

HILTI CP 638

High strength Structural Firestop Compound

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

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FS 074 - 01	Hilti CP 638 Damper in Solid Wall
FS 075 - 01	Hilti CP 638 Plastic Pipe. – Solid Floor
FS 078 - 01	Hilti CP 638 Damper in Solid Floor
FS 083 - 01	Hilti CP 638 Mixed Services – Solid Floor
FS 096 - 01	Hilti CP 638 Mixed Services – Solid Wall
FDS 104 - 05	Hilti CP 637 and 638 Firestop mortar installation Guide
Data summary	Additional Properties of CP 638 seals
Data summary	CP 638 - High strength structural firestop compound – BREEAM Criteria summary
Data summary	CP 638 - High strength structural firestop compound - NBS specification clauses

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	Error correction and Data summaries added
May 2013	Update

High-strength structural firestop compound CP 638

A fire resistant gypsum based mortar, with thermal insulating and acoustic properties for sealing medium to large sized openings where further penetrations may be required. Providing integrity of up to 4 hours.



Applications

- Cables and cable trays
- Combustible pipes
- Non combustible pipes
- Ductwork dampers
- Suitable for unreinforced spans up to 1600mm

Advantages

- Quick setting
- Expands when set to provide smoke seal
- Good adhesion to steel, concrete and masonry
- Can comply with BS6399 for loading

Technical data

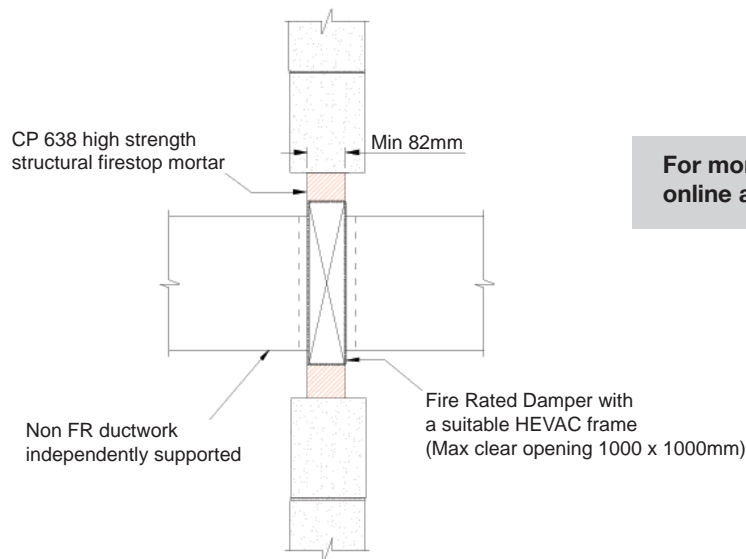
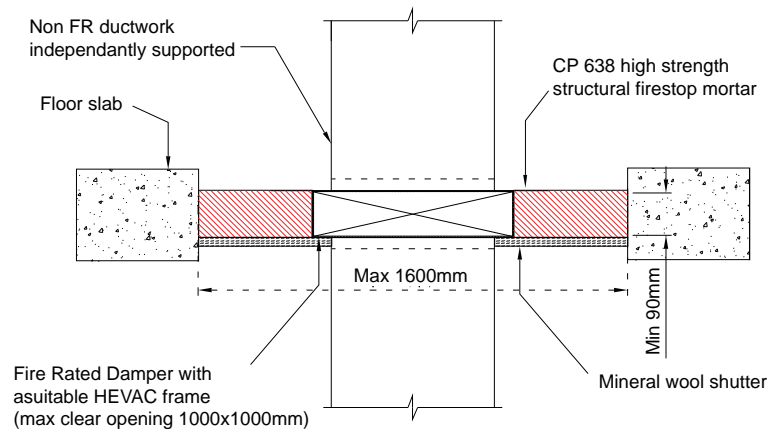
CP 638 HS FS	
Fire rating	Up to 4 hours
Base materials	Concrete (porous), Concrete, Masonry
Application temperature range	5°C - 40°C
Colour	Light grey
Acoustics performance	Up to 50dB
Load bearing (without reinforcement)	100mm thick seal with span 1.6m x unlimited linear length is capable of supporting light foot traffic
Consumption guide	140-160kg per square metre for 100mm thick seal



Ordering

Order description	Package Contents	Package Quantity	Item number
Firestop mortar CP 638 HS FS	CP 638 firestop compound (20kg sack)	1 pc	00340646

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 638

Notice

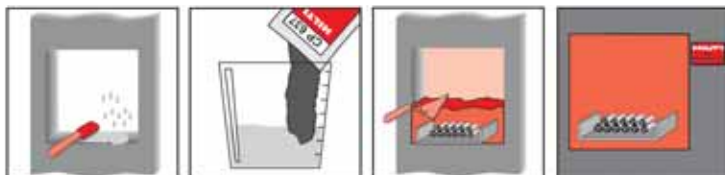
- Before handling, read Material Safety Data Sheet and product label for safe usage and health information.

