

# Hilti CP 651 Firestop Cushion

## Submission Folder

Product Information and Method Statement	2
Test Reports	
Warres No. 155047	5
VOC Content	25
Letters	
Government Letters	26
Country of Origin	29
LEED Letter	30
Non-CFC and Ozone Confirmation	31
Material Information Statement	32
Job Reference	33



Recycling one ton of paper saves 17 trees and 7000 gallons of water.  
Please consider your environmental responsibility before using the hard copy version!

## Firestop cushion CP 651N



### APPLICATIONS

- Temporary sealing of openings in floors and walls through the construction phase

### ADVANTAGES

- Quick and easy installation
- No special tools required
- Very economical in use thanks to optimized cushion dimensions
- Re-usable and thus economical
- Fully functional immediately after installation
- Tear-resistant and dust-free installation



Acoustic

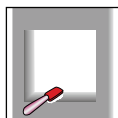


Mould & Mildew

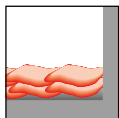
### Technical data

Base materials	Drywall, Concrete, Masonry
Approx. density	350 kg/m <sup>3</sup>
Application temperature range	-30 - 35 °C
Temperature resistance range	-40 - 120 °C
Storage and transportation temperature range	-30 - 40 °C
Colour	White

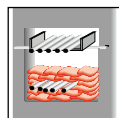
### Application Procedure



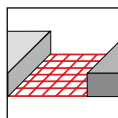
1. Clean opening



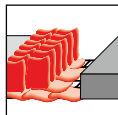
2. Cushion arrangement without cables in wall



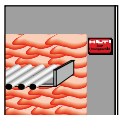
3. Cushion arrangement with cables in wall



4. Fasten wire mesh in place when closing floor openings with cushions



5. Cushion arrangement in floor



6. Fasten installation plate in place (if required)



Order Now



Watch Video

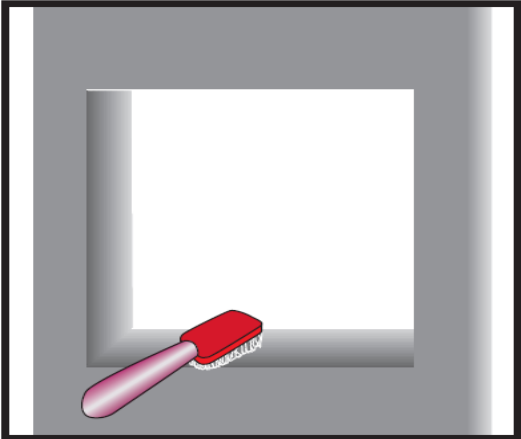
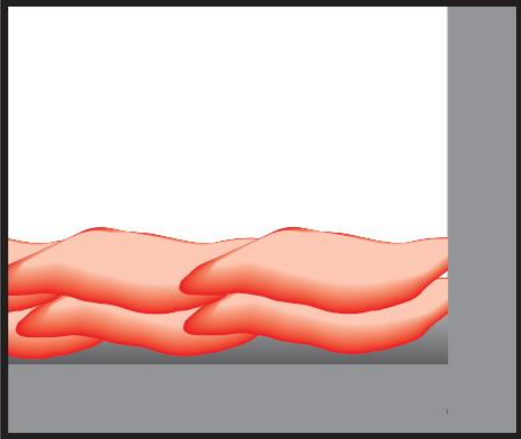
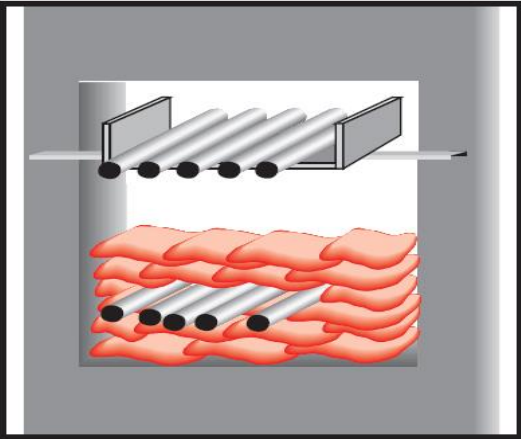


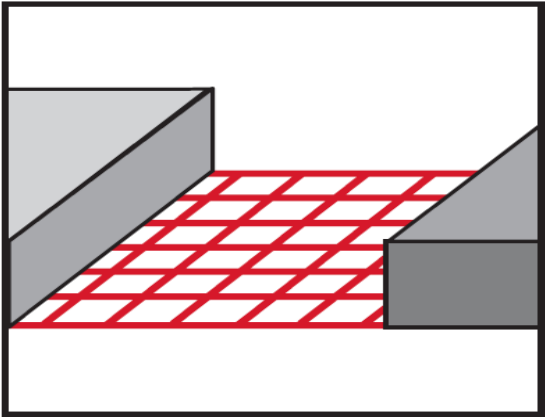
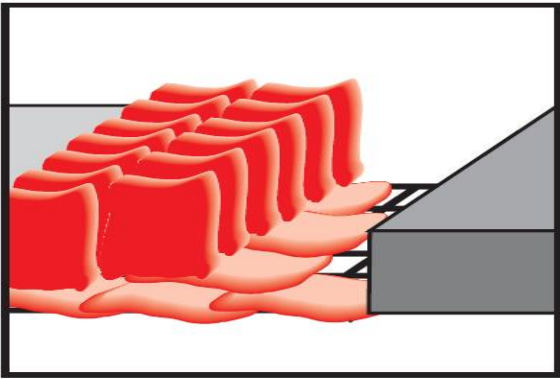
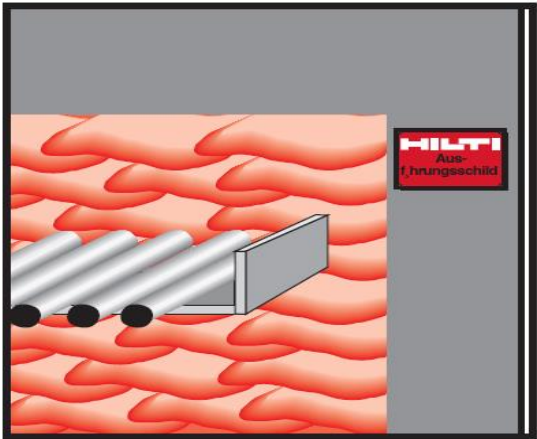
Ordering designation	Dimensions (LxWxH)	Sales pack quantity	Item number
CP 651N-S	300 x 40 x 30 mm	30 pc	382624 <sup>1)</sup>
CP 651N-M	300 x 80 x 30 mm	15 pc	382625 <sup>1)</sup>
CP 651N-L	300 x 170 x 30 mm	6 pc	382626 <sup>1)</sup>

<sup>1)</sup> This is a non-stock item. For detailed lead time information please contact your Hilti representative.

