Resolute Testing Laboratories Pty Ltd
NATA Accredited Laboratory
Number: 20089 / Corporate Site Number: 24654
U18-19, 31-79 Paisley Drive, Lawnton
Queensland, 4501
Tel. 1300 664 698

TEST CERTIFICATE

CERTIFICATE NUMBER	TC-F87.01
SPONSOR	Fire Rated Solutions Pty Ltd
DATE OF TEST	Wednesday 13th October 2021
FULL TEST REPORT	TR-F87.01
TEST ID	FR144-S12

This Test Certificate is issued to give a summary of the test specimens subjected to test under the conditions outlined in Australian Standard AS 1530.4:2014, Methods for fire tests on building materials, components and structures, Part 4: Fire-resistance tests for elements of construction, Sections 2 & 12.

THIS CERTIFICATE IS PROVIDED FOR GENERAL INFORMATION ONLY AND DOES NOT COMPLY WITH THE REGULATORY REQUIREMENTS FOR EVIDENCE OF COMPLIANCE.

Reference should be made to the relevant full Test Report or Regulatory Information Report to determine the applicability of the test result to a proposed installation.

TEST SUMMARY	
TEST SPECIMEN	Specimen A: FRS DN150 split bracket, M16 threaded rod, and FRS nut, Specimen B: FRS side bracket
DESCRIPTION	Specimen A was suspended from the soffit of the slab by way off a single 310 stainless steel M16 diameter reverse-threaded rod. This threaded rod extended through the slab and was secured with a single 310 stainless steel nut located on the top side of the slab. Between the nut and the slab was a mild steel plate measuring 150 mm x 100 mm x 8 mm, this plate acted as a washer. Within the furnace, the threaded rod was secured to the split bracket by way of an FRS nut, the length of threaded rod within the furnace was approximately 200mm. Specimen B was a 100 mm x 75 mm x 6 mm steel angle was bolted though the slab using 2 x M12 304 stainless steel fixings and secured with two FRS nuts on the top side of the slab. Two FRS steel side brackets were installed to the steel angle using 2 x M12 304 stainless steel fixings and secured with two 304 stainless steel nuts. The bolts were installed on the south side of the angle and nuts on the north side. The south FRS bracket had a 304 stainless steel threaded rod down to the weight bar, the length of the rod was approximately 100 mm. The north FRS bracket was fastened to the slab by way of a 304 stainless steel M16 threaded rod, secured on the top side with a stainless-steel nut. Between the nut and the slab was a mild steel plate measuring 150 mm x 100 mm x 8 mm, this plate acted as a washer. The threaded rod was wrapped with an insulative wool type blanket. Through each pipe hanger bracket a nominally 1200 mm long x 165 mm diameter steel weight bar was installed. To each end of each bar, seven 300 mm wide x 400 mm high x 20 mm thick steel plates were added (totaling 14 plates on each specimen). The total weight was 424kg for A and 425.1kg for B.

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The test specimen described above achieved the following fire-resistance periods when evaluated against the criteria of failure under the relevant Sections.

Specimen	Heating Regime to	Design Capacity	Time to Operational Failure	Average Temp. at Failure °C	Max Temp. at Failure °C	Mode of Failure
A	AS 1530.4	421 Kg	No Failure	No Failure. 500 °C @ 18 minutes	No Failure	-
	Structural Adequacy		No failure at 91 minutes			
	Integrity		Not applicable			
	Insulation		Not applicable			
	For the purposes of the Building Code of Australia the Specimen A under test achieved a fire-resistance level (FRL) of: 90/-/-. The FRL is applicable to the specimen as tested and exposed to fire from the same side as tested unless the specimen is symmetrical in which case fire exposure may be from either direction.					
B	AS 1530.4	421 Kg	No failure	No Failure 500 °C @ 13 minutes	No Failure	-
	Structural Adequacy		No failure at 91 minutes			
	Integrity		Not applicable			
	Insulation		Not applicable			
	For the purposes of the Building Code of Australia the specimen under test achieved a fire-resistance level (FRL) of: 90/-/-. The FRL is applicable to the specimen as tested and exposed to fire from the same side as tested unless the specimen is symmetrical in which case fire exposure may be from either direction.					

Pre (left) and Post (right) Test Photos:

Issued On	The 15th October 2021 without alterations or additions	
Authorised By		M. Lewis Technical Manager

The results of these fire tests may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions.