

QC Metallurgical, Inc.

Testing & Consulting Services

Protect A Child Pool Fence Company
QCM Job No. 23DM-210

May 16, 2023

INSPECTION REPORT

This report is regarding load testing for the Protect-A-Child Pool Fence incorporating the fiberglass curved I beam shape support posts and slotted capture of mesh to post design.

The fence/post was tested using the Florida Building Code R4501.17.1.1 through R4501.17.1.15 2020, ANSI/APSP ICC-8 (R2013) Model Barrier Code, and ASTM F1908.

The general test consisted of placing poles in concrete 3" deep. The mesh measured 0.250 inches above the ground level. The poles were spaced 36 inches apart. The fence height was 48" above the ground. These meet the Florida Building Code Standards.

An impact load was applied per ASTM F 2286-16 but was above the 3' minimum with no damage to the poles or fence material.

The vertical load test was applied to a single post as per R4501.17.1-.15 which requires a minimum load of 52 lbs. supplied at a height of 36" above the floor. This was done with no failure. The individual post was ultimately tested to failure which was at 165 lbs. which is over 3 times the standard test load. The failure was at the base and revealed itself only as a vertical crack.

The mesh was not tested as it had been tested in the past by Phifer Inc on August 15 2016 per ASTM F 2286-16 and the Florida Building code.

The poles and fence met loading and impact strength testing with no failure. All test equipment was calibrated per the National Institute of Standards and Technology, Digital Force Gauge, Chatillon DFM-100, S/N C33995, 10-31-22 to 10-31-23.



Jerry Iacofano
QC Metallurgical, Inc.

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Testing & Consulting Services

Protect-A-Child Pool Fence Company
Purchase Order: Verbal
QCM Job No. 21KM-716

November 2, 2021

This letter confirms a review of tested pool barrier for Protect-A-Child Pool Fence Company to update to current specifications and requirements.

Job #12FM-611 on 06/29/2012 was performance tested.

Job #16HM-660 on 08/10/2016 was reviewed to update specification requirements.

All data was reviewed from prior jobs and meet the current ASTM 2286-16 standard design and performance specifications for removable mesh fencing for swimming pools, hot tubs and spas for Florida Building Code, 7th Edition 2020 and Residential Swimming Barrier Requirement R4501.17.1.1 through R4501.17.1.14. No performance values changed.

Customers' vendor & supply source has not changed.



Jerry Iacofano
QC Metallurgical, Inc.

Nov 3, 2021

QC Metallurgical, Inc.

Testing & Consulting Services

Protect-A-Child Pool Fence Company
Purchase Order No. Verbal
QCM Job No. 16HM-660

August 10, 2016

ANALYSIS REPORT

The poles on the fence and gate were tested on June 29th, 2012 with QC Metallurgical Job No. 12FM-611.

The data revealed a post loaded at 36" above ground reached 91 lbs. before failure. The requirement for R4101.17.1.15 was 52 lbs. The new specification of R4501.17.1.15 still has the same requirements of 52 lbs. loaded at 36". The old post still met the latest requirements.

The original access gate was self-closing and was 48" tall. The release mechanism was over 54". The previous requirement was under R4101.17.1.8 and R4101.17.1.1. The new specification per R4501.17.1.1 is still a minimum of 48" and the latch requirement is still 52" per R4501.17.1.8. The older fence meets the new requirements.

CONCLUSION

For the load carrying capacity and the gate dimensions the child pool fence would meet the latest R4501.17.1.15, R4501.17.1.1 and R4501.17.1.8. standard.



Frank Grate, PE
QC Metallurgical Inc.

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Testing & Consulting Services

Protect-A-Child Pool Fence Company
Purchase Order No. Verbal
QCM Job No. 12FM-611

June 29, 2012

INSPECTION RESULTS

This report documents testing on 48" and 60" heights of fencing and self closing gates manufactured by Protect-A-Child Pool Fence Company.

The samples inspected included fence sections in 48" and 60" heights with support posts attached to the mesh on 30" and 36" centers and self closing gates of sample heights. The fence and gates submitted were tested per the standards listed below including ASTM F 2286.


- The mesh was tested per ASTM F2286-05.
- Vertical load test per ASTM F2286 Paragraph 5.1. A vertical load test was conducted. A 1/8" steel wire was looped through the mesh 36" above ground. Upward force of 20 pounds was applied. No tearing of the mesh was noted.
- Impact Test per ASTM F 2286-05 Paragraph 5.2. A weight of 52 pounds was swung into the fence 36" above ground level. No deformation or tearing was noted.
- The self closing gates tested were greater than 48" tall and included self closing hinges and a key lockable self latching mechanism. The release mechanism on the gate was above 54" minimum height requirement.
- The mesh properties were certified by PHIFER Incorporated.
- Post was tested - loaded 36" above ground. Load reached 91 lbs. before failing.

CONCLUSION:

The fence and gates submitted for testing meet or exceed the requirements of:

- ASTM F 2286 and ASTM F 1908 for tests performed. No testing on the mesh other than the impact and vertical tests.
- ANSI IAF-8 Model Barrier Code for tests performed.
- BOCA National Building Code Section 421.10.1 for tests performed.
- *ICC - APSP International Swimming Pool and Spa Code (ISPSC) Public Version 1.0 (*see note below) for tests performed.
- 2010 Florida Residential Building Code R4101.17.1.15 which requires a load of 52 lbs., 36" above the deck.

*Meets ICC-APSP ISPSC code when installed in such a manner that it is not removable without the aid of tools.


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