Please visit Hilti website for the latest item numbers and related products

**Subject:** Method Statement of CP 651N.  
**Material:** CP 651N firestop cushion  
**Accessory:** Nil

Setting Operation		
1	Clean the opening. Cables and cable supporting structures must be installed and fastened in compliance with standards.	
2	Cushion arrangement without cables running through wall partition.	
3	Cushion arrangement with cables running through wall partition.	

4	For floor openings, fasten wire mesh in place when closing the opening.	
5	Cushion arrangement in floor. Seal gaps between cables and CP651N with CP606 if required (please refer to approval).	
6	Fasten identification plate in place (if required).	

### Important Precautions:

- Insert the first layer of CP 651N underneath the cables if possible.
- Overlap (> 20 mm)
- Shift next layer 1/2 width of cushion (stretcher bond).
- Seal off the opening with CP 651N tightly.
- If cable penetration must carry permanent identification mark in the form of an installation plate. Enter the appropriate details on the installation plate and mount it in a visible position beside the cable penetration.
- Check that the cushions have been installed in compliance with regulations.



# assessment report

**Title:**

The Fire Resistance  
Performance of 'Hilti CP651N'  
Pillow Based Penetration  
Sealing System When  
Penetrated by Various Services

**WF Assessment Report No:**

155047

**Prepared for:**

**Hilti**  
**Entwicklungsgesellschaft**  
**mbH**

Hiltistr. 6  
86916 Kaufering  
Germany

**Date:**

**25<sup>h</sup> May 2006**

**TABLE OF CONTENTS**

<b>SECTION</b>	<b>PAGE</b>
<b><u>Executive Summary</u></b>	<b><u>3</u></b>
<b><u>Introduction</u></b>	<b><u>4</u></b>
<b><u>Assumptions</u></b>	<b><u>4</u></b>
<b><u>Proposals</u></b>	<b><u>4</u></b>
<b><u>Basic Test Evidence</u></b>	<b><u>4</u></b>
<b><u>Assessed Performance</u></b>	<b><u>5</u></b>
<b><u>Conclusions</u></b>	<b><u>11</u></b>
<b><u>Validity</u></b>	<b><u>12</u></b>
<b><u>Summary of Primary Supporting Data</u></b>	<b><u>12</u></b>
<b><u>Declaration by Hilti Entwicklungsgesellschaft mbH</u></b>	<b><u>15</u></b>
<b><u>Signatories</u></b>	<b><u>16</u></b>
<b><u>Annex</u></b>	<b><u>17</u></b>



---

## Executive Summary

---

<b>Objective</b>	This report provides a considered opinion regarding the fire resistance performance of wall and floor mounted 'Hilti CP651N' pillow based penetration sealing systems, where they are penetrated by various services.
<b>Report Sponsor</b>	Hilti Entwicklungsgesellschaft mbH
<b>Address</b>	Hiltistr. 6 86916 Kaufering Germany
<b>Summary of Conclusions</b>	<p>Should the recommendations given in this report be followed, it can be concluded that wall and floor mounted 'Hilti CP651N' pillow based penetration sealing systems, when penetrated by various services, as detailed in this report should provide up to 240 minutes integrity and 120 minutes insulation performance, if subjected to a test in accordance with of prEN 1366-3: Draft 10A.</p> <p>A matrix of the appraised seal performance is included in the Annex to this report.</p>
<b>Valid until</b>	1 <sup>st</sup> June 2011

**This report may only be reproduced in full. Extracts or abridgements of reports shall not be published without permission of warringtonfire.**



---

## Introduction

This report provides a considered opinion regarding the fire resistance performance of wall and floor mounted 'Hilti CP651N' pillow based penetration sealing systems, where they are penetrated by various services.

The supporting test evidence for this report was all conducted in accordance with prEN 1366-3: Draft 10A: 23.10.2005. While a published standard BS EN 1366-3: 2004 exists for the testing of such products, the limitations of this standard have been recognised and a wholly revised and more extensive standard is under preparation. While the revised standard remains unpublished, the latest draft (10A) was adopted for the purpose of the tests.

### FTSG

The data referred to in the supporting data section has been considered for the purpose of this appraisal which has been prepared in accordance with the Fire Test Study Group Resolution No. 82: 2001.

---

## Assumptions

### Installation

It is assumed that the 'Hilti CP651N' pillows, services and any associated sealing systems will be installed in a similar manner to that of the previously tested assemblies cited in this report, by competent installers.

### Supporting construction

It is assumed that the supporting structure into which the elements are installed will have a proven fire resistance performance such that it is capable of effectively supporting the proposed constructions for at least the required period.

---

## Proposals

It is proposed that 'Hilti CP651N' pillow based penetration sealing systems mounted within concrete floors, masonry walls and drywalls will provide up to 240 minutes integrity and 120 minutes insulation performance when penetrated by various cables and plastic pipes as described later in this report.

---

## Basic Test Evidence

### WF No. 150136

The test referenced WF No. 150136 and described briefly in the supporting data section of this report, describes a fire resistance test in accordance with prEN 1366-3: Draft 10A, on a 'Hilti CP651N' pillow based penetration sealing system, mounted within a lightweight rigid wall supporting construction (autoclaved block). The system was installed within a 1500 mm high by 1200 mm wide aperture within the wall and incorporated the test arrangement for sealed cable penetration systems (large wall openings), as defined in the standard, along with additional penetrating items.

The test demonstrated the ability of the seal to provide 241 minutes integrity and 45 minutes insulation performance. A full breakdown of the insulation performances recorded on each penetrating item is included in the test report.



**MPA No.  
3265/7575**

The test referenced No. 3265/7575 and described briefly in the supporting data section of this report, describes a fire resistance test in accordance with prEN 1366-3: Draft 10A, on a 'Hilti CP651N' pillow based penetration sealing system, mounted within a lightweight flexible wall supporting construction (plasterboard drywall). The system was installed within a 1480 mm high by 1200 mm wide aperture within the wall and incorporated the test arrangement for sealed cable penetration systems (large wall openings), as defined in the standard, along with additional penetrating items.

The test demonstrated the ability of the seal to provide 132 minutes integrity and insulation performance.

**CTICM No. 05-E-  
331-A**

The test referenced WF No. 150136 and described briefly in the supporting data section of this report, describes a fire resistance test in accordance with prEN 1366-3: Draft 10A, on two 'Hilti CP651N' pillow based penetration sealing systems, mounted within a concrete floor supporting construction. The systems were installed within 1000 mm long by 700 mm wide apertures within the floor and both incorporated the test arrangement for cable penetration systems (large floor openings), as defined in the standard, along with additional penetrating items. Seal 1 incorporated additional sealing of CP606 mastic between cushions and services and CP648 wraps for the plastic pipes. A further aperture and sealing system was included within the test but is not the subject of this report.

The test demonstrated the ability of Seal 1 to provide 135 minutes integrity and 94 minutes insulation performance and of Seal 2 to provide 135 minutes integrity and 85 minutes insulation performance.

