

Our ref: FCO-2291/3932

Mr Lorenzo Fazzini
L & A Fazzini Manufacturing Pty Ltd
23-25 Wentworth Street
GREENACRE NSW 2190

Dear Mr Fazzini,

LIKELY FIRE PERFORMANCE OF VERMITEX TH AND VERMITEX HX SPRAYED
TRIMESH ENCLOSURES
Assessment Number FCO-2291
Your e-mail of 11 November 2010

INTRODUCTION

We have re-examined the information referenced by you on the likely performance of your Trimesh framed enclosure incorporating either Vermitex TH or Vermitex HX insulation materials and subjected to hydrocarbon time-temperature exposure. The information included:-

- Australian Standard 1530, Methods for fire tests on building materials, components and structures, Part 4-1990, Fire-resistance tests of elements of building construction;
- British Standard 476, Fire tests on building materials and structures, Part 20:1987, Method for the determination of the fire resistance of elements of construction (general principles) including Appendix D; and
- data from CSIRO tests numbered FS 3049/1696 conducted on 20 July 1998 and FS 3356/2110 conducted on 19 December 2000.

We have retained this information.

You have requested an assessment as to the likely internal temperature of your Trimesh enclosures when protected by various thicknesses of Vermitex TH and Vermitex HX and subjected to a hydrocarbon fire exposure.

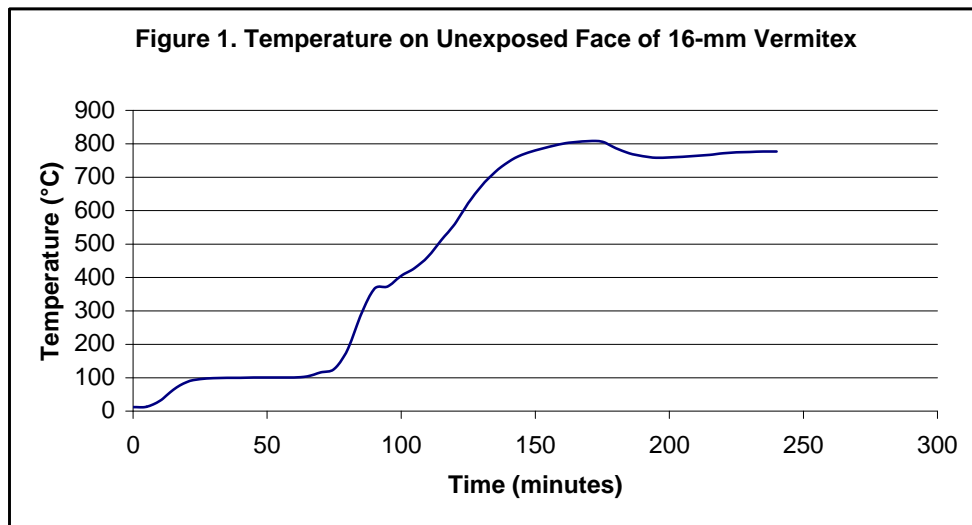
ANALYSIS

CSIRO fire test numbered FS 3049/1696

On 20 July 1998 this Division conducted a fire test on sprayed enclosure incorporating one side that was fabricated from your Trimesh reinforcement and your cement based Vermitex 7WP when exposed to a simulated hydrocarbon fire exposure. The exposed thickness of this material was measured at 16-mm thick and the temperature was recorded on the unexposed face of this 16-mm thickness.

THIS ASSESSMENT SUPERSEDES FCO-2291 ISSUED ON 21 JANUARY 2009.

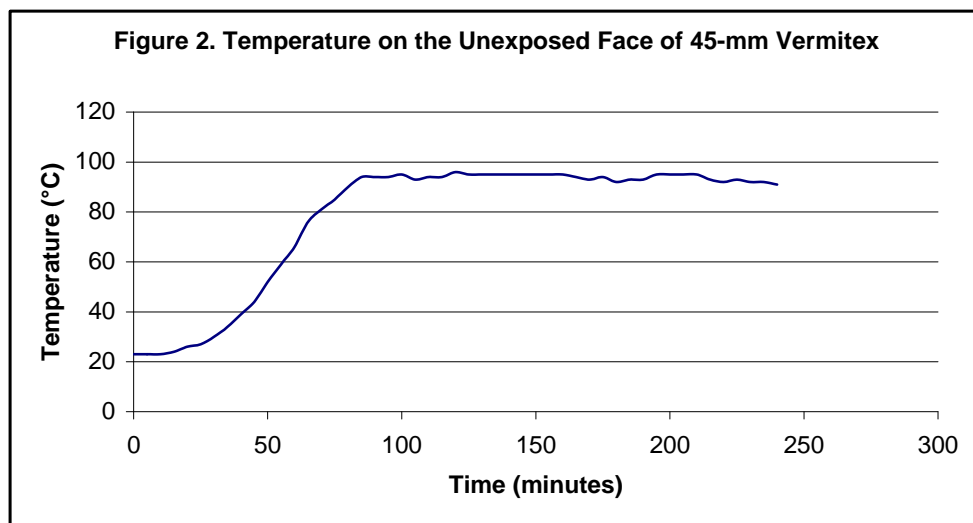
Figure 1, below, shows the temperature recorded during this test.



CSIRO fire test numbered FS 3356/2110

Subsequently, on 19 December 2000, this Division conducted a full-scale fire-resistance test that incorporated a Trimesh ceiling system with 45 mm of your Vermitex TH cement based insulation. The enclosure was subjected to a simulated hydrocarbon fire exposure for 241 minutes.

Figure 2, below, shows the temperature recorded on unexposed face of the ceiling.



Due to the performance characteristics of the insulation barriers it is generally conservative to extrapolate down or interpolate between values provide that stickability has been established as it has for this product over numerous tests. Thus it is possible to determine the likely thermal performance of a range of thicknesses

CONCLUSION/OPINION

Based on the test data and the factors related to the performance of the Vermitex TH and Vermitex HX, it is the opinion of this Division that the table below represent the approximate times to reach the nominated temperatures on the unexposed face of a Trimesh enclosure

when exposed to a hydrocarbon fire and protected by the nominated thickness of Vermitex TH or Vermitex HX cement based sprayed insulation.

Table 1. Calculated time (minutes) to reach the nominated temperature on the unexposed face of a Trimesh enclosure when subjected to a hydrocarbon fire exposure.

Vermitex TH or HX thickness (mm)	Temperature (°C)		
	100	150	200
16	35	75	80
25	115	125	130
35	175	185	190
45	Not Reached at >240	Not Reached at >240	Not Reached at >240

TERM OF VALIDITY

This assessment report will lapse on 31 March 2016. Should you wish us to re-examine this assessment with a view to the possible extension of its term of validity, would you please apply to us three to four months before the date of expiry. This Division reserves the right at any time to amend or withdraw this report in the light of new knowledge.

Yours faithfully



Russell Collins
For Manager, Fire Testing and Assessment

8 March 2011