Application

1. Clean penetration. Pre-moisten sides of penetration.
2. Important! First add clean water to separate container. Then slowly add CP 638 to water while stirring by hand or power mixer to ensure smooth, lump-free mix.

3. Work prepared mortar into opening by troweling, pouring, or pumping with suitable pump. Use forms for large openings.

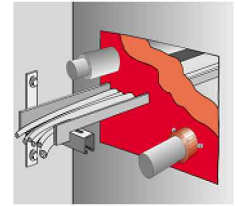
4. Fasten identification plate (if required).



For full instructions **CP637 and CP638 Firestop Mortar Installation Guide - FDS 104 Issue 5.** must be followed and is available at www.hilti.co.uk/cfs

Hilti CP 637 & CP 638 Structural Firestop Mortar

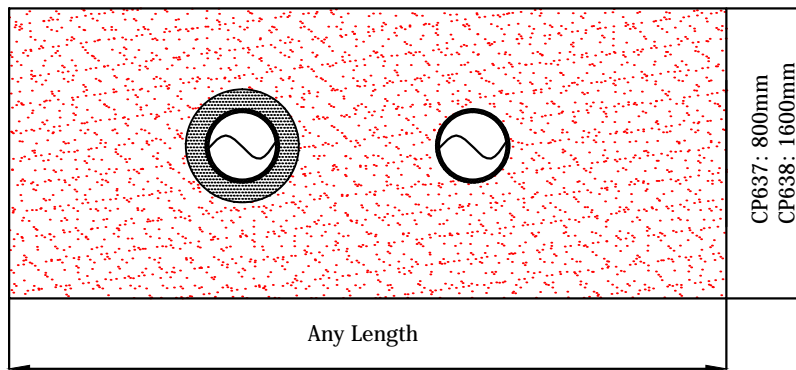
APPLICATION



Metal Pipes
Through
Solid floor

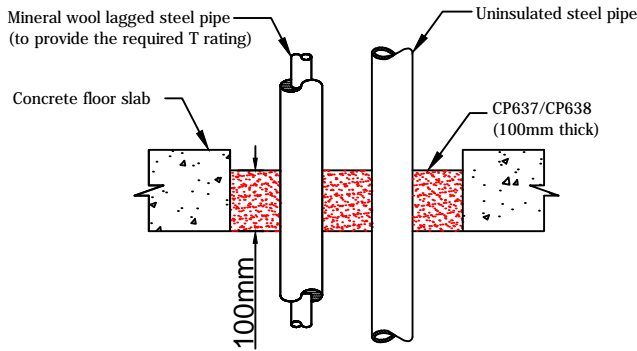
Test	Up to
Fire Integrity	4 hr
Insulation	2 hr
Acoustics	50dB
Age Testing	30 Years

Approvals
BS476 pt 20
LUL

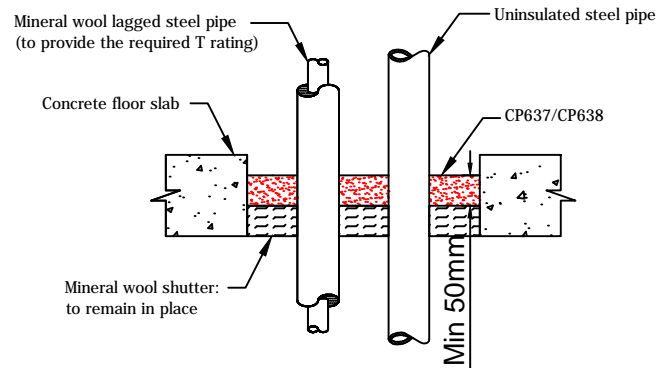


Mortar	Max span:depth ratio
CP637	8:1
CP638	16:1

Structural Seal



Non Structural Seal



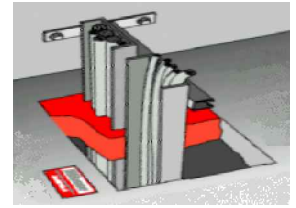
For combustible pipes a minimum depth of 100mm of mortar must be applied in conjunction with a Hilti closure device. Please see the appropriate Standard Details.

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.