## Assessed Performance

**Field of direct  
application of test  
results**

prEN 1366-3: Draft 10A contains rules for a direct field of application of test results and while the standard is unpublished, it is considered that these rules still provide useful guidance with regard to the possible field of application and where appropriate these rules have been utilised.

**Supporting  
construction**

The tests discussed above have demonstrated the ability of the 'Hilti CP651N' pillow based penetration sealing system, to provide integrity and insulation performances in a lightweight rigid wall supporting wall construction, a flexible wall construction and in a concrete floor construction. The insulation performance of the seals will be discussed later in this report, due to variance between different penetrating items, however the integrity performances of the seals in alternative supporting constructions, would be expected to be as discussed below:

**Rigid walls**

The direct field of application rules given within the standard indicate that the results of the test referenced WF No.150136, may be applied to walls thicker than the tested 150 mm and denser than the tested 620 kg/m<sup>3</sup>.



An integrity performance of at least 240 minutes would therefore be expected within solid masonry/concrete/block walls of the following specification:

- Minimum density – 620 kg/m<sup>3</sup>
- Minimum thickness – 150 mm
- Maximum aperture size – 1500 mm high by 1200 mm wide

### **Flexible walls**

The direct field of application rules given within the standard indicate that the results of the test referenced No. 3265/7575, may be applied to alternative walls classified in accordance with EN 13501-2, that are thicker than the tested 100 mm, but with the same number/type of boards and also masonry/concrete elements at least as thick as that tested.

An integrity performance of at least 120 minutes would therefore be expected within plasterboard drywalls and solid masonry/concrete/block walls of the following specification:

- Minimum thickness – 100 mm
- Minimum number of board layers - 2 x 12.5 mm Type F on each face (drywalls only)
- Maximum aperture size – 1500 mm high by 1200 mm wide
- Aperture lining – Studs and 2 layers of 12.5 mm Type F board (drywalls only)
- Stud type – Steel or timber (drywalls only)
- Classification – Must be classified for the required period in accordance with EN 13501-2 (drywalls only)

### **Rigid floors**

The direct field of application rules given within the standard indicate that the results of the test referenced WF No.150136, may be applied to floors thicker than the tested 150 mm and denser than the tested 620 kg/m<sup>3</sup>.

An integrity performance of at least 120 minutes would therefore be expected within concrete floors of the following specification:

- Minimum density – 2200 kg/m<sup>3</sup>
- Minimum thickness – 150 mm
- Maximum aperture size – 700 mm wide by unlimited length



### PVC pipes

In all of the cited tests the PVC pipes satisfied the integrity and insulation criteria for the test duration and therefore there is little doubt that the 'Hilti CP651N' pillow based penetration sealing system is capable of providing the performances discussed above (integrity & insulation), when penetrated by PVC pipes of 50 mm diameter and with wall thicknesses between 1.8 mm and 5.3 mm.

### Cable/Trays insulation performance

The insulation performances achieved in the cited tests vary both in terms of the performance achieved on different services and of the results achieved upon the same services in different tests. Obviously certain services are likely to be more 'critical' in terms of insulation failure than others and additionally different orientation and seal/supporting construction depth have also been influential.

The test referenced CTICM No. 05-E-331-A incorporated two seals in a floor, both 150 mm deep with horizontally laid cushions, however one of the seals also incorporated additional mastic and intumescent wraps sealing, as shown below:

**Figure 1**

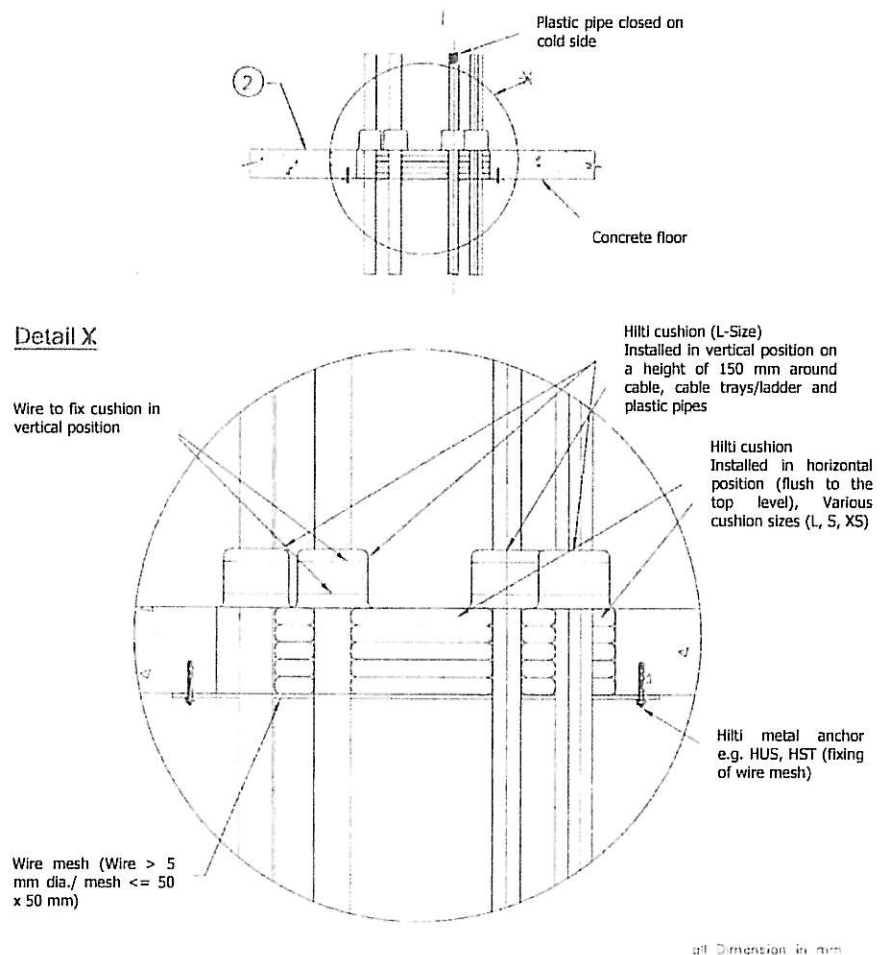
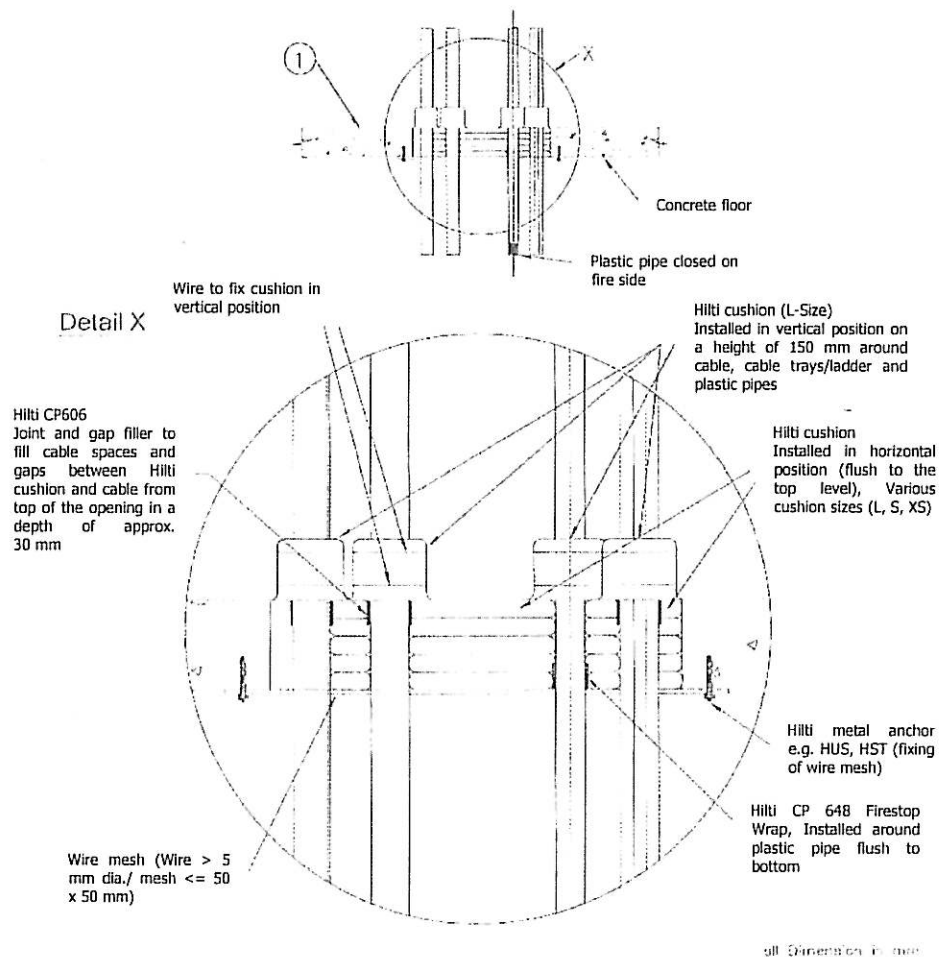


