



**Home Innovation**  
RESEARCH LABS™

# TEST REPORT

## KITCHEN SINK

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### REPORT SUMMARY

**GRIFORM Innovations, Inc. (CR-6532)**  
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**Inspection Month:** February 2023  
**Test Type:** Full Series  
**Report Date:** 12/20/2023  
**Report Number:** 6532-0223-442-R3

**Manufacture Date:** Not provided  
**Retest Unit Received:** 11/29/2023  
**Retesting Completed:** 12/20/2023

**Inspection Date:** 03/23/2023  
**Inspected By:** Mike Gardiner  
**Unit Model Style:** KRC1215  
**Unit Serial Number:** None

**Unit Description:** Solid Surface Kitchen Sink

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#### Comments:

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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.

Nay Shah, PE  
Laboratory Test Engineer  
Home Innovation Research Labs



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

<b>PASS</b>	<b>4.1.2 Surface finish</b> Fixture surfaces shall be free from defects to the extent specified in this Standard when inspected in accordance with Clause 5.4.
	<b>4.2 Waste fitting openings, drainage, and overflows</b>
	<b>4.2.1 Openings and drainage</b> Openings and drainage shall comply with 4.2.1.1, 4.2.1.2, 4.2.1.3.
<b>PASS</b>	<b>4.2.1.1</b> 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.
<b>STANDARD</b>	<b>4.2.1.2</b> 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).
<b>N/A</b>	<b>4.2.1.3</b> Factory-supplied waste fittings shall comply with ASME A112.18.2/CSA B125.2.
	<b>4.2.2 Overflows</b> When provided, overflows shall comply with 4.2.2.1.
<b>N/A</b>	<b>4.2.2.1 Lavatories and sinks.</b> When overflows for lavatories and sinks are provided, their position in the fixture shall be at the option of the manufacturer and shall comply with the performance requirements in Clause 5.19. Also, overflows in sinks intended for dishwashing and food preparation (e.g., kitchen and bar sinks) shall not be concealed and shall be accessible for disassembly and cleaning after installation.  <i>This requirement is not applicable to the product tested.</i>
	<b>4.3 Lavatories and sinks</b> Openings and mounting surfaces for supply fittings shall comply with 4.3.1.1 – 4.3.1.3.
<b>N/A</b>	<b>4.3.1.1</b> When provided, openings and mounting surfaces for lavatory and sink supply fittings shall be as shown in Figure 2, 3, 4, 5, or 6 (CSA B45.5/IAPMO Z124), as applicable, except when proprietary (i.e., non-standard) supply fittings are provided by the manufacturer.  <i>This requirement is not applicable to the product tested.</i>
<b>N/A</b>	<b>4.3.1.2</b> Factory-supplied supply fittings shall comply with ASME A112.18.1/CSA B125.1.  <i>This requirement is not applicable to the product tested.</i>
<b>N/A</b>	<b>4.3.1.3</b> Mounting surfaces for supply fittings that rely on an air gap for backflow protection shall be not more than 13 mm (0.5 in) below the flood level rim.  <i>This requirement is not applicable to the product tested.</i>

## 5. Test Requirements

**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.

**PASS 5.8.6 Load test for sinks**

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. The maximum residual deflection after removal of the load shall not exceed 0.254 mm (0.010 in).

Position	Residual Deflection (inches)
Center	.002

**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 = 1.900

**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	UNCOVERED
1. Black Crayon	2	2
2. Black Liquid Shoe Polish	1	1
3. Blue Washable Ink	5	5
4. Lipstick	1	1
5. Hair Dye	4	4
6. Iodine Solution	3	3
7. Gentian Violet Solution	4	4
8. Beet (sinks only)	1	1
9. Grape (sinks only)	1	1
10. Tea Bags (sinks only)	1	1
<b>TOTALS</b>	<b>23</b>	<b>23</b>
Thickness of material lost = N/A	Stain resistance rating = 46	

## 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.

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

The specimen shall drain at least 5 min from the onset of water flowing into the overflow opening, without overflowing its flood level rim.

**PASS 5.20 Knife drop test (for kitchen and bar sinks only)**

In accordance with Clause 5.4.1(d); the specimen shall not show any cracks or fractures.

**PASS 5.21 Skillet drop test (for kitchen sinks only)**

In accordance with Items (b) to (d) of Clause 5.4.1; the specimen shall not show any cracks or fractures.

**PASS 5.22 Vibration test (for kitchen sinks only)**

In accordance with Clause 5.4.1(b) to (d); the specimen shall not show any cracks or fractures.

**PASS 5.23 Heated Pan test (for kitchen sinks only)**

In accordance with Clause 5.4.1(d); there shall be no cracking, crazing, blistering, discoloration, or other surface defects.

**PASS 5.24 Hot wax test (for kitchen sinks only)**

There shall be no cracking, crazing, blistering, discoloration, or other surface defects.

## 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.

<b>PASS</b>	<b>6.1.1</b> 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.
<b>PASS</b>	<b>6.1.2</b> Markings shall be permanent, legible, and visible after installation.
<b>PASS</b>	<b>6.1.3</b> 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.
<b>N/A</b>	<b>6.1.4</b> In Canada, warnings and cautionary and safety markings, including those found in user manuals, shall be in English and French.
<b>PASS</b>	<b>6.4 Packaging</b> 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.

## 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 A112.18.1-2018/CSA B125.1-18 *Plumbing Supply Fittings* (Section 4.3.1.2)

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)

#### **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)