Hilti CP 637 & CP 638 Firestop Mortar

APPLICATION



Metal Pipes

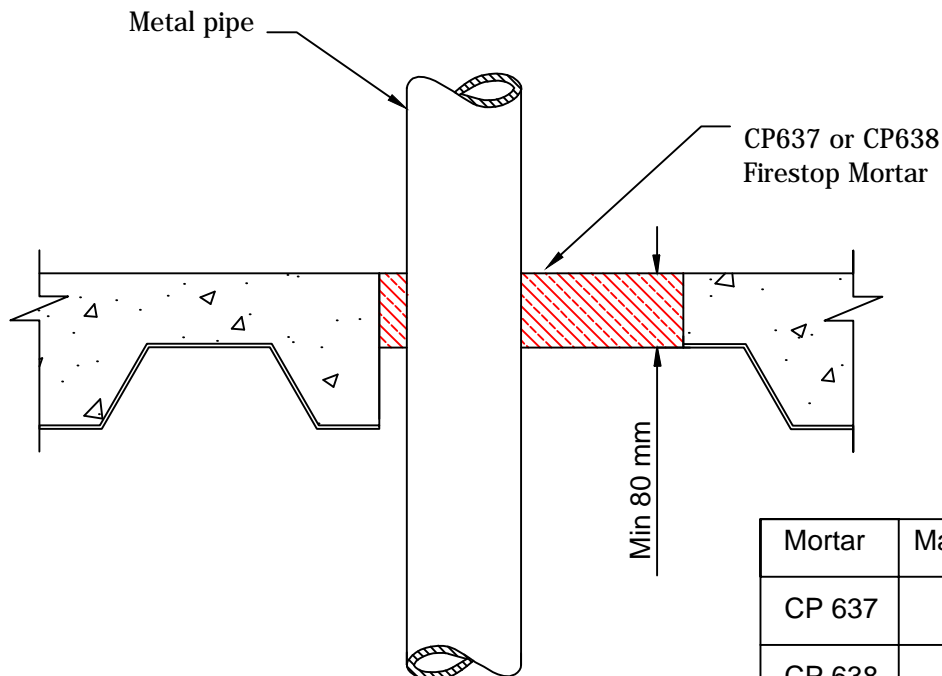
Through

Metal deck

Test	Up to
Fire Integrity	2 hr
Insulation	
Acoustics	50dB
Air Tightness	
Age Testing	30 years

Approvals
BS476 pt 20
LUL

Non-combustible pipes



Mortar	Max span:depth ratio
CP 637	8:1
CP 638	16:1

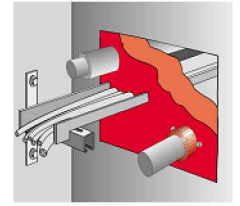
For combustible pipes see appropriate Standard Details

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Hilti CP 637 & CP 638 Structural Firestop Mortar

APPLICATION



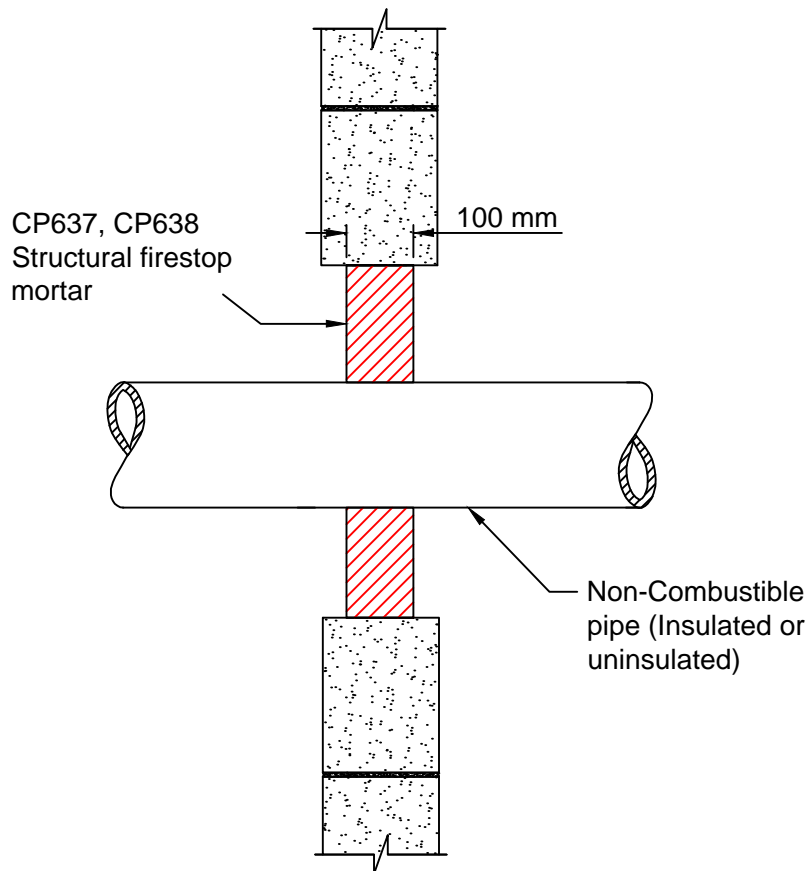
Metal Pipes

Through

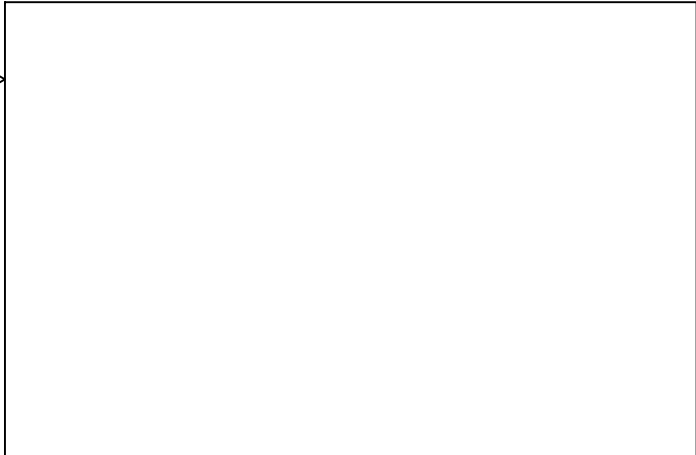
Solid wall

Test	Up to
Fire Integrity	4 hr
Insulation	2 hr
Acoustics	50dB
Age Testing	30 Years