Figure 2



Seal 2, without additional sealants demonstrated its ability to provide 85 minutes insulation performance and therefore the ability of the seal as shown in Figure 1 to provide at least 60 minutes insulation performance is not in question.

Seal 1, with additional sealants demonstrated its ability to provide 85 minutes insulation performance and therefore the ability of the seal as shown in Figure 2 (with additional sealants) to provide at least 90 minutes insulation performance is not in question.

It is further proposed based on the test referenced MPA No. 3265/7575, that by modification of the sealing system, a result of 120 minutes insulation might be achieved.

Having observed the insulation failures in both the floor and rigid wall test, the third in the series of tests was specifically modified to achieve an improved insulation result. The nature of this modification was to wrap the penetrating trays and cables on both faces with either 170 mm long or 300 mm long 'CP651' cushions. This extended insulation length achieved the desired effect and no insulation failures for the test duration of 132 minutes were recorded.



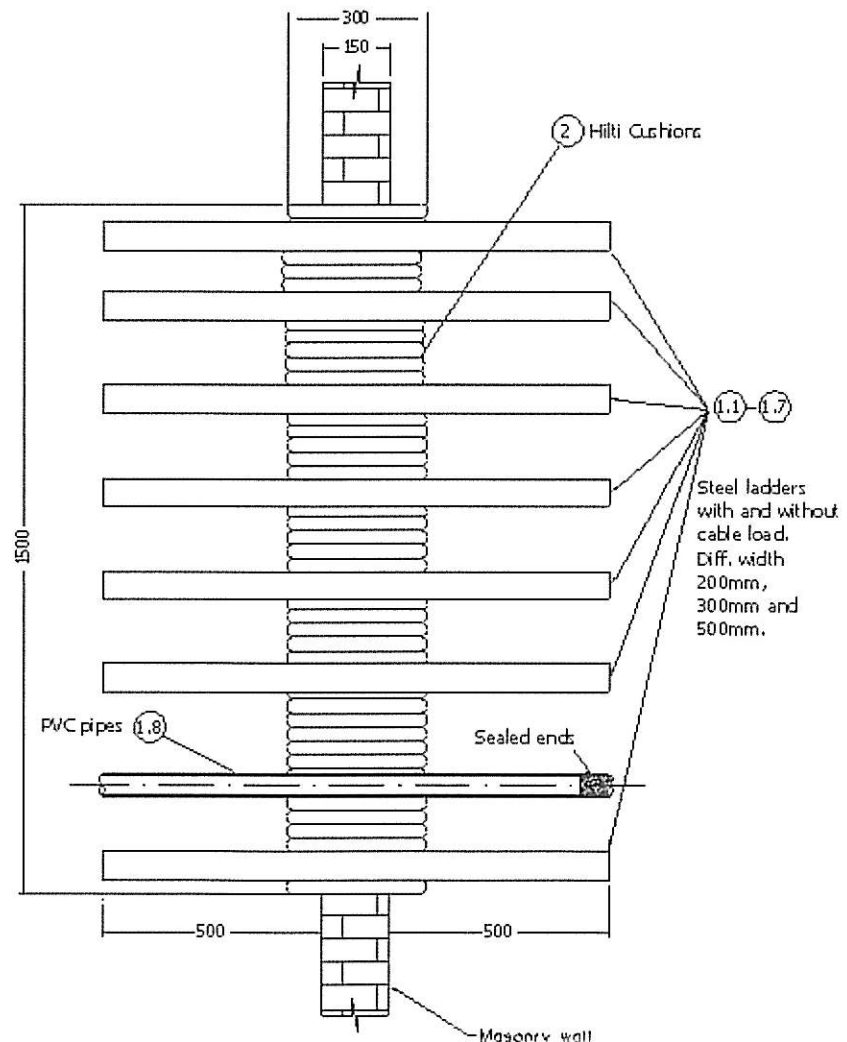


This represented a significant increase in insulation performance over the otherwise similar seal test under the reference WF No. 150136, where the first insulation failure was recorded after just 45 minutes on a metallic conduit and after 85 minutes on a cable (d3). The improvement in performance is considered to be primarily a result of the necessary repositioning of thermocouples further along the service, the insulation failures having been recorded on the services, rather than on the face of the seal.

Although the proposed seal is in the horizontal orientation and cannot incorporate additional insulation on the soffit, it is considered that based upon the significant improvement in performance demonstrated by increasing the insulation length and the fact that the only temperature rises recorded before the required 120 minute period were on the services (not on the seal), that if 300 mm long 'CP651' cushions are wrapped around the trays, cables and conduits on the upper face of the construction, then an insulation performance of 120 minutes would be anticipated.

