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-F86.01
SPONSOR	Fire Rated Solutions Pty Ltd
DATE OF TEST	Tuesday 5th October 2021
FULL TEST REPORT	TR-F86.01
TEST ID	FR143-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	A – FRS DN150 Strap Assembly, M16 threaded rod, drop in anchor. B – FRS DN150 Split Bracket research specimen, M16 threaded rod, side brackets bolted through steel angle, bolted through concrete.
DESCRIPTION	Specimen A was suspended from the soffit of a slab by way off a single 304 stainless-steel drop-in anchor and 310 stainless steel M16 diameter reverse-threaded rod. The length of the rod was approximately 500 mm. The rod was secured to the pipe bracket by way of an FRS nut. Through the 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 (measured) for specimen A was 424 kg 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 304 stainless steel nuts on the top side of the slab. Two FRS steel 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 FRS DN150 split bracket, the length of the rod was approximately 450mm. The rod was secured to the pipe bracket by way of an FRS nut. The north FRS bracket was fastened to the slab by way of a 304 stainless steel threaded rod, secured with an FRS nut on the top side of the slab. Through the 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 (measured) for specimen B was 425.1 kg.

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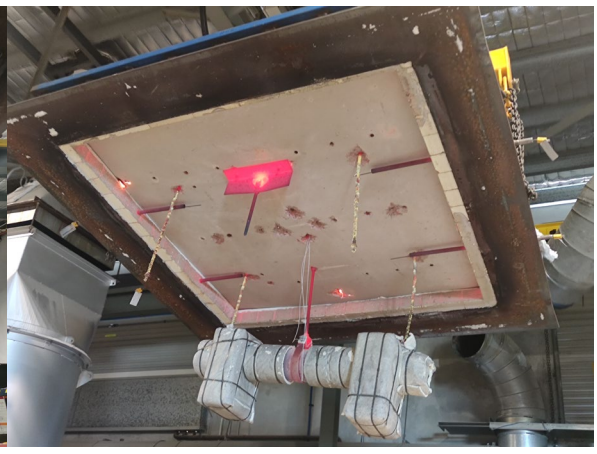
The test specimen described above achieved the following fire-resistance periods when evaluated against the criteria of failure under the relevant Sections.

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 @ 9 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	53 minutes	873 °C. 500 °C @ 3 minutes	877 °C	Tensile Stress in Rod
	Structural Adequacy		Failure at 53 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: 30/-/-. 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.					

Test Photos:



Issued On	The 15th of 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.