

HILTI CP 657

Firestop Brick

The enclosed pages are taken from the
Hilti Firestop Systems Manual
Edition April 2011
Supported by additional standard details

For Material Safety data sheets
visit the technical library at www.hilti.co.uk/cfs

Hilti (Gt Britain) Ltd
TECHNICAL ADVISORY SERVICE
TELEPHONE 0161 886 1144

Quality Management System Certification

Standard: ISO 9001:2008

Issued by: The Swiss Association for Quality and Management Systems SQS.

Registration No: 12455 (The current certificate can be downloaded from www.hilti.co.uk)

Field of activity: Market Organisation.

Note: The certificate of Hilti (Gt. Britain) Ltd. is a sub-certificate to the master certificate of Hilti Aktiengesellschaft, FL-9494 Schaan with the field of activity: Research, Development, Manufacturing, Sales and Service.

Don't just use Hilti Firestop Products, use our Hilti Accredited Firestop Contractors

It is the combination of a quality conscious and third party accredited manufacturer working in close co-operation with a selected group of third party accredited installers that can offer you the best value.

Here are some of the benefits available to you by using this co-operation:-

- Reduce your liability; liability that comes from poor or incorrect installation and performance of products.
- Efficient Project Management based on the co-operation of a specialised manufacturer with a specialist contractor
- Commercially designed, effective Fire Protection solutions
- Products that adhere to 3rd party product conformity schemes such as FM, UL and Certifire.

These approvals are an assurance of product and manufacturer quality, they can also have an influence on the building insurance premium reducing the service costs of the building.

- Solutions that have been tested for long term performance.
- Solutions that offer business continuity and protections of premises.
- Certification of conformity of work completed.
- Installation work audited by FIRAS on site to ensure compliance with manufacturers' recommendations and Building regulations.
- Installer with site based manufacturer support.
- Installer having available site based manufacturers support when needed.
- Clear and comprehensive documentation of installation.
- Comprehensive support documentation for proposed solutions.
- Clarity and assistance understanding the role of Passive Fire measures in modern building construction.



Product Accreditation

Hilti Firestop Systems have been certified by a wide variety of international bodies, such as FM, UL, Certifire and iBMB

As part of this process products are monitored on an on-going basis so you can have absolute confidence in the quality and standard of the product you are specifying.

Installation Accreditation

Hilti-Accredited Firestop Contractors are also third party certified (e.g. FIRAS or LPCB).

This means that they work to agreed industry standards, employ trained operatives and are subject to on-site audits and inspection of representative samples of the work carried out to ensure compliance with manufacturers' recommendations and Building Regulations

Further details about Hilti accredited Firestop Contractors and the support that we can offer you can be obtained by telephoning Freephone 0800 083 8889 (GB only).



Association for Specialist Fire Protection

Hilti is proud to support and be a member of The Association for Specialist Fire Protection (ASFP)

ASFP Vision

To offer the industry it serves with:

- Knowledge / guidance on all aspects of 'built-in' fire protection
- Technical support / impartial advice
- Direction through industry authority

Contents

	Hilti Firestop Systems Manual Pages for Hilti CP 657
FS 114 - 01	Hilti CP 657 – Bricks for Drywall penetration
FS 115 – 01	Hilti CP657 Bricks for Solid wall penetration
FS 116 – 01	Hilti CP657 Bricks for Service Penetrations in Concrete Slab
Data summary	Additional Properties of CP 657 seals
Data summary	CP 657 - Firestop Brick – BREEAM Criteria summary

Material Safety Data Sheets and CAD files of the standard details FS ***-** can be downloaded from the technical library at www.hilti.co.uk/cfs

Revision History

May 2011	First release
July 2011	Data summaries added
May 2013	Update

Firestop brick CP 657

An expanding flexible firestop brick based on a two-component polyurethane foam



Applications

- Temporary or permanent sealing of cables, cable trays, and pipes in wall and floor openings. Installation specific approvals.
- Single or multiple penetrations.
- Cables and cable trays
- Plastic pipes and metal pipes