The test referenced WF No. 150136 incorporated a seal in a block wall, 300 mm deep with longitudinally laid cushions, as shown below:

**Figure 3**



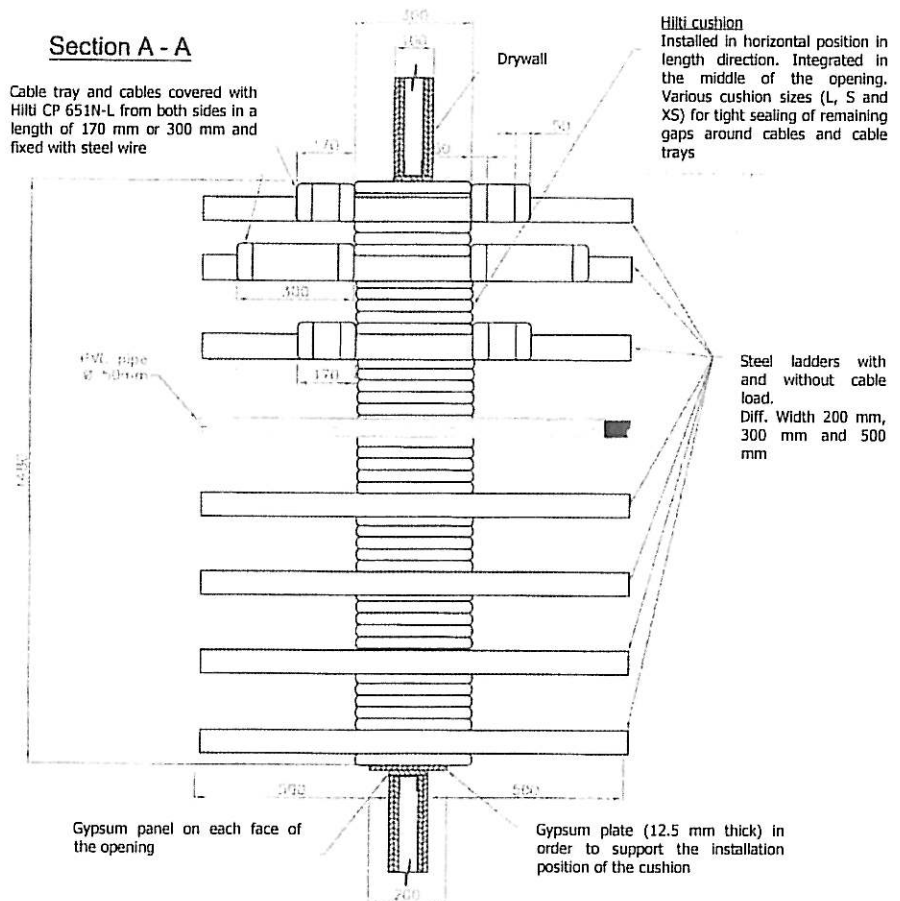
The specimen demonstrated its ability to provide 85 minutes insulation performance (with the exception of metallic conduits) and therefore the ability of the seal, as shown in Figure 3, to provide at least 60 minutes insulation performance (with metallic conduits) is not in question.

It is further proposed based on the test referenced MPA No. 3265/7575, that by modification of the sealing system, a result of 120 minutes insulation might be achieved.

As discussed above, this test was specifically designed to improve the insulation performance of the seal via the addition of 170 mm or 300 mm 'CP651' cushions wrapped around the trays, cables and conduits on both faces of the construction. Based upon the successful results of both of these additions (170 mm & 300 mm) and the otherwise identical specification of the seals, an insulation performance of at least 120 minutes would be expected of the seal in rigid walls, when modified with the 170 mm long cushions as described.

The test referenced MPA No. 3265/7575 incorporated a seal in a plasterboard drywall, 300 mm deep with longitudinally laid cushions, as shown below:

**Figure 4**



all Dimension in mm

The specimen demonstrated its ability to provide 132 minutes insulation performance and therefore the ability of the seal as shown in Figure 4 to provide at least 120 minutes insulation performance is not in question.

It is further proposed based on the test referenced WF No. 150136, that a reduced performance of at least 60 minute insulation performance, may be achieved without 'CP651' cushions affixed to the trays, cables and conduits on each side of the seal.

Although the test referenced WF No. 150136, was conducted in the more stable rigid supporting wall construction, the 85 minutes insulation performance achieved (excepting metallic conduits), some 42% greater than that proposed, in conjunction with the general stability of the seal in the flexible wall construction, provides confidence that a 60 minute insulation performance would be achieved by such a seal (without metallic conduits).

**Alternative cables** The field of direct application of test results given within prEN 1366-3: Draft 10A, indicates that based upon a test of the standard cable configuration, as included in all of the cited tests, all cable types currently and commonly used in building practice in Europe, up to a maximum diameter of 80 mm may be covered (including bundles of cables up to 150 mm diameter), with the exception of wave guides and unsheathed cables (wires).

While it is impossible to accurately predict the expected performance of unspecified cable types, the standard configuration includes a broad spectrum of cables, large and small, with different sheathing/insulation and different cores and based upon the results achieved on this range of cables, it is considered reasonable to expect that the performance of the seal would not be reduced by the inclusion of alternative cable types, currently and commonly used in building practice in Europe, subject to the conditions described above.

## Conclusions

Should the recommendations given in this report be followed, it can be concluded that wall and floor mounted 'Hilti CP651N' pillow based penetration sealing systems, when penetrated by various services, as detailed in this report should provide up to 240 minutes integrity and 120 minutes insulation performance, if subjected to a test in accordance with of prEN 1366-3: Draft 10A.

A matrix of the appraised seal performance is included in the Annex to this report.



## Validity

This assessment is issued on the basis of test data and information available at the time of issue. If contradictory evidence becomes available to warringtonfire the assessment will be unconditionally withdrawn and Hilti Entwicklungsgesellschaft mbH will be notified in writing. Similarly the assessment is invalidated if the assessed construction is subsequently tested because actual test data is deemed to take precedence over an expressed opinion. The assessment is valid initially for a period of five years i.e. until 1<sup>st</sup> June 2011, after which time it is recommended that it be returned for re-appraisal.

The appraisal is only valid provided that no other modifications are made to the tested construction other than those described in this report.

## Summary of Primary Supporting Data

### WF No. 150136

A fire resistance test in accordance with prEN 1366-3: Draft 10A, on a 'Hilti CP651N' pillow based penetration sealing system mounted within a lightweight rigid wall supporting construction (autoclaved block). The system was installed within a 1500 mm high by 1200 mm wide aperture within the wall and incorporated the test arrangement for sealed cable penetration systems (large wall openings), as defined in the standard, along with additional penetrating items.