Approvals
BS476 pt 20
LUL



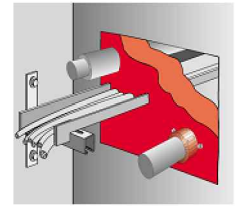
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Hilti CP 637 & CP 638 Structural Firestop Mortar

APPLICATION



Metal Pipes

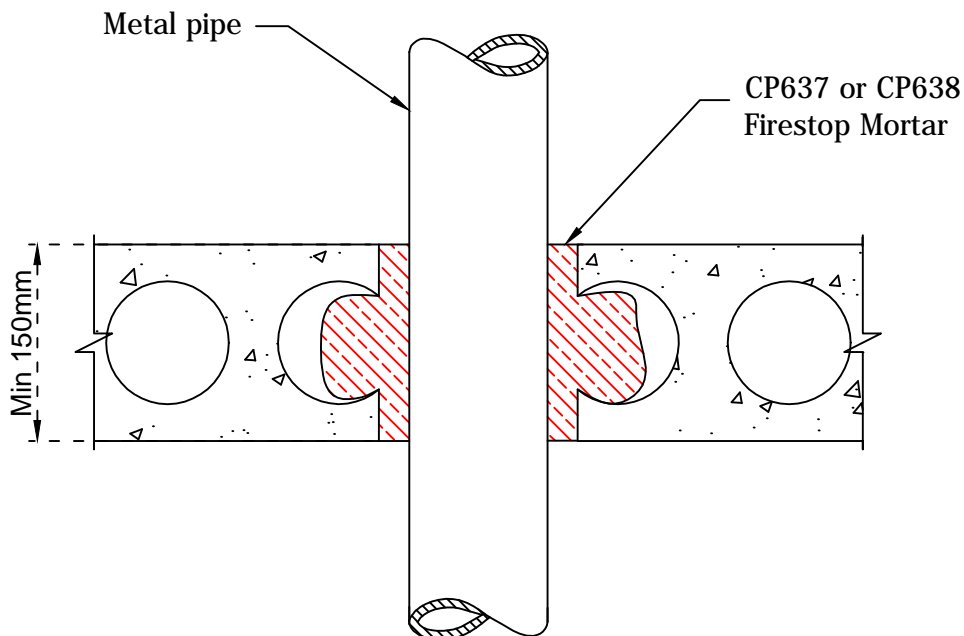
Through

Hollow core slab

Test	Up to
Fire Integrity	2 hr
Acoustics	50dB
Age Testing	30 Years

Approvals
BS476 pt 20
LUL

Non-combustible pipes



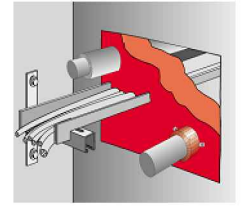
For combustible pipes then please see the appropriate Standard Details.

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Hilti CP 638 High Strength Structural Firestop Mortar

