

Our ref: FCO-0812/3932

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

Dear Mr Fazzini,

COMPATIBILITY OF VERMITEX SPRAY PROTECTION SYSTEMS WITH METAL PRIMERS
Assessment FCO-0812
Your e-mail of 11 November 2010

INTRODUCTION

We have re-examined the information referenced by you on the likely performance of your sprayed insulation system when applied to primed steel sections. The information included:

- test numbered FS 2161 conducted on 14 December 1988;
- test numbered FS 2171 conducted on 6 February 1989;
- test numbered FS 2172 conducted on 13 February 1989;
- test numbered FS 2174 conducted on 15 February 1989;
- CSIRO Sponsored Investigation test report numbered FSH 0007 for a full-scale fire-resistance test conducted on 2, 17 and 25 May 1989;
- CSIRO Sponsored Investigation test report numbered FSH 0230 on fire protected steel sections;
- CSIRO Sponsored Investigation test report numbered FSH 0236 for a full-scale fire-resistance test conducted on 18 December 1992;
- CSIRO Sponsored Investigation test report numbered FSP 0836 for a fire test conducted on 19 December 2000;
- CSIRO Sponsored Investigation test report numbered FSP 0837 for a fire test conducted on 22 December 2000;
- CSIRO Sponsored Investigation test report numbered FSH 0981 for a fire test conducted on 28 June 2003;
- CSIRO Sponsored Investigation test report numbered FSH 0982 for a fire test conducted on 28 June 2003;
- CSIRO Sponsored Investigation test report numbered FSH 1070 for fire tests conducted on 30 June 2004 and 2 July 2004;
- CSIRO Sponsored Investigation test report numbered FSH 0026 for a full-scale fire-resistance test conducted on 6 September 1989;
- faxes from Vessey Chemicals;
- National Association of Corrosion Engineers publication 6H189; and
- Duraprime HB Zinc Phosphate Primer data sheet.

We have retained this information.

You have proposed to apply your various Vermitex sprayed insulation materials over primed steel surfaces without detrimentally affecting the fire-resistance levels of the approved protection system.

ANALYSIS

As the result of a number of series of full scale fire-resistance tests on various steel column and beam sections using your Vermitex (AF DX & TH) sprayed insulation this Division carried out a least square regression analysis in accordance with Section 12 of the Australian steel Structure Code to produce a series of tables relating fire protection to material thickness and the surface-to-mass ratio of the steel sections. These tests were performed on steel section which were both protected and not protected by a primer layer prior to your treatment.

All of these tests, particularly the 700 mm wide plate in FSH 0230 and on the underside of concrete slabs, have demonstrated the excellent stickability of your Vermitex spray material. It is this stickability requirement of the protection material that would be in question should it be applied over a pre-finished surface.

As referred to, Section 9 of AS 3784.1-1990 and BS 8202.1-1995 indicated that the spray may be locked in position due to the shape of the steel member. Members such as Universal Columns and Universal Beams, for which you are seeking this assessment, would certainly fulfil this requirement. The addition of a thin layer of primer over correctly prepared steel should not affect this stickability.

CONCLUSION/OPINION

Based on the proven performance of your Vermitex (AF DX & TH) sprayed protection systems during standard fire tests to AS 1530.4, BS 476 Part 20 and BSEN 1363, it is the opinion of the Division that the fire-resistance levels specified for your approved Vermitex (AF, DX & TH) fire protection system when applied to steel sections would not be detrimentally affected by applying it over the commercially primed steel or steel sections primed using Vermitex 7 Primer (Bond/Prick-up), provided that the steel is cleaned and prepared as specified by the primer manufacturer prior to the application of the primer.

This assessment covers the application of Vermitex (AF, DX & TH) to

1. Bare Steel.
2. Primed steel (Red Oxide/Zinc Phosphate etc).
3. Galvanised/Hot Dip & Electroplated Structural steel members for all steel sections (Universal & Welded Beams, Universal & Welded Columns, SHS, RHS, CHS, PFC, TFB, TFC, EA and UA)

TERM OF VALIDITY

This assessment report will lapse on 31 January 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
21 January 2011