Advantages

- Particularly suitable for remedial work
- Economical in use owing to short installation time
- Easy installation as no special tool is required immediately functional after installation
- Ideal for use in floors as no formwork is required
- High movement capability
- Free from dust and fibres

British Standard
BS 476



Technical data*

CP 657	
Fire rating	Up to 3 h
Base materials	Concrete, Concrete (porous), Masonry, Drywall
Application temperature range	5°C - 40°C
Acoustics performance	Up to 58dB
Density	0.27 g/cm³
Colour	Red
Application temperature	5°C to 40°C
Temperature resistance	-15°C to 60°C
Intumescence activation	Approx. 300°C
Expansion ratio (unrestricted)	Up to 1:3

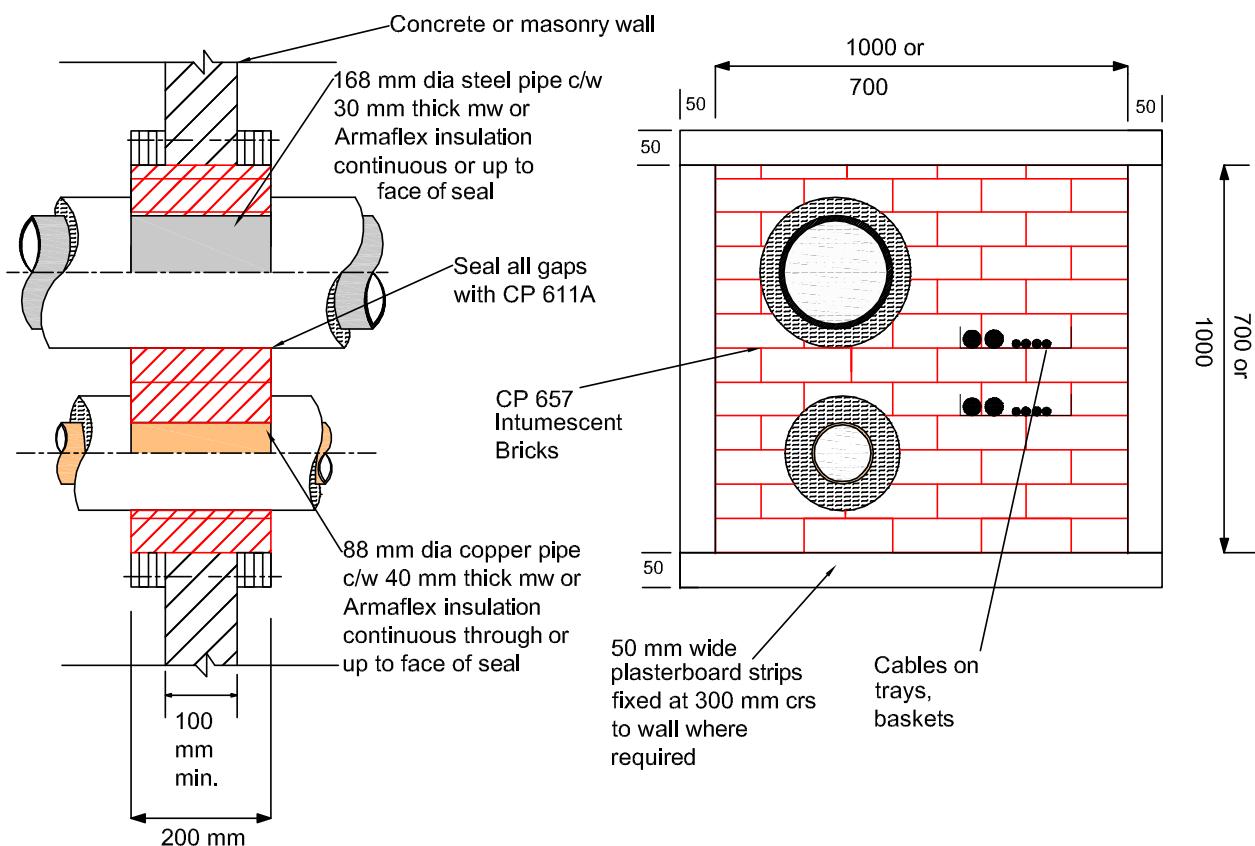
*At 73°F (23°C) and 50% relative humidity