APPLICATION



Damper

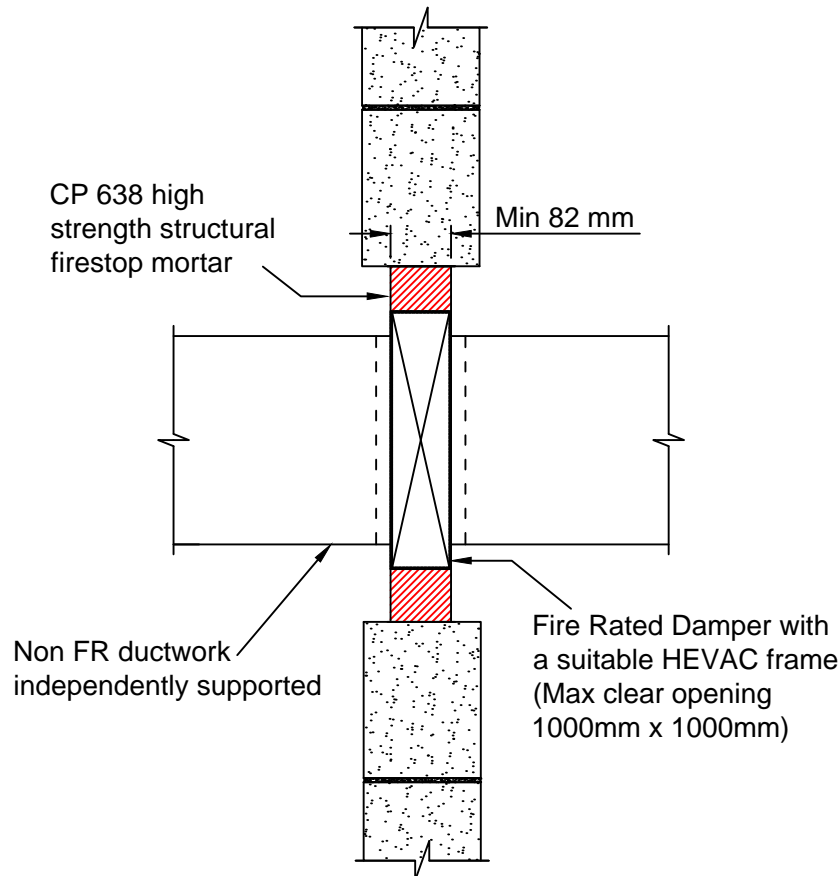
installed within

Solid wall

Test	Up to
Fire Integrity	4 hr
Insulation	2 hr
Acoustics	Fill remaining annulus with fire rated mortar
Age Testing	30 Years

Approvals
BS476 pt 20
UL Classified
LUL

FR Dampers up to 1000 mm x 1000 mm



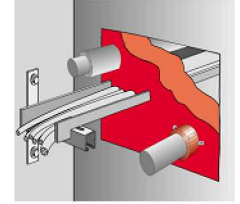
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Hilti CP 637 & CP 638 Structural Firestop Mortar

APPLICATION



Combustible Pipes

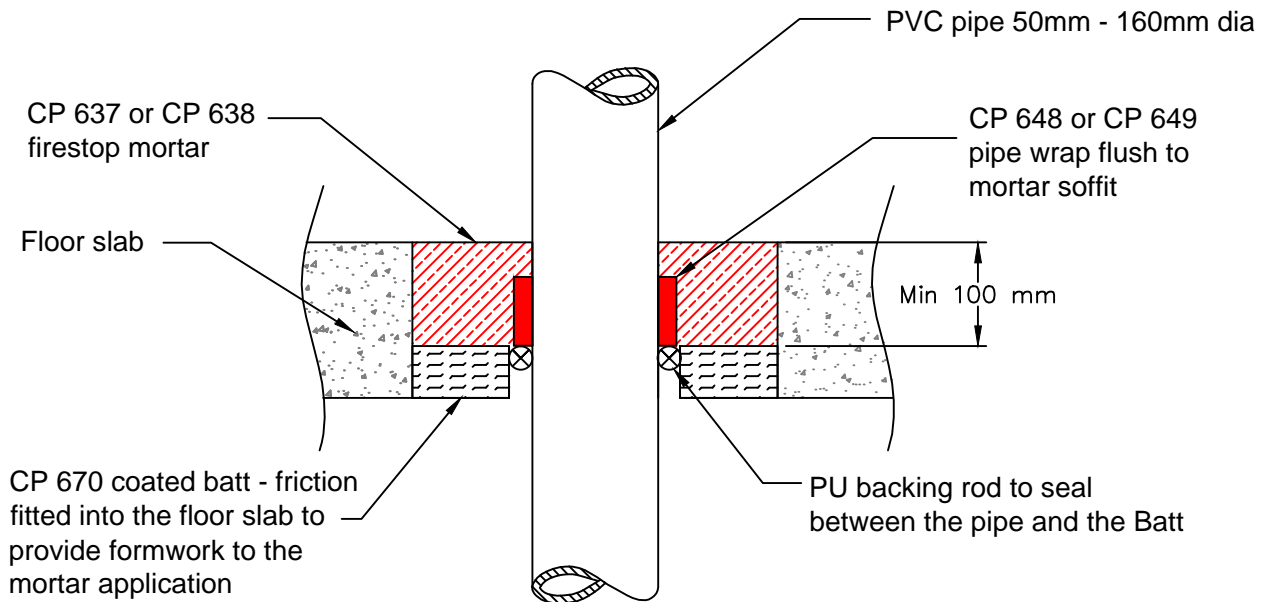
Through

Solid floor

Test	Up to
Fire Integrity	2 hr
Insulation	2 hr
Acoustics	50dB
Age Testing	30 Years

Approvals
BS476 pt 20
LUL

Solid floor



Notes:

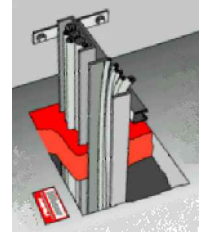
The batt is designed to act as a sacrificial layer. In the event of a fire the PU backing rod is designed to allow the direct exposure of the wrap to heat to allow its activation.