The test results were as follows:

Service	Insulation	Integrity Cotton Pad	Integrity Flaming
1.1 - Tray	181 minutes	241 minutes	241 minutes
1.1 - Cable d1	117 minutes		
1.1 - Cable d2	136 minutes		
1.1 - Cable e	91 minutes		
1.2 - Tray	241 minutes*		
1.2 - Cable d3	85 minutes		
1.3 - Tray	237 minutes		
1.3 - Cable b	98 minutes		
1.3 - Cable c1	105 minutes		
1.3 - Cable c2	169 minutes		
1.3 - Cable c3	144 minutes*		
1.3 - Cable a1	241 minutes*		
1.3 - Cable a2	241 minutes*		



Service	Insulation	Integrity Cotton Pad	Integrity Flaming
1.3 – Cable a3	241 minutes*	241 minutes	241 minutes
1.4 - Tray	241 minutes*		
1.5 - Tray	241 minutes*		
1.5a Tray	241 minutes*		
1.5a – Cable b2	156 minutes		
1.5a – Cable c4	138 minutes		
1.6 - Tray	156 minutes		
1.6a - Tray	241minutes*		
1.6a – Conduit h	45 minutes		
1.6a – Conduit i	241 minutes*		
1.6a – Cable f	217 minutes		
1.6b - Tray	241 minutes*		
1.6b – Cable a4	118 minutes		
1.6c - Tray	** minutes		
1.6c Cable g1	241 minutes*		
1.6c Cable g2	241 minutes*		
1.7 - Tray	241 minutes*		
1.7a - Tray	241 minutes*		
1.7a – Cable g1	87 minutes*		
1.7a – Cable g2	98 minutes*		
1.8 – Pipe 50 mm dia by 1.8 mm	241 minutes*		
1.8 – Pipe 50 mm dia by 5.3 mm	241 minutes*		
CP651N	241 minutes*		

Test date : 5<sup>th</sup> December 2005

Test sponsor : Hilti Entwicklungsgesellschaft mbH



**MPA No.  
3265/7575**

A fire resistance test in accordance with prEN 1366-3: Draft 10A, on a 'Hilti CP651N' pillow based penetration sealing system mounted within a lightweight flexible wall supporting construction (plasterboard drywall). The system was installed within a 1480 mm high by 1200 mm wide aperture within the wall and incorporated the test arrangement for sealed cable penetration systems (large wall openings), as defined in the standard, along with additional penetrating items.

The test results were as follows:

<b>Service</b>	<b>Insulation</b>	<b>Integrity Cotton Pad</b>	<b>Integrity Flaming</b>
All	132 minutes	132 minutes	132 minutes

Test date : 20<sup>th</sup> January 2006

Test sponsor : Hilti Entwicklungsgesellschaft mbH

**CTICM No. 05-E-  
331-A**

A fire resistance test in accordance with prEN 1366-3: Draft 10A, on two 'Hilti CP651N' pillow based penetration sealing systems mounted within a concrete floor supporting construction. The systems were installed within a 1000 mm long by 700 mm wide apertures within the floor and both incorporated the test arrangement for cable penetration systems (large floor openings), as defined in the standard, along with additional penetrating items. Seal 1 incorporated additional sealing of CP606 mastic between cushions and services and CP648 wraps for the plastic pipes. A further aperture and sealing system was included within the test but is not the subject of this report.

The test results were as follows:

<b>Opening</b>	<b>Insulation</b>	<b>Integrity Cotton Pad</b>	<b>Integrity Flaming</b>
<b>1</b>	94 minutes	135 minutes	135 minutes
<b>2</b>	85 minutes	135 minutes	135 minutes

Test date : 10<sup>th</sup> November 2005

Test sponsor : Hilti Entwicklungsgesellschaft mbH



---

## Declaration by Hilti Entwicklungsgesellschaft mbH

---

We the undersigned confirm that we have read and complied with the obligations placed on us by the UK Fire Test Study Group Resolution No. 82: 2001.

We confirm that the component or element of structure, which is the subject of this assessment, has not to our knowledge been subjected to a fire test to the Standard against which the assessment is being made.

We agree to withdraw this assessment from circulation should the component or element of structure be the subject of a fire test to the Standard against which this assessment is being made.

We are not aware of any information that could adversely affect the conclusions of this assessment.

If we subsequently become aware of any such information we agree to cease using the assessment and ask warringtonfire to withdraw the assessment.

Signed:

\_\_\_\_\_  
For and on behalf of:

\_\_\_\_\_



## Signatories



Responsible Officer

C Johnson\* - Technical Officer



Approved

D Hankinson\* - Technical Consultant

\* For and on behalf of warringtonfire.

Report Issued: 25<sup>th</sup> May 2006

The assessment report is not valid unless it incorporates the declaration duly signed by the applicant.

This copy has been produced from a .pdf format electronic file that has been provided by warringtonfire to the sponsor of the report and must only be reproduced in full. Extracts or abridgements of reports must not be published without permission of warringtonfire. The original signed paper version of this report is the sole authentic version. Only original paper versions of this report bear authentic signatures of the responsible warringtonfire staff.





## Annex

Integrity	Masonry/ Concrete Walls	Concrete Floors	Drywalls
30	✓	✓	✓
60	✓	✓	✓
90	✓	✓	✓
120	✓	✓	✓
180	✓	✗	✗
240	✓	✗	✗

Details of suitable supporting constructions and services are detailed earlier in this report

Insulation	Masonry/ Concrete Walls	Concrete Floors	Drywalls
30	✓	✓	✓
60	✓ <sup>1</sup>	✓	✓ <sup>1</sup>
90	✓ <sup>2</sup>	✓ <sup>3</sup>	✓ <sup>2</sup>
120	✓ <sup>2</sup>	✓ <sup>4</sup>	✓ <sup>2</sup>
180	✗	✗	✗
240	✗	✗	✗

1. Either with additional 'CP651N' cushions at least 170 mm long applied to the cables/conduits/trays on both faces or without metallic conduits
2. With additional 'CP651N' cushions at least 170 mm long applied to the cables/conduits/trays on both faces
3. With 'CP606' Mastic applied between cushions and services
4. With additional 'CP651N' cushions at least 300 mm long applied to the cables/conduits/trays on the upper face





Warrington Fire Research Centre Ltd - Holmesfield Road - Warrington - Cheshire - UK - WA1 2DS  
t: +44 (0) 1925 655116 - f: +44 (0) 1925 655419 - w: [warringtonfire.net](http://warringtonfire.net)



Testing. Advising. Assuring.

WF Report No. 364067/B Issue 2  
Page 1 of 2  
29<sup>th</sup> April 2016

**Mr Uwe Bohn**  
**Hilti Entwicklungsgesellschaft mbH**  
86916 Kaufering  
Hiltistr. 6  
Germany

### **Review of Assessment Report Referenced WFRC No. 155047 Issue 2**

#### **1 Introduction**

The assessment report referenced WFRC No. 155047 Issue 2 presents a considered opinion regarding the fire performance of Hilti CP636 Fire Prevention Mortar penetration sealing systems if subjected to a test using the general principles of BS 476: Part 20: 1987.

The appraisal report concludes that recommendations given in this report be followed, wall and floor mounted 'Hilti CP651N' pillow based penetration sealing systems, when penetrated by various services, as detailed in this report should provide up to 240 minutes integrity and 120 minutes insulation performance, if subjected to a test in accordance with of prEN 1366-3: Draft 10A.

#### **2 Confirmation of Specification**

It has been confirmed by Hilti Entwicklungsgesellschaft mbH that there have been no changes to the specification of the constructions considered in the original appraisal referenced WFRC No. 155047 Issue 2.