	Wall (mm)	Floor (mm)
Min. thickness of building component	100	150
Min. distance between penetrating items and opening surface:		
• Cables tray	60 mm	60 mm
• PVC pipes	100 mm	100 mm
• Metal pipes	100 mm	100 mm
Min. distance between penetrating items	25 mm	25 mm
Max. dimensions of penetrating items		
Max. opening loading (as % of opening size)	60%	60%
Cables diameter	26 mm	26 mm
PVC pipe diameter	50 mm	50 mm
Insulated metal pipe diameter	168 mm	-
Metal pipe diameter non insulated	60 mm	60 mm

Ordering

Order description	Package Contents	Package Quantity	Item number
Firestop brick CP 657-L	20 x CP 657L firestop brick	-	00383523
Firestop sealant CP 611A	instumescence mastic (310ml)	1 pc	00382848
Dispenser CB 200-P1	manual dispenser (310ml)	1 pc	00055205

Technical Information



For more standard details and technical information register online at the Hilti Firestop Design Centre at www.hilti.co.uk/cfs

Installation instructions for CP 657

Notice

- Before handling, read Material Safety Data Sheet and product label for safe usage and health information.
- Instructions below are general guidelines

Opening

- Clean the opening. Penetration and penetration supporting structures must be installed in compliance with local building and electrical standards.

Application of Fire Blocks

- If no penetrations are located, build up CP 657 Fire Block firmly seated, within opening.
- If penetrations are located, build up CP 657 Fire Block firmly seated, while cutting blocks with a knife to suit the placed penetrations.
- Finish building up Fire Blocks until entire opening is filled.
- Completely fill cable spaces, gaps between blocks and pipes, and joints with CP 611A Firestop Sealant.
- For maintenance reasons, a penetration seal could be permanently marked with an identification plate. In such a case, mark the identification plate and fasten it in a visible position next to the seal.

Re-installing cables or other penetrations

- Remove or cut the block from the seal.
- Install the penetrant and re-lay the block in compliance with the approval. Fill gaps and spaces with CP 611A.

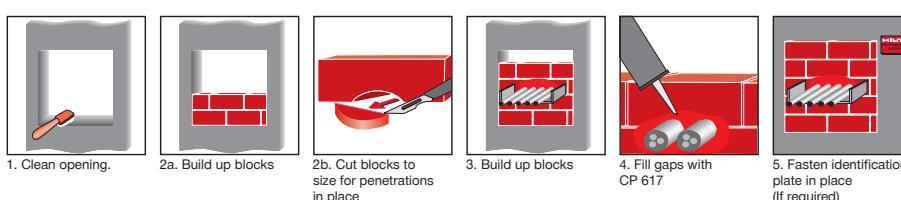
Single cables can be run through joints between blocks or a hole can be drilled through a block using a sharpened piece of metal pipe or tubing.

Not for use

- In wet rooms, outdoors or exposed to the weather or UV radiation (can be done only after applying an additional silicone coating, i.e. CP 611A).