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Hilti CP CP 638 High strength structural Firestop Mortar

APPLICATION



Fire rated Damper

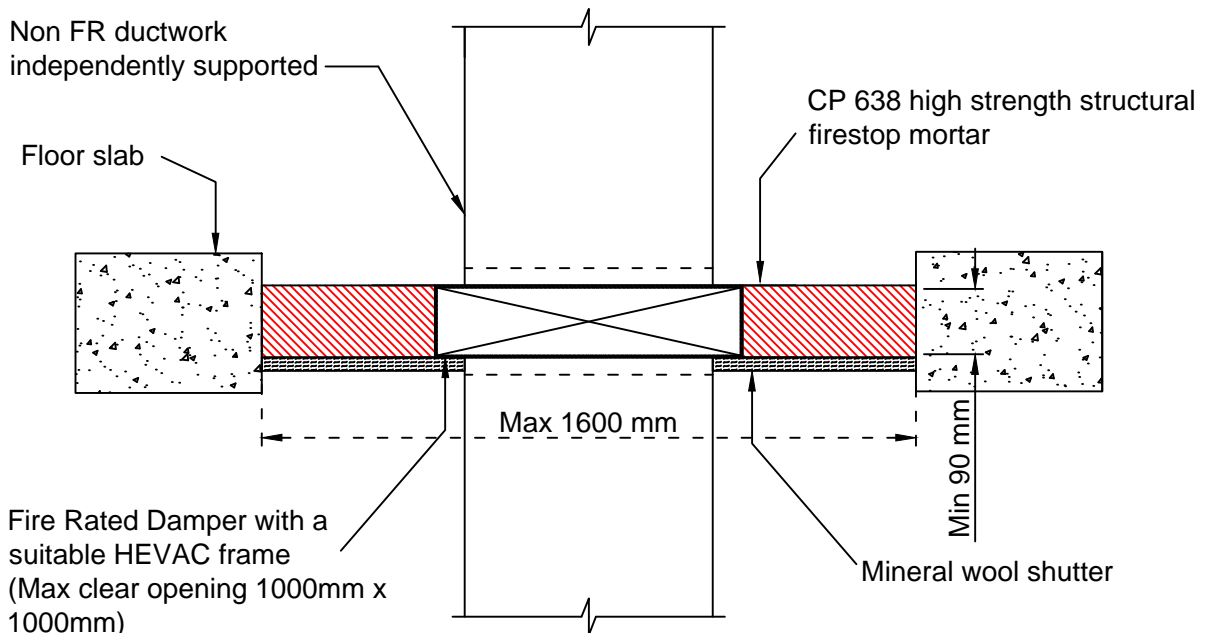
Through

Solid floor

Test	Up to
Fire Integrity	4 hr
Acoustics	50 dB
Age Testing	30 Years

Approvals
BS476 pt 20
LUL

FR Dampers up to 1000 mm x 1000 mm



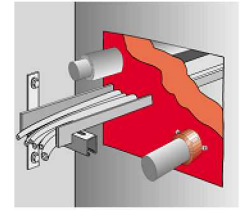
For a structural seal then a minimum depth of 100 mm of mortar must be applied.

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Hilti CP 637 & CP 638 Structural Firestop Mortar