#### **3 Conclusions**

The data used for the original appraisal has been re-examined and found to be satisfactory.

The procedures adopted for the original assessment have also been re-examined and are similar to those currently in use.

Therefore, with respect to the assessment of performance given in WFRC No. 155047 Issue 2, the contents should remain valid until 1<sup>st</sup> May 2021.

#### 4 Validity

This review is based on information used to formulate the original assessment. No other information or data has been provided by Hilti Entwicklungsgesellschaft mbH which could affect this review.

The original appraisal report was performed in accordance with the principles of the UK Fire Test Study Group Resolution 64A: 1993, which has since been superseded by Resolution No. 82: 2001. This review has therefore been conducted using the principles of Resolution No. 82: 2001.

Performed by:



**C. Abbott**  
Principal Certification Engineer  
**Exova Warringtonfire**

Reviewed By:



**D. Hankinson**  
Principal Certification Engineer  
**Exova Warringtonfire**

This copy has been produced from a .pdf format electronic file that has been provided by Exova Warringtonfire to the sponsor of the report and must only be reproduced in full. Extracts or abridgements of reports must not be published without permission of Exova Warringtonfire. The pdf copy supplied is the sole authentic version of this document. All pdf versions of this report bear authentic signatures of the responsible Exova Warringtonfire staff.



88 Empire Drive • St. Paul, Minnesota • 55103  
(651) 642-1150 • fax (651) 642-1239

## **VOC Content Test Certificate**

October 23, 2009

Supplier: Hilti Entwicklungsgesellschaft mbH  
BU Chemicals  
Hiltistrasse 6  
86916 Kaufering  
GERMANY

Sample Description: Hilti CP 651-NL

Date tested: September 21, 2009

Test Method: SCAQMD method 304-91 Determination of Volatile Organic Compounds (VOC) in various materials as referenced by South Coast Air Quality Management District (SCAQMD) rule 1168. The values also comply with the requirements of EPA test method #24.

Test Data: Legend Project Number 0903311

Specification	Product
<b>LEED 2009 (LEED 3.0) LEED 2.2</b> IEQ-4.1: Low-Emitting Materials – Firestop Materials	<b>Hilti CP 651-NL</b>
<b>Green Building Council of Australia</b> Green Star Office Design 3.0, IEQ-13 Green Star Office Design 2.0, IEQ-13 Green Star Office Interiors 1.1, IEQ-11	
<b>Multipurpose Construction Materials; VOC Limit: 70 g/L</b>	<b>Product contains: 6.6 g/L of VOC</b>

William Welbes  
Vice President of Laboratory Operations

Allen Noreen, Ph.D.  
Technical Director

# Buildings Department

屋宇署

Our Ref. 本署檔號: (24) BD GR/BM/2(185)

Your Ref. 來函檔號:

Tel. No. 電話: 848 2838

Fax No. 圖文傳真: 840 0451

Hilti (Hong Kong) Ltd.  
Unit 3 5/F Harbour Centre Tower 2  
8 Hok Cheung Street Hung Hom  
Kowloon

26 May 1994  
33  
21

Dear Sirs,

Fire Resisting Penetration Sealing System  
As Supplied By Hilti (GB) Ltd.

Thank you for your letters dated 4.3.94 and 27.4.94 and the accompanying test/assessment reports on the above. You are asking for comments on the acceptability of the fire resisting product in the context of relevant provisions of the Buildings Ordinance, Chapter 123 of the Law of Hong Kong and its subsidiary legislation.

Under the Buildings Ordinance, "authorized persons" (i.e. architects, engineers or surveyors registered with the Building Authority) are required to supervise building works including the selection and installation of fire resisting products and to certify compliance with the Buildings Ordinance upon completion of works. Authorized persons are therefore responsible for ensuring the safety requirements inter alia of fire resisting products in the building projects which they have been appointed by the developer to coordinate and supervise.

In establishing the acceptability of fire resisting products, reference may be made to the performance standards laid down in Building (Construction) Regulation 90, the current Code of Practice for Fire Resisting Construction issued by the Building Authority and British Standard 476: Parts 20 to 24. Reliance may also be placed on the test/assessment report prepared by a recognized laboratory or an equivalent establishment.

The Buildings Department has a list of recognized laboratories. This is available for reference at our office:

Technical Administration (Building) Unit  
Buildings Department  
11/F Murray Building  
Garden Road Hong Kong

Before fire resisting products are installed in a building project, the authorized person appointed for the project should be approached for advice and guidance.

Your test/assessment reports are returned herewith. In this respect, please note that paragraph 3 of my letter dated 25 January 1994 is no longer applicable. The delay in replying is regretted.

Yours faithfully,

  
(Patrick H. Tsui)

Technical Secretary/Building  
for Director of Buildings

消防處  
防火組  
香港九龍尖沙咀東部康莊道1號  
消防總部大廈



FIRE SERVICES DEPARTMENT,  
FIRE PROTECTION BUREAU,

FIRE SERVICES HEADQUARTERS BUILDING,  
No. 1 Hong Chong Road,  
Tsim Sha Tsui, East, Kowloon,  
Hong Kong.

本處檔號 Our Ref.: FPB 207/0005

來函檔號 Your Ref.: L026/92HK

電訊掛號 Telex: 39607 HKFSD HX  
國文傳真 Fax: 852-3110066  
852-3689744

(24 小時 Hours)

電話 Tel. No.:

733 7596

29 April 1992

Hilti (Hong Kong) Ltd.,  
Unit 3, 5/F, Harbour Centre,  
Tower 2,  
8 Hok Cheung Street,  
Hung Hom, Kowloon.

Dear Sirs,

"HILTI" Fire Prevention System

I refer to your letter of 30.3.92 and the enclosures attached thereto.

Based on the information contained in your letter under reference and the given test report, I understand that the captioned product is a building material which should be approved by the Director of Buildings and Lands. As such, I am not in a position to process your application and you are advised to refer your enquiry to the Director of Buildings and Lands, whose address is listed hereunder :-

The Director of Buildings and Lands,  
(Attn.: Technical Secretary/Building, B.O.O.)  
Murray Building,  
Garden Road,  
Central,  
Hong Kong.

Please feel free to contact us should you have any other question in this matter.

Yours faithfully,

(TSE Yu-hing)  
for Director of Fire Services

TYH/jt



# ARCHITECTURAL SERVICES DEPARTMENT 建築署

QUEENSWAY GOVERNMENT OFFICES, 66 QUEENSWAY, HONG KONG. 香港金鐘道六十六號金鐘道政府合署  
FAX 852-2869 0289

Our Ref : ASD 16/92101/AML/APP  
Your Ref. : -----  
Tel. No. : 2867 3631  
Fax No. : 2877 0594

06 June 1997

Hilti (HK) Ltd  
17/F, Tower 6, China HK City,  
33 Canton Rd., TST

Dear Sirs,

**Architectural Services Department**  
**List of Acceptable Materials**  
**Hilti Firestop Products**  
**Ref. no. 0001P**

I am pleased to inform you that approval has been given to include the above product/material in this Department's List of Acceptable Materials. Initially, this listing is for a probationary status and this will be reviewed after the submission of satisfactory performance reports on completion of projects undertaken by this Department where your product has been used.