Storage

- Store only in the original packaging in a location protected from moisture and direct sunlight

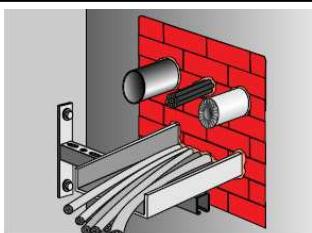


APPLICATION

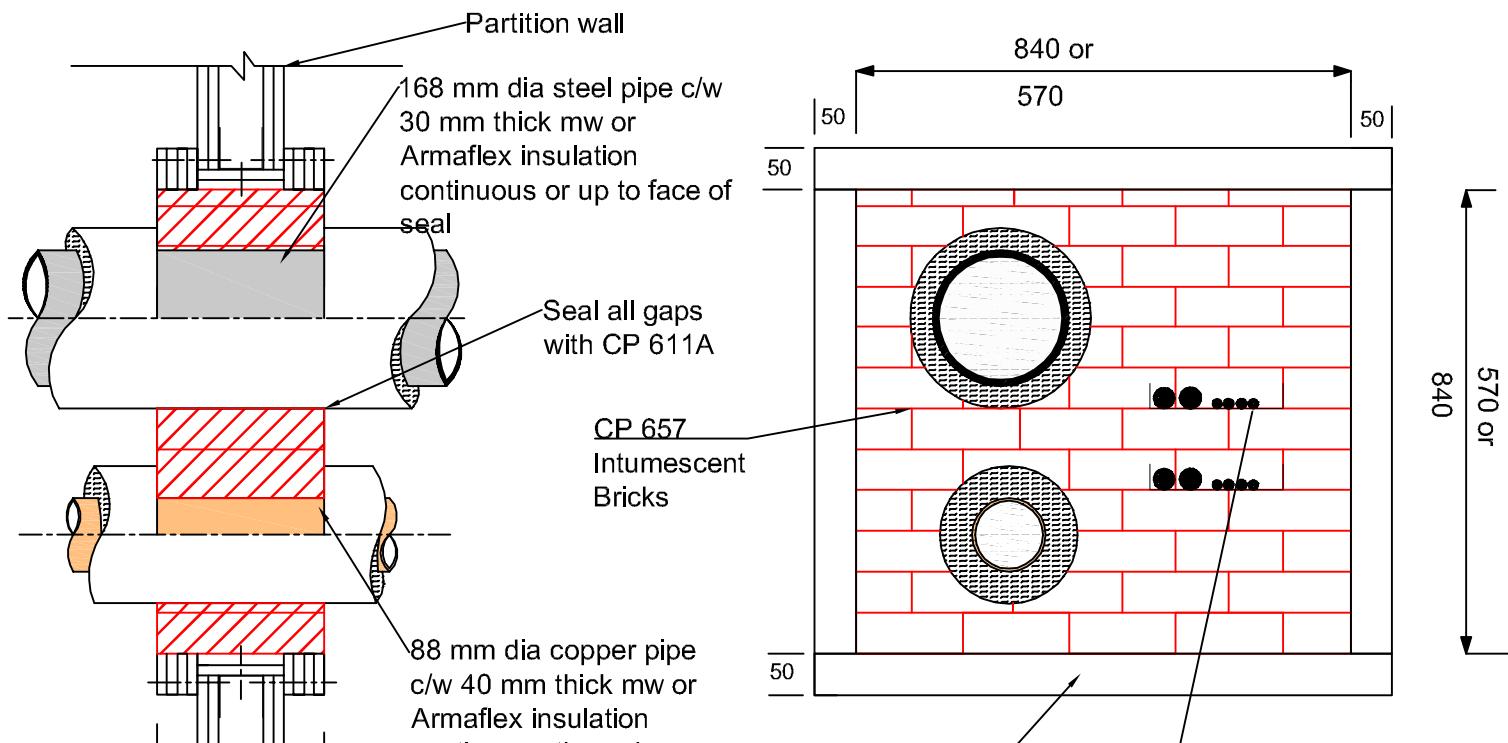
Hilti CP 657 Intumescent Bricks

Test	Up to
Fire Integrity	2 hr
Insulation	2 hr
Acoustics	53 dB
Air Tightness	✓
Age Testing	30 years

Approvals
BS476 pt 20
EN 1366-3



Service penetration through partition wall



200 mm

The above applications are not exhaustive. For further details please contact

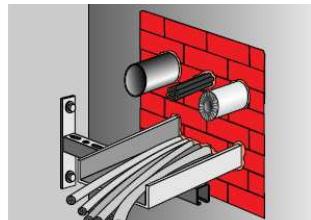
1. The application limits on this detail are for guidance purposes only. For more detailed information on the full range of available test results please contact a Hilti Firestop Specialist on 0800 886100.
2. The product and application has been fire tested as a minimum to BS 476. It may have additional European and worldwide testing. Please contact Hilti for further information.
3. All installations should be carried out in accordance with Hilti's installation instructions, by competent, experienced installers using Hilti branded products.

