



REGULATORY INFORMATION REPORT

An assessment of the fire resistance performance of a 150mm thick concrete floor penetrated by plastic pipes protected by a Hilti CP 680 1 1/4" S collars if tested in accordance with AS1530.4-2005 and assessed in accordance with AS 4072.1-2005

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1 INTRODUCTION

This report contains the minimum information sufficient for regulatory compliance and refers to the Assessment report EWFA 36530900.1.

The referenced report presents an assessment of the fire resistance performance of a 150mm thick concrete floor penetrated by plastic pipes protected by a Hilti CP 680 110/4" S collars if tested in accordance with AS1530.4-2005 and assessed in accordance with AS4072.1-2005.

The tested systems are described in Section 2 and are subject to the proposed variations described in Section 3 if tested in accordance with the referenced test method described in Section 4. The conclusions of the report are summarised in Section 5. The validity of the referenced assessment is conditional on compliance with Sections 7, 8 and 9 of the referenced report.

2 TESTED PROTOTYPE

The referenced assessment is based on fire resistance tests WF145217/A, WF 171712/A, WF 130659, and FSH 1208.

Test WF145217/A, describes a test of various stack pipe penetrations protected with Hilti CP 680 N 110/4" N-RAD collars tested in accordance AS1530.4-1997. The test was undertaken by Warringtonfire on 24th March 2005 and sponsored by Hilti Entwicklung Befestigungstechnik GmbH, who has granted permission for this test data to be referenced in this report.

Test WF 171712/A, describes a test of various stack pipe penetrations protected with Hilti CP 680 110/4" S tested in accordance with AS1530.4-2005. The test was undertaken by Bodycote Warringtonfire on 22nd April 2008 and was sponsored by Hilti Entwicklung Befestigungstechnik GmbH, who has granted permission for this test data to be referenced in this report.

Test WF 130659 describes a test of various stack pipe penetrations protected with Hilti CP 680N firestop collars tested in accordance with AS1530.4-1997. The test was undertaken by Warringtonfire and was sponsored by Hilti Entwicklung Befestigungstechnik GmbH, who has granted permission for this test data to be referenced in this report.

Test FSH 1028 describes a test of various stack pipe penetrations protected with various Hilti products tested in accordance with AS1530.4-1997 was undertaken by CSRIO and was sponsored by Hilti (Aust.) Pty Ltd.

3 VARIATION TO TESTED PROTOTYPES

The proposed construction shall be PP, PP-R, Silere (PP), PE or HDPE pipe penetrations protected with Hilti CP 680 110/4" S firestop collars in floors as tested in tests WF 130659, and FSH 1208 and with consideration of the following variations:

- The floor thickness shall be minimum 150mm thick or greater.
- CP680 110/4" S cast-in fire collar as tested in WF 171712/A to be used to protect penetrations in lieu of the CP680 110/4" N collars
- As an option, the tested floor construction may be replaced by the Ultrafloor flooring system, which incorporates a layer of 12mm compressed fibre cement permanent formwork on the underside of the concrete slab. The proposal requires a hole to be cut in the formwork to completely expose the metal plate of the Hilti CP 680 110/4" S firestop collars.
- Refer to table 1 and figure 1 for a summary of the proposed construction.

Table 1 – Pipes protected with Hilti CP 680 110/4" S firestop collars in 150mm thick floors

Pipe Material	Hilti Collar System	Nominal Pipe Diameter (mm)	Nominal Pipe Wall Thickness (mm)
PP pipe	CP 680 110/4" S	90	8.2
		110	10.0
PP-R pipe		90	12.3
		110	10.0
Silere pipe		110	5.6
PE pipe		90	8.2-9.2
		110	10-11.1
HDPE		90	3.5
	110	4.3	