APPLICATION

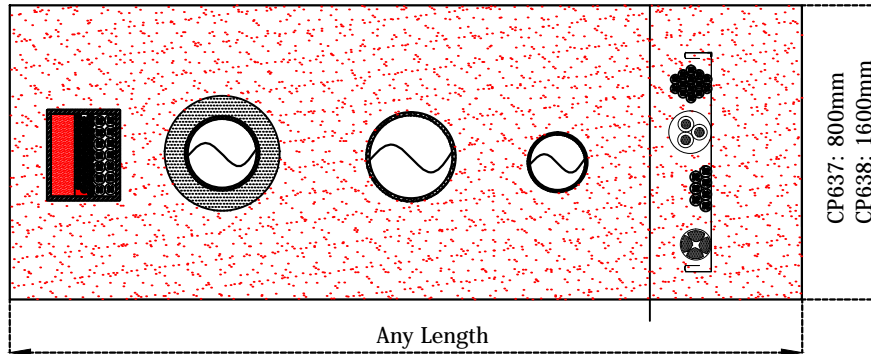


Mixed services
passing through

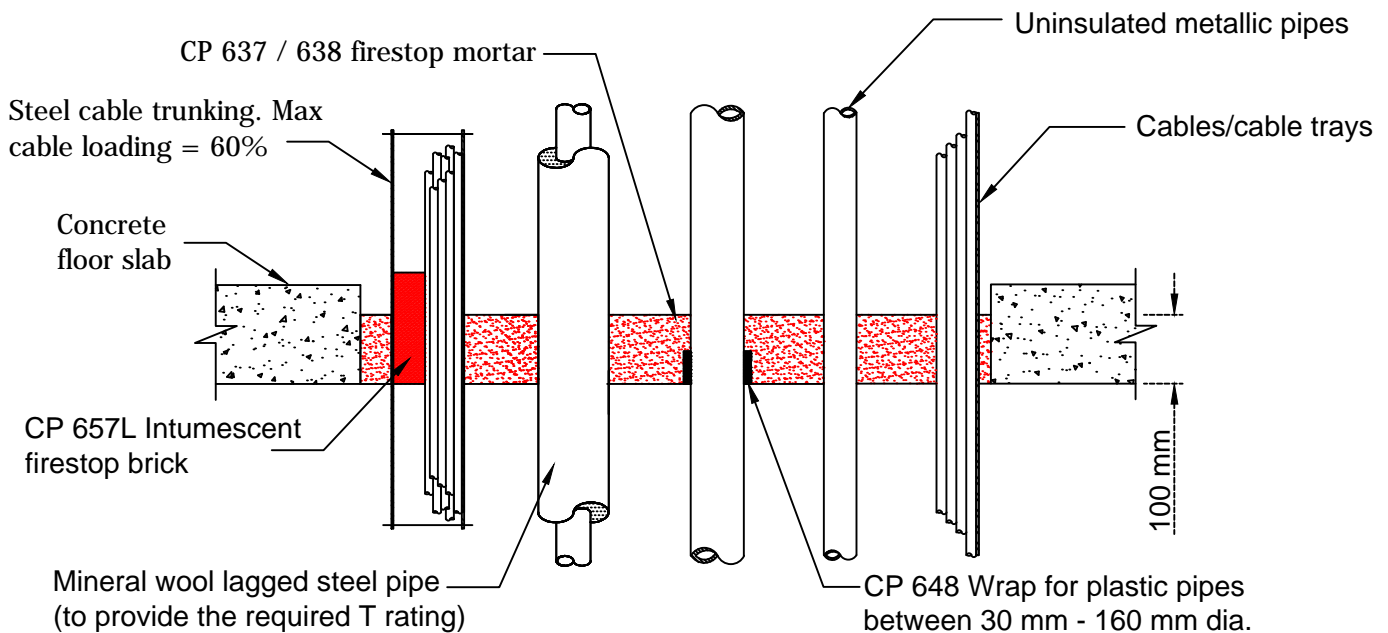
Solid floor

Test	Up to
Fire Integrity	2 hr
Insulation	2 hr
Acoustics	50dB
Age Testing	30 Years

Approvals
BS476 pt 20
LUL



Mortar	Max span:depth ratio
CP637	8:1
CP638	16:1



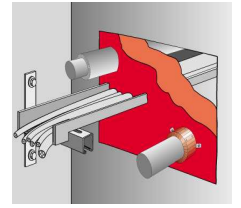
CP 611A should be used to seal any spaces within the cable trunking between the cables and CP 657L firestop brick. CP 643N firestop collars can be used as an alternative to the CP 648 wraps.

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Hilti CP 637 & 638 Structural firestop mortar