APPLICATION

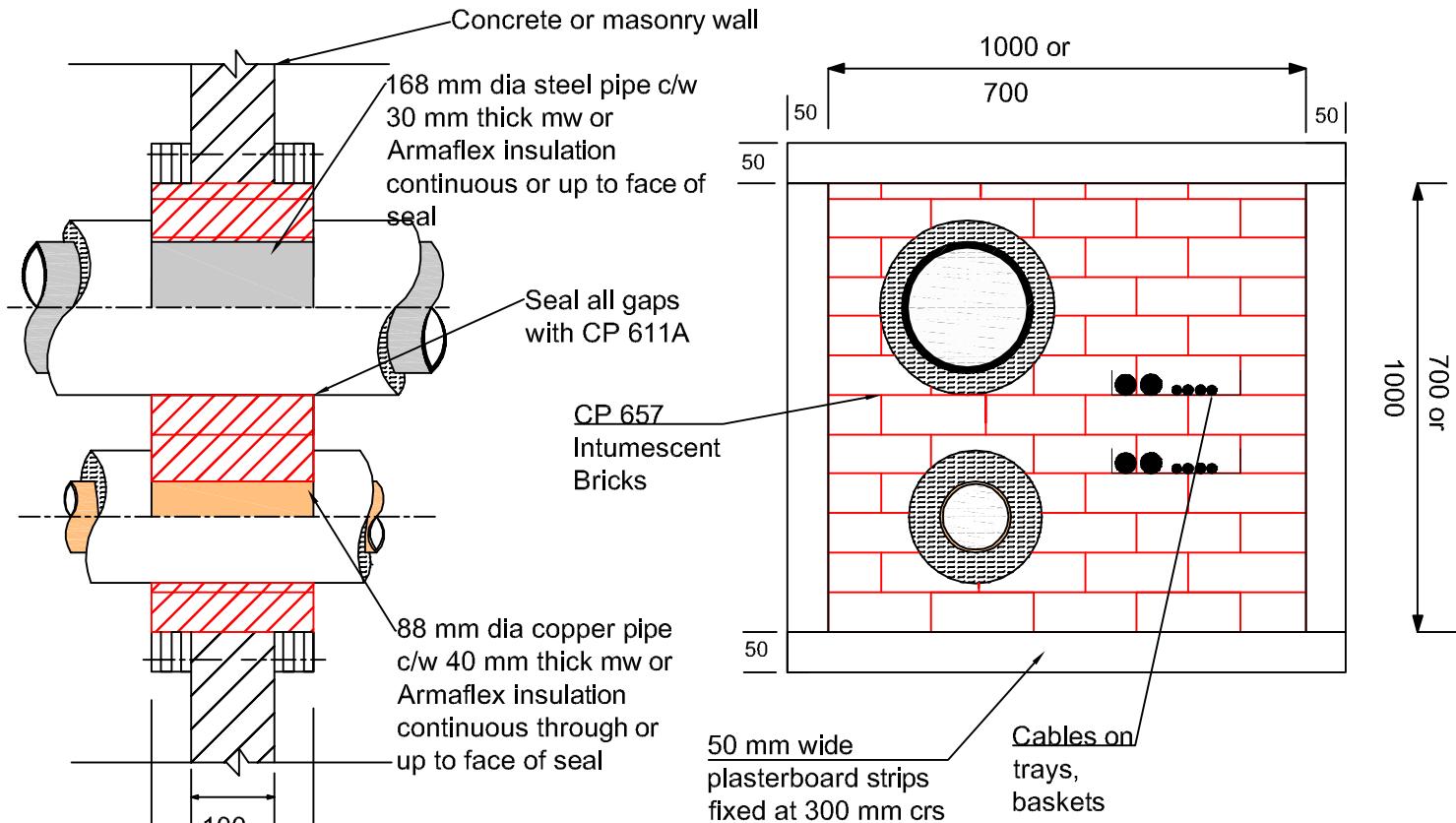
Hilti CP 657 Intumescent Bricks

Test	Up to
Fire Integrity	2 hr
Insulation	2 hr
Acoustics	53 dB
Air Tightness	✓
Age Testing	30 years

Approvals
BS476 pt 20
EN 1366-3



Service penetration
through
