mm (0.063 in) in diameter below the original finish surface, and the maximum allowable number of voids smaller than 1.6 mm (0.063 in) for the two test areas shall be eight.

PASS **5.6 Waste fitting connection test**
There shall be no visible cracks in the bottom surface of the specimen.

PASS **5.7 Point impact load test**
There shall be no cracks or chips in the surface of the specimen when examined in accordance with Items (b) to (d) of Clause 5.4.1.

N/A **5.8.1 Load test for bathtub and shower seats**
There shall be no cracks or other signs of failure in the surface of the seat or in the area around the seat when examined in accordance with Items (b) to (d) of Clause 5.4.1.

This requirement is not applicable to the product tested.

PASS **5.8.2 Load test for bathtub rims and bottoms and shower thresholds and bottoms**
There shall be no cracks in the surface of the specimen when examined in accordance with Items (b) to (d) of Clause 5.4.1.

In addition, for specimen bottoms, a) deflections under the test load shall not exceed 3.81 mm (0.150 in); and b) the maximum residual deflection 10 min after removal of the load shall not exceed 0.203 mm (0.008 in).

Position	Deflection (inches) (<= .150")	Residual Deflection (inches) (<= .008")
Center	0.029	0.001

PASS **5.8.2.2.3 Secondary loads (Bathtub rims and bottoms / Shower thresholds and bottoms)**
There shall be no cracks in the surface of the specimen.

N/A **5.8.3 Area impact load test for bathtubs and shower wall surrounds**
There shall be no cracks in the surface of the specimen when examined in accordance with Items (b) to (d) of Clause 5.4.1.

This requirement is not applicable to the product tested.

N/A 5.8.4 Load test for bathtub and shower wall surrounds
With the load applied, deflection at any point shall not exceed 6.35 mm (0.25 in). For free-standing showers, the deflection at any point shall not exceed 25.4 mm (1.0 in).

This requirement is not applicable to the product tested.

PASS **5.9 Radii load test for water closets, urinals, bathtubs, and showers**
The surface of the specimen shall show no cracks, chips, or voids when examined in accordance with Items (b) to (d) of Clause 5.4.1.

PASS **5.10 Colorfastness test**
The test sample shall show no significant change in color or surface texture after 200 hours of exposure to a xenon arc-type light-exposure apparatus in accordance with 5.10.2 and 5.10.3. Measured color difference shall be not more than 2 delta E units of the test sample before and after exposure.

Test Result: DE = 0.7

PASS **5.11 Stain resistance test**
Ratings for removal of the stains listed in the referenced standard are as follows:

The maximum stain resistance rating shall be the sum of the individual stain ratings for each of the covered and uncovered stain areas and shall not exceed 50, Except for sinks, where it shall not exceed 64. The maximum allowable thickness of material removed to eliminate a stain shall be 0.127 mm (0.005 in).

REAGENT	COVERED	UN-COVERED
1. Black Crayon	2	2
2. Black Liquid Shoe Polish	3	3
3. Blue Washable Ink	1	1
4. Lipstick	2	2
5. Hair Dye	3	3
6. Iodine Solution	1	1
7. Gentian Violet Solution	4	4
TOTALS	16	16
Thickness of material lost = N/A	Stain resistance rating = 32	

5.12 Cleanability and wear tests

PASS **5.12.1 Wear test**
Each specimen shall withstand the number of scrub cycles specified in Table 2 (CSA B45.5/IAPMO Z124) without wear-through of the surface material in the middle third of the specimen surface (see Figure 16 [CSA B45.5/IAPMO Z124]) when tested in accordance with Clause 5.12.1.

PASS **5.12.2 Cleanability test**
In addition, when tested in accordance with Clause 5.12.2, each specimen shall not lose more than 5% white-light reflectance after being cleaned with liquid cleanser and not more than 2% white-light reflectance after an additional cleaning with abrasive cleaner.

PASS **5.14 Cigarette test**
There shall be no ignition or progressive glow of the specimen surface during or after contact with the lighted cigarettes. Any resulting damage shall not impair the serviceability of the fixture and shall be easily repairable using abrasive and polishing compounds to approximate the original finish.

PASS **5.15 Chemical resistance test**
The surface finish shall be unaffected by the reagents except for superficial changes removable by sanding with 400-grit wet or dry sandpaper and water. Damage resulting from the test shall not impair the serviceability of the fixture and shall be easily repairable using abrasive and polishing compounds to approximate the original finish.

PASS **5.16 Thermal shock resistance test**
Examine the specimen in accordance with Clause 5.4.1(d). There shall be no cracking, crazing, blistering or spalling, or delamination.

PASS **5.17 Water resistance test for bathtubs and showers**
Examine the specimen in accordance with Clause 5.4.1(d). There shall be no cracking, crazing, blistering or spalling, delamination, or permanent colour change of the specimens.

Final evaluations for colour change shall be performed between 72 and 108 h after testing. When the result is in doubt, an examination shall be conducted in accordance with ASTM D2244. The average colour difference between the test and control specimens shall be not more than ±2 Delta E units.

Discolouration that can be removed by abrading the surface to a maximum depth of 0.125 mm (0.005 in) and repolishing in accordance with the manufacturer's care and maintenance instructions shall be acceptable.

Sample	DE
1	0.3
2	0.3
3	0.3

6. Markings

6.1 General
Plastic plumbing fixtures shall be marked with the manufacturer's name or registered trademark. Markings shall be permanent, legible, and visible after installation. The marking shall comply with 6.1.1-6.1.4.

PASS **6.1.1** Plastic plumbing fixtures shall be marked with the manufacturer's name or registered trademark or, in the case of private labelling, the name of the customer for whom the fixture was manufactured. Additional markings shall be in accordance with Clauses 6.3 and 6.4, as applicable.

PASS **6.1.2** Markings shall be permanent, legible, and visible after installation.

PASS **6.1.3** Acceptable means of applying permanent markings shall include etching, mechanical stamping, stamping with a permanent (non-water-soluble) ink, and moulding in.

Adhesive labels that comply with CSA C22.2 No. 0.15 or UL 969 shall also be considered permanent when placed on a surface that is not normally submerged in water. The exposure conditions specified in Clause 7.1 of UL 969 shall apply.

N/A **6.1.4** In Canada, warnings and cautionary and safety markings, including those found in user manuals, shall be in English and French.

N/A **6.4 Packaging**
Packaging for plastic plumbing fixtures shall be marked with the a) manufacturer's name or registered trademark or, in the case of private labelling, the name of the customer for whom the fixture was manufactured; and b) model number.

The unit was not received in retail packaging.

REFERENCED STANDARDS

PRIMARY REFERENCED STANDARD

CSA B45.5-22 / IAPMO Z124-2022 *Plastic Plumbing Fixtures*

ADDITIONAL REFERENCED STANDARDS

ASME (The American Society of Mechanical Engineers)/CSA Group

ASME A112.18.2-2020/CSA B125.2-20 *Plumbing Waste Fittings* (Section 4.2.1.3)

ASME (The American Society of Mechanical Engineers)

ASME 112.18.1-2018/CSA B125.1-18 *Faucet Cartridges & Cartridge Parts* (Section 4.4.5)

ASTM International (American Society for Testing and Materials)

ASTM D2244-16 *Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates* (Section 5.17)

CSA Groups

C22.2 No. 0.15-15 (R2020) *Adhesive Labels* (Section 6.1.3)

UL (Underwriters Laboratories)

969-2017 Edition 5 *Standard for Marking and Labeling Systems* (Section 6.1.3)