APPLICATION



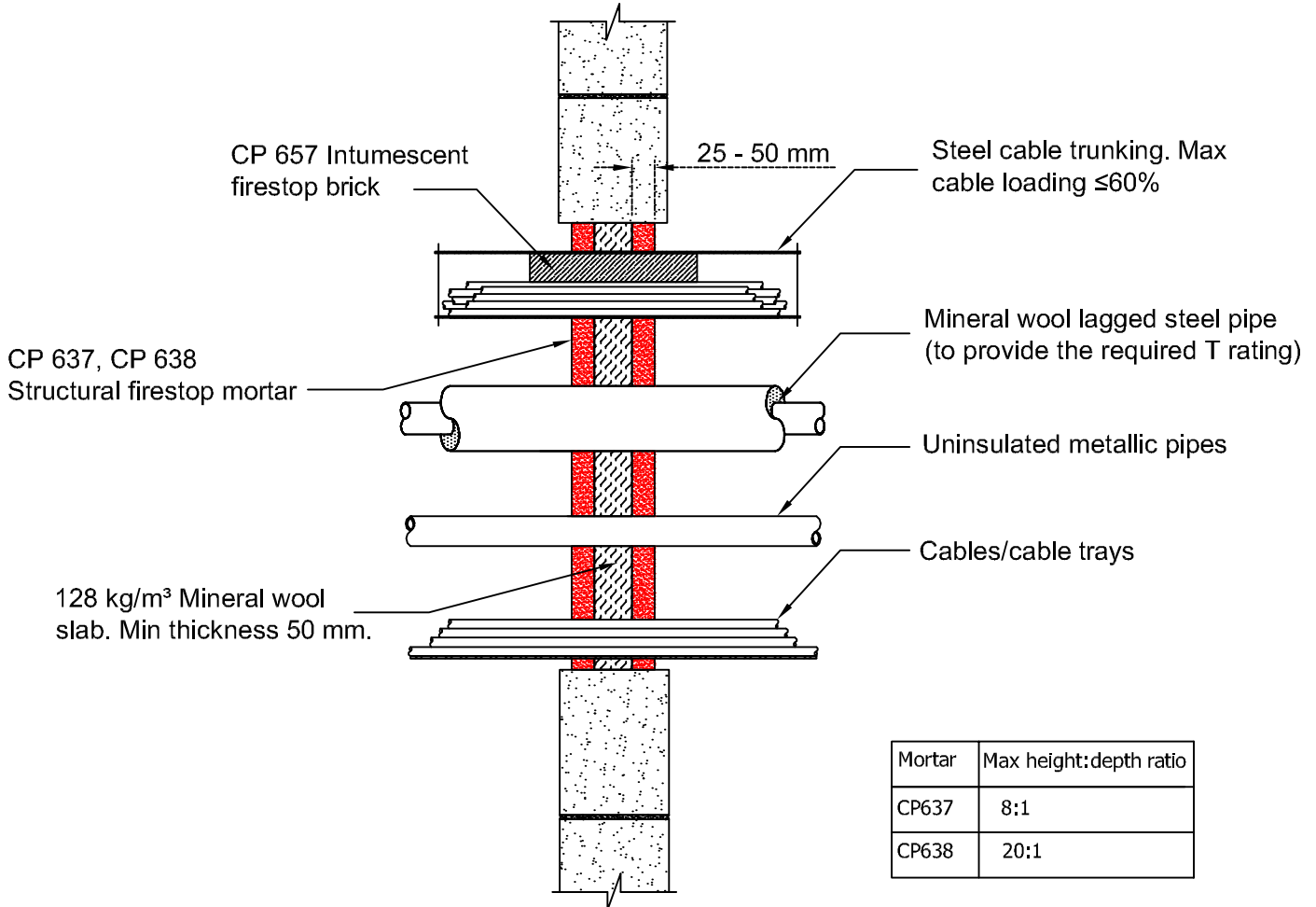
Mixed services

passing through

Solid wall

Test	Up to
Fire Integrity	4 hr
Insulation	4 hr
Acoustics	50dB
Age Testing	✓

Approvals
BS476 pt 20
EN 1366-3
LUL



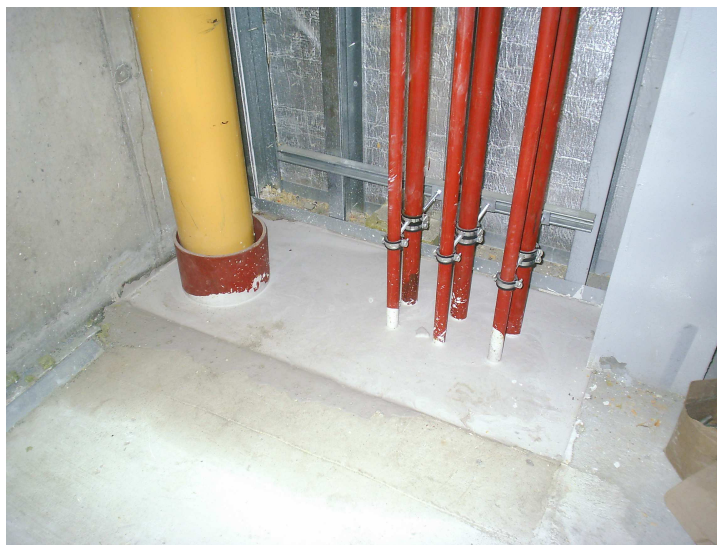
The applied mortar depth is dependant upon the required fire rating and aperture size. Please refer to BRE assessment cc214738 Iss 2. All service items must be independently supported either side of the seal system. This detail is not suitable for use around dampers, for further information on this type of seal please refer to Hilti drawing FS 074.

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FDS	104	Iss	5
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CP637 and CP638 Firestop Mortar Installation Guide



1. Introduction

This document provides Approved Firestop Installers with guidelines for the correct installation of CP 637 and CP 638 Compounds. Further technical details can be found in the *CP 637 and CP 638 Mortar Technical Guide* or by contacting Hilti technical Advisory Service.

2. Training

All operatives engaged in the installation of Hilti CP 637 or CP 638 Compounds should be proficient in wet trades and must have received appropriate training from a Hilti Firestop Specialist. All installations must be carried out in accordance with the guidelines given in that training and with these installation guidelines

3. Setting Behaviour

Both CP637 and CP638 expand on setting to form a smoke tight seal within the opening and around all penetrating services. The hydration/setting process is exothermic, i.e. heat producing. Provided that the mortar seal has a rigid, unyielding surface to expand against, as for example, in a concrete floor slab opening, the expansion is restrained, leading to the creation of considerable membrane action within the opening. This unique setting behaviour, together with high crushing strength, enables the seal to carry substantial loads before failure occurs, even without steel reinforcement. Therefore it must be ensured that the effective span is bounded by two parallel structural sides.

4. Installation Equipment

Hilti CP 637 and CP 638 Compounds can be simply installed using the following equipment:

- Mixing Containers (e.g. black plastic bins)
- A Hilti drilling machine (e.g. TE7, TE 30)
- A mortar mixing paddle with SDS connecting shaft
- Suitable litre measuring jug