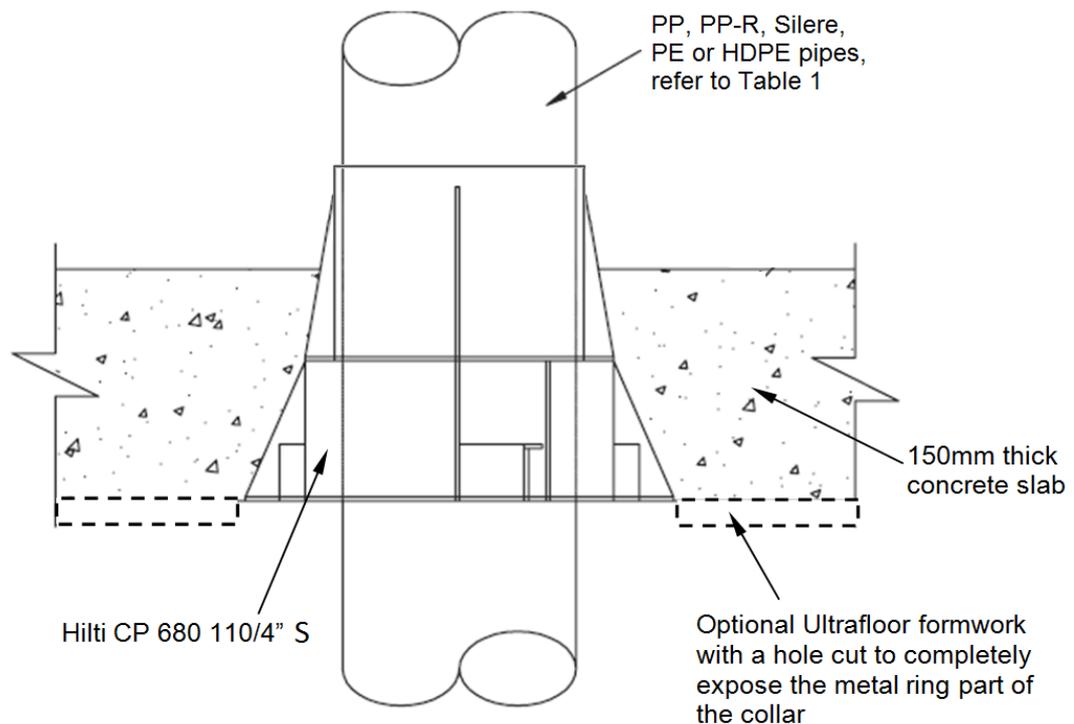


Figure 1 – Stack pipes protected with Hilti CP 680 110/4" S with or without Ultrafloor

4 REFERENCED TEST PROCEDURES

The referenced report is prepared with reference to the requirements AS1530.4-2005 and AS4072.1-2005 for the determination of an FRL and specimen configuration.

5 FORMAL ASSESSMENT SUMMARY

On the basis of the discussion presented in the referenced report, it is the opinion of this testing authority that if the tested prototype described in Section 2 had been varied as in Section 3, it will achieve the fire resistance as stated below if tested in accordance with the test method referenced in Section 4 when subject to the requirements of Section 7.

Table 2 - Performance of stack pipes in floors

Pipe Type & Material	Nominal Pipe Diameter	Nominal Pipe Wall Thickness	Hilti Collar System	Refer Figure	FRL
PP pipe	90	8.2	CP 680 110/4" S	Fig. 1	-/240/240
	110	10.0			-/240/240
PP-R pipe	90	12.3			-/240/240
	110	10.0			-/180/180
Silere pipe	110	5.6			-/240/240
PE pipe	90	8.2-9.2			-/240/240
	110	10-11.1			-/240/240
HDPE	90	3.5			-/240/240
	110	4.3			-/240/240

6 DIRECT FIELD OF APPLICATION

The application of the results of the referenced assessment is to floor elements exposed to fire from the underside as tested with the service supported as tested.

7 REQUIREMENTS

The referenced report details the methods of construction, test conditions and assessed results that would have been expected had the specific elements of construction described herein been tested in accordance with AS1530.4.

The supporting floor construction shall be capable of providing effective support of the proposed pipe and collar for the required fire period.

All services shall be supported in the manner in which they are assessed as described in Section 3. Any further variations with respect to size, constructional details, loads, stresses, edge or end conditions, other than those identified in the referenced report, may invalidate the conclusions drawn in the referenced report.

8 VALIDITY

The referenced assessment report does not provide an endorsement by Exova Warringtonfire Aus Pty Ltd of the actual products supplied.

The conclusions of the referenced assessment 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.

Because of the nature of fire testing, and the consequent difficulty in quantifying the uncertainty of measurement, it is not possible to provide a stated degree of accuracy. The inherent variability in test procedures, materials and methods of construction, and installation may lead to variations in performance between elements of similar construction.

The assessment can therefore only relate only to the actual prototype test specimens, testing conditions, and methodology described in the supporting data, and does not imply any performance abilities of constructions of subsequent manufacture.

The referenced assessment is based on information and experience available at the time of preparation. The published procedures for the conduct of tests and the assessment of test results are the subject of constant review and improvement and it is recommended that the referenced report be reviewed on or, before, the stated expiry date.

The information contained in the referenced report shall not be used for the assessment of variations other than those stated in the conclusions above. The assessment is valid provided no modifications are made to the systems detailed in the referenced report. All details of construction should be consistent with the requirements stated in the relevant test reports and all referenced documents.

9 AUTHORITY

9.1 APPLICANT UNDERTAKINGS AND CONDITIONS OF USE

By using this report as evidence of compliance or performance the applicant(s) confirms that: to their knowledge the component or element of structure, which is the subject of this assessment, has not been subjected to a fire test to the Standard against which this assessment is being made, and

they agree to withdraw this assessment from circulation should the component or element of structure be the subject of a fire test by a test authority in accordance with the Standard against which this assessment is being made and the results are not in agreement with this assessment, and

they are not aware of any information that could adversely affect the conclusions of this assessment and if they subsequently become aware of any such information, agree to ask the assessing authority to withdraw the assessment.

9.2 GENERAL CONDITIONS OF USE

This report may only be reproduced in full without modifications by the report sponsor. Copies, extracts or abridgments of this report in any form shall not be published by other organisations or individuals without the permission of Exova Warringtonfire Aus Pty Ltd.

9.3 AUTHORISATION ON BEHALF OF EXOVA WARRINGTONFIRE AUS PTY LTD

Prepared by:

Reviewed by:



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9.4 DATE OF ISSUE

20/08/2015

9.5 EXPIRY DATE

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