The Architectural Services Department List of Acceptable Materials is a restricted internal document. This letter should not be used for commercial or marketing purposes and failure to comply with this may result in the removal of the product from the List.

Yours faithfully,

( W.M. TANG )  
Technical Secretary/2  
for Chief Architect/ Central Management Branch  
Architectural Services Department



Attn. : To whom it may concern

Date : 1 April 2025  
Ref. : 045/FP/SC/25

Subject : Country of Origin- Hilti CP 651N Firestop Cushion

Dear Sir / Madam,

Enclosed please find the information of Hilti CP 651N Firestop Cushion.

Brand Name : Hilti

Model Name : Hilti CP 651N Firestop Cushion

Manufacturer : Hilti Corporation

Address of Manufacturer : FL-9494, Principality of Liechtenstein.

Manufacturer Contact Person : Spencer Cheung

Supplier : Hilti (Hong Kong) Ltd

Address of Supplier : 701-704, 7/F, Tower A, Manulife Financial Centre,  
223 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong

Supplier Contact Person : Spencer Cheung (+852 9732 1231)

Country of Origin : China

Should you have further questions, please do not hesitate to contact our Technical Representatives, Customer Service Hotline at 8228-8118, or email us at [hksales@hilti.com](mailto:hksales@hilti.com).

Yours faithfully,



Spencer Cheung  
Head of Product Leadership Strategy

July 30, 2014

To Whom It May Concern:

Re: Hilti Firestop Cushion CP 651N– LEED Info.

- The Hilti Firestop Cushion CP 651N is manufactured in People Republic of China.
- The package of Hilti Firestop Cushion CP 651N can be completely recycled.
- There is no recycled content in Hilti Firestop Cushion CP 651N and it cannot be recycled.
- The Hilti Firestop Cushion CP 651N does not share any rapidly renewable materials.
- The VOC content of Hilti Firestop Cushion CP 651N is 6.6 g/l.

If you would like to know more about Hilti solutions for LEED buildings or should you have any further question please feel free to contact me at my email or mobile number as shown below.

Sincerely,



Andrew Lau

Product Manager - Firestop

Hilti (Hong Kong) Limited

Email: [andrew.lau@hilti.com](mailto:andrew.lau@hilti.com)

Mobile: (852) 9843-6291

Re: Hilti Firestop Cushion CP 651N – LEED Info.

**Hilti (Hong Kong) Ltd.**  
701-704 | Tower A | Manulife Financial Centre  
223 Wai Yip Street | Kwun Tong

Kowloon | Hong Kong

**P** +852-8228 8118 | **F** +852-2954 1751

**[www.hilti.com.hk](http://www.hilti.com.hk)**

**To whom it may concern**

Date: 22<sup>nd</sup> April 2016

Dear Sir / Madam,

**Subject: Hilti Firestop Products non-CFC and Ozone Confirmation**

Referring to your enquiry about the captioned subject, please be advised that:

Hilti firestop products, CP651 Firestop Cushion is free of CFC, HCFC nor other ozone depletion elements.

CFC, HCFC and ozone depletion elements were not used during the product process neither.

Should you have further questions, please do not hesitate to contact our Technical Representatives or Customer Service Hotline at 8228-8118.

Yours sincerely,



Andrew Lau  
Product Manger

# Material Information Statement

## Articles

According to Regulation (EC) 1907/2006, Article 32  
Revision: 07.04.2020

Version: 18

## 1 Identification of the articles and of the company undertaking

### 1.1 Product identifier

Trade name:

- Firestop Bandage CFS-B / CP 646
- Firestop Back Pan Strip CFS-BPS
- Firestop Block CFS-BL / CFS-BL P
- Firestop Board CP 675
- Firestop Boot CFS-BO
- Firestop Box Insert
- Firestop Cable Collar CFS-CC / CFS-RCC / CFS-RCC EXT
- Firestop Cable Module CFS-T
- Firestop Cast-in device CP 680 / CP 681 / CFS-CID / CFS-CID MD P/M
- Firestop Coated Board CFS-CT B / CP670 / CP673 / CP676
- Firestop Collar CFS-C / CFS-C P
- Firestop Collar CP 643 / CP 644
- Firestop Composite Sheet CFS-COS
- Firestop Cord CFS-CO
- Firestop Cushion CP 651N
- Firestop Drop-In Device CFS-DID
- Firestop Edge of Slab QuickSeal CFS-EOS QS
- Firestop Endless Collar CFS-C EL
- Firestop Filler Module CFS-T FB
- Firestop Gangplate CFS-SL GP
- Firestop Module Box CFS-MB / CP 657
- Firestop Plug CFS-PL / CP 658
- Firestop Plug Seal CFS-T RR / CFS-T RRS
- Firestop Retrofit Sleeve CFS-SL RK
- Firestop Sleeve CP 645
- Firestop Sleeve Kit CFS-SL SK
- Firestop Speed Sleeve CFS-SL / CFS-SL GA / CP 653
- Firestop Top Track Seal CFS-TTS
- Firestop Top Track Seal CFS-TTS MD
- Firestop Top Track Cover CFS-TTS MD
- Firestop Top Track Plug CFS-TTS MD
- Firestop Top Track Seal CFS-TTS 212
- Firestop Top Track Seal CFS-TTS R
- Firestop Wedge Seal CFS-T WD120
- Firestop Wrap Strip CFS-W EL / SG / P / CP 648
- Foil Tapes CS-FT
- Intumescent façade cavity closer CP674
- Joint Sealing Tapes CS-JST
- Mineral Wool
- Mineral Wool Boards
- Multifunctional Tapes CS-MFT
- Pre-coated Mineral Wool Boards
- Smoke & Acoustic Track Seal CS-TTS SA
- Speed Plug CP 777
- Speed Strip CP 767

### 1.2 Application of the listed articles

Construction industry.

Refer to Hilti product literature, technical data sheets, 3rd party published listings and national approvals for specific application information. For more details, please contact your local Hilti organization through <http://www.hilti.group>

### 1.3 Manufacturer / Supplier

#### Hilti AG

Feldkircherstr. 100  
FL-9494 Schaan  
Liechtenstein

#### Customer Service

Phone +423 (0)844 84 84 85  
Fax +423 (0)844 84 84 86

## 2 Other information

A Safety Data Sheet is not required due to the classification of these products as “articles” according to Regulation (EC) No. 1907/2006 of 18 December 2006 (EU) / 29CFR 1910.1200 (U.S.A.). Consequently, these products are exempted from CLP / OSHA Labeling and SDS requirements.

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### Informing department:

[chemicals.hse@hilti.com](mailto:chemicals.hse@hilti.com)



Apr 2025