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Our Ref: **RE-25286-S1**

Date: 22 November 2021

Delivery Date: 03 November 2021

Test Dates: 03 – 12 Nov 2021

For the attention of Alan Bradley

SAMPLE(S) FOR TEST:

One, KiddieRail

RESULT:

INFORMATIVE*

TEST REQUIREMENTS:

Bespoke testing:

- Durability Test
- Static Load Test
- Point Load Test

*See Comments

This Report relates to the sample(s) submitted for test and no others. Additions, deletions or alterations are not permitted.

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TECHNICAL REPORT

DESCRIPTION

Item: KiddieRail

Overall Dimensions: 330mm high x 3550mm wide x 70mm deep

Qty	Item	Material
4	Handrails	850mm Long 25.6mm Ø Tubular Metal
5	Wall Mounts	2.5mm Thick Moulded Plastic
5	Brackets	2.5mm Thick Moulded Plastic Incorporating locking screw/nut in channel.
3	Rail Joining Connectors	22.4mm Ø Plastic
2	Curved End Sections	1.6mm Thick Moulded Plastic

All dimensions are approximate.

TECHNICAL REPORT

BESPOKE TESTING

The strength tests required were carried out in accordance with customer requirements. Where applicable details of the loads applied and their positions of application are retained at FIRA and are available on request. Structural testing machines are set to operate at the tolerances stated in the standard. Uncertainty of Measurement calculations have not been applied. FIRA Uncertainty of Measurement values are available on request.

Item: KiddieRail

Initial Inspection: No apparent faults

Test 1	Test	Result
Durability Test	Four rail sections and five supports on a wall with supports at each end and at each section join giving a span of 850mm. A durability test at mid-span using a load of 5 kg every five seconds for 14,600 cycles.	INFORMATIVE No damage.

Test 2	Test	Result
Static Load Test	Four sections and five supports on a wall. An initial load of 1 kg to be applied at mid-span and the deflection measured, the load removed and the return to normal to be monitored. Repeat with increasing increments of 1kg up to 10kg. If this test passes with no major deflection/damage, the test to continue on the four sections and five supports with a point load of 10 kg load at mid-span for 48 hours.	INFORMATIVE No deflection observed 1Kg to 10Kg. 10Kg Sustained Load / 48Hrs. No damage.

Test 3	Test	Result
Point Load Test	Point load at a support at one end of the handrail. Increase load in 5kg increments up to 30kg, or until failure.	INFORMATIVE *Failure of component at 25Kg load

*See Comments

In extreme weather conditions the ambient test temperature and/or humidity may fall outside the requirements of the standard. Such changes have not been shown to affect the validity of the results. Details of the ambient conditions at time of test are available on request.

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COMMENTS


Test 3 – On application of a 25Kg Point Load to a support at one end of the handrail, the bracket detached from the wall mount. The screw / nut which slides within the groove pulled through the channel.

CONCLUSION

The KiddieRail sustained no damage or deflection on completion of Test 1 and Test 2. During Test 3, there was a component failure when a 25Kg Point Load was applied.

Tested by: J Moore

Reported by: J Moore

A handwritten signature in black ink, appearing to read 'H James', with a long horizontal line extending from the end of the signature.

Approved by: H James
Operations Manager – Testing Services

TECHNICAL REPORT



Photo 1: KiddieRail

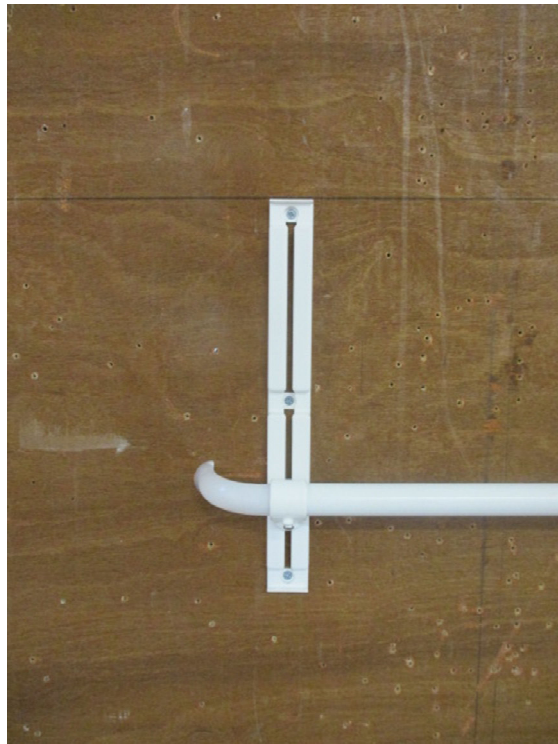


Photo 2: KiddieRail

TECHNICAL REPORT

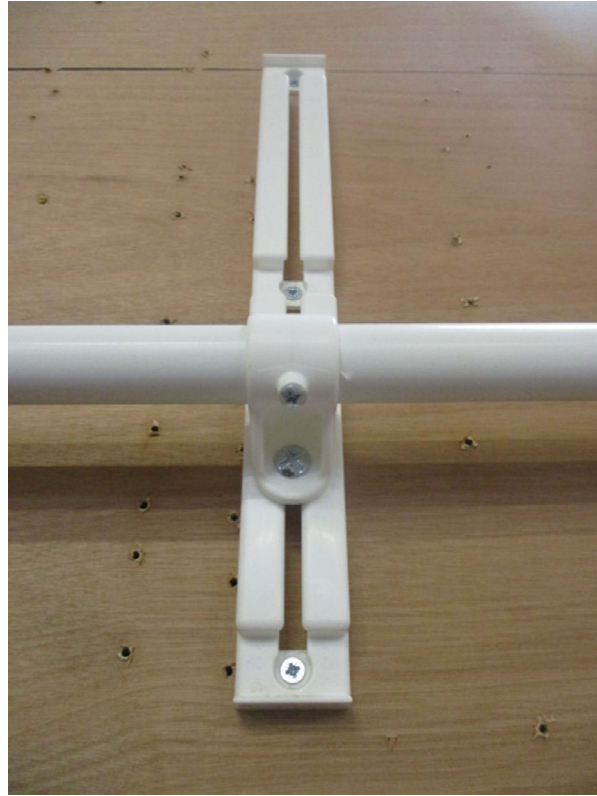


Photo 3: KiddieRail



Photo 4: KiddieRail. Test 1 – Durability 14,600 cycles x 5Kg

TECHNICAL REPORT



Photo 5: KiddieRail. Test 2 – 10Kg load x 48hrs.



Photo 6: KiddieRail. Test 3 – Point Load application.

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Photo 7: KiddieRail. Test 3 – Point Load. At 25Kg, bracket detached from wall mount.

*****End of Report*****