solid wall



The above applications are not exhaustive. For further details please contact

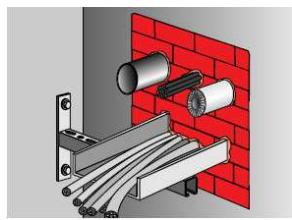
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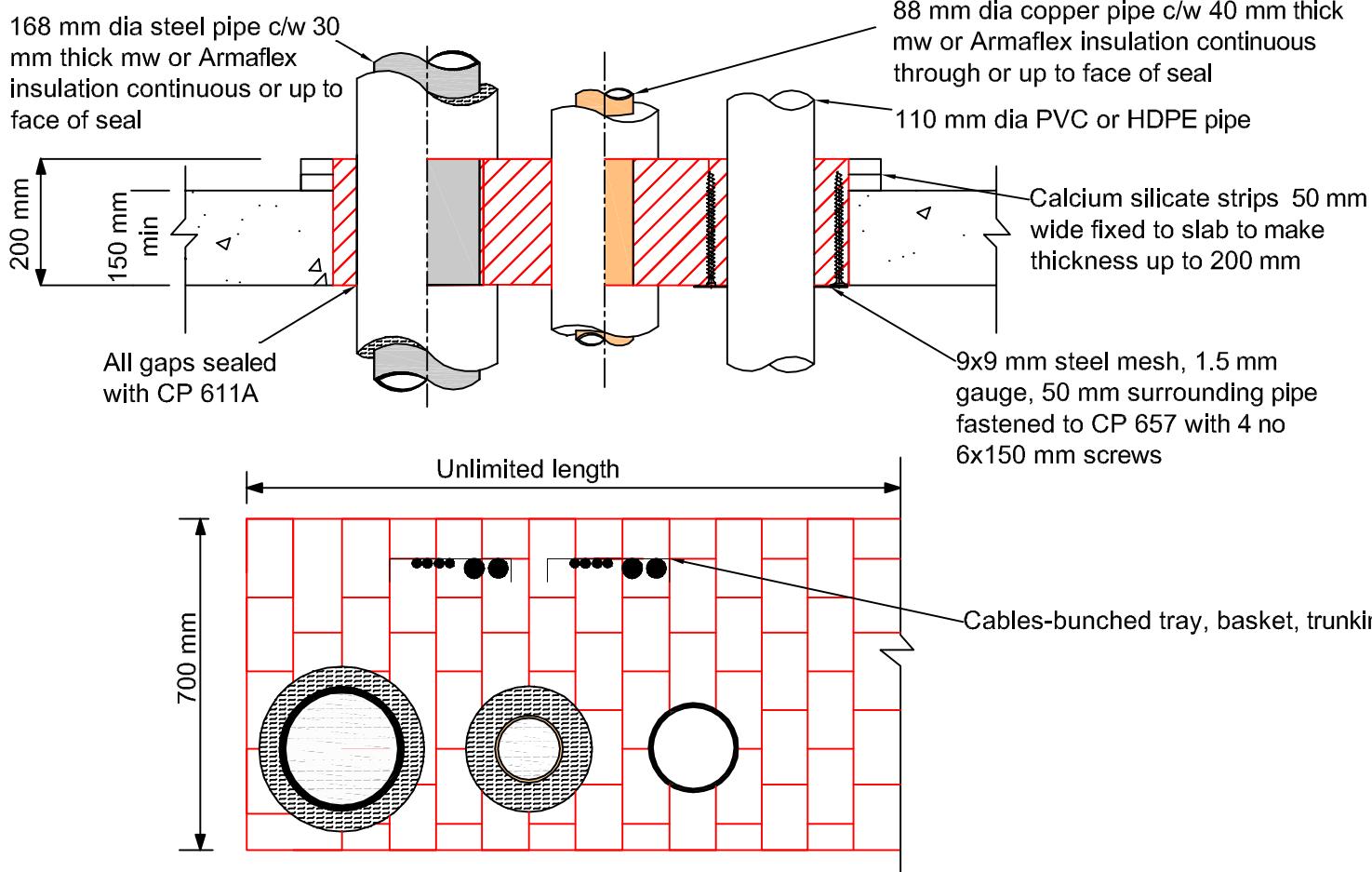
Hilti CP 657 Intumescent Bricks

