



May 17, 2019

Ms. Gail Griffin
Griffom Innovations, Inc.
P.O. Box 258
Glide, OR 97443-0258

RE: CR# 6532
Report #: 65320219042
Shower Unit Certification Test Report

Dear Ms. Griffin:

Please find enclosed a copy of the test report on the specimen submitted for evaluation. Please check the comment section on the summary page for notes or requested follow up.

If you have any questions, please do not hesitate to call.

Sincerely,

A handwritten signature in blue ink that reads "Deanna Seale".

Deanna (Williams) Seale, PE
Assistant Lab Director
dseale@HomeInnovation.com

Enclosure



Home Innovation
RESEARCH LABS™

TEST REPORT

SHOWER UNIT

Home Innovation Research Labs is accredited by IAS in accordance with ISO 17020, 17025, and 17065. The test methods within this report are included in the scope of accreditation. This report shall not be used to claim product endorsement by Home Innovation Research Labs or IAS. This Certification report may be distributed in its entirety, but excerpted portions shall not be distributed without prior written approval of Home Innovation Research Labs.

REPORT SUMMARY

Griffom Innovations, Inc.
P.O. Box 258
Glide, OR 97443-0258

Manufacturer CR #: 6532

Inspection Date: 2/22/2019

Manufacture Date: 2/11/2019

Unit Received: 4/2/2019

Unit Description: Barrier Free Shower Pan

Inspection Month: February 2019

Test Type: Full

Report Date: 5/17/2019

Report Number: 65320219042

Inspected By: Nathan B.

Unit Model Style: Barrier Free

Unit Serial Number: 24536

Comments:

Shipping damage, if any, did not influence test results. The specimen was inspected for tampering prior to arrival. These tests were performed under the direct and continuous supervision of laboratory personnel. The specimen, as selected, **PASSED** all of the sections of the CSA B45.5-17 / IAPMO Z124-2017 standard detailed in this report.

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

Deanna (Williams) Seale, PE
Assistant Lab Director

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

4. General Requirements

4.1.1 Tolerances

The tolerance on Dimensions 8" and greater shall be ± 3%, less than 8" shall be ± 5%
 Manufacturer's Specified Tolerances: 1 mm
 Manufacturer's Specified Unit Dimensions:
 Whole Unit: 24" x 24" x 5 7/8"
 Measured Unit Dimensions:
 Whole Unit: 24" x 24" x 5 7/8"

4.1.2 Surface finish PASS

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

4.1.3 Coated parts N/A

4.1.4 Different materials N/A

4.1.5 Accessible design fixtures N/A

4.2.1 Openings and drainage PASS

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

4.2.2 Overflows N/A

4.4 Bathtubs and shower bases PASS

Bathtubs and shower bases shall comply with 4.4.1-4.4.5.

5. Test Requirements

5.2 Stress tests for grab bars and grip rails N/A

5.3 Warpage tolerance test PASS

The unit is evaluated in accordance with 5.3.1 and must meet the performance criteria in Clause 5.3.2.

5.4 Surface examination test PASS

The specimen shall be free from cracks, chipped areas, and blisters. Other defects shall not exceed the maximums specified in Table 1 of the referenced standard.

5.5 Subsurface test PASS

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.

5.6 Waste fitting connection test PASS

There shall be no visible cracks in the bottom surface of the specimen.

5.7 Point impact load test PASS

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.

5.8.1 Load test for bathtub and shower seats N/A

5.8.2 Load test for bathtub rims and bottoms and shower thresholds and bottoms PASS

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 Number | Deflection (inches) (<= .150") | Residual Deflection (inches) (<= .008") |
|-----------------|--------------------------------|---|
| 1 | 0.021 | 0.001 |
| 2 | | Pass |
| 3 | | Pass |

Threshold Loads

A= N/A

B= N/A

5.8.3 Area impact load test for bathtubs and shower wall surrounds N/A

5.8.4 Load test for bathtub and shower wall surrounds N/A

5.9 Radii load test for water closets, urinals, bathtubs, and showers N/A

5.10 Colorfastness test **PASS**

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.

5.11 Stain resistance test **PASS**

Ratings for removal of the stains listed in the referenced standard are as follows:

| REAGENT | COVERED | UN-COVERED |
|---|------------------------------|------------|
| 1. Black crayon | 3 | 3 |
| 2. Black liquid shoe polish | 3 | 3 |
| 3. Blue washable ink | 3 | 3 |
| 4. Lipstick | 3 | 3 |
| 5. Hair Dye | 1 | 1 |
| 6. Iodine Solution | 1 | 1 |
| 7. Gentian Violet Solution | 4 | 4 |
| TOTALS | 18 | 18 |
| Thickness of material lost = N/A inches | Stain resistance rating = 36 | |

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).

5.12 Cleanability and wear tests **PASS**

A. Wear **PASS**

Each specimen shall withstand the number of scrub cycles specified in Table 2 without wear-through of the surface material in the middle third of the specimen surface (see Figure 16) when tested in accordance with Clause 5.12.1.

B. Cleanability **PASS**

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.

5.13 Ignitability test **N/A**

5.14 Cigarette test **PASS**

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.

5.15 Chemical resistance test **PASS**

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.

5.16 Thermal shock resistance test **PASS**

Examine the specimen in accordance with Clause 5.4.1(d). There shall be no cracking, crazing, blistering or spalling, or delamination.

5.17 Water resistance test for bathtubs and showers **PASS**

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.

5.18 Field-installed tiling-flange seal test **N/A**

5.19 Overflow test (lavatories and sinks) **N/A**

6. Markings

6.1 General **PASS**

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.

6.2 Non-standard fixtures N/A

6.3 Field-installed flanges N/A

6.4 Packaging PASS

Packaging for plumbing fixtures shall be marked as detailed in 6.4.