Test	Up to
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Insulation	2 hr
Acoustics	53 dB
Air Tightness	✓
Age Testing	30 years

Approvals
BS476 pt 20
EN 1366-3



Service penetration
through
concrete slab



The above applications are not exhaustive. For further details please contact

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Additional Properties of CP 657 – Firestop Brick

Property	Test regime	Notes	
Fire	BS 476 - 20 FM approval (Class 4990)	✓	✓
Acoustic	EN ISO 20 140-10: 1992 EN ISO 20 140-10: 1992	Dnw Cables	57 dB Dn,e,w, 58 dB
Ageing	DIBT DAfSTB Fire test after ageing		✓ ✓ ✓
Air sealing	DIN 1026 Pressure difference 50Pa Pressure difference 200Pa		✓ ✓
Electrical resistance	Surface resistance Volume resistivity Insulator		✓ ✓ Yes
Water resistance	Rain Resistance Water tightness	UL 1479	N.R N.R
VOC	LEED 2009	LEED 3.0	4.4 g/l
Chemical Resistance	Contact Hilti Technical Advisory Service with details of type, concentration, duration and ambient temperature of exposure conditions		
		N.R	Not relevant
		✓	Meets standard

CP 657 –Firestop Brick - BREEAM criteria

BREEAM Section

	No power tools required for installation (no energy source required)	
Management construction site impact	Dust free installation	✓
	Saves water during application	✓
	No water pollution	✓
	Low VOC* (air quality)	✓
	No ozone depletion potential (ODP)	✓
Health and wellbeing	Low global warming potential (GWP)	✓
	Smoke and gas tightness	✓
	Noise reduction	✓
Energy	Air tightness	✓
	Avoidance of air infiltration	✓
Materials	Product Carbon Footprint or LCA Data	✓
	Thermal insulation	✓
	Recycling of packaging	✓
Waste	Reuse of materials	✓
	Re-penetration in existing opening (No waste)	✓

Product contributes to Green Building under this clause
 Not applicable for this product
 Product makes No contribution to green Building under this clause

✓
NA
✗

Visit our web site at www.Hilti.co.uk/cfs to access our **Firestop Design Centre**

Penetration product selector



Other product features



Joints product selector



Interactive product selector for firestopping openings through walls and floors

Find out more about the benefits of using Hilti firestop systems

Interactive product selector for wall to wall, top of wall, curtain wall, floor to floor and floor to wall applications.

Important note:

**All sales are subject to Hilti (Gt Britain) Ltd.
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Copies of these “Terms and Conditions of sale” are available on request.

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- may be subject to a handling charge of £10 or 20% Hilti Gt. Britain Ltd) of the value of the Goods, whichever amount is the greater; and
- Must be in the same condition as originally supplied to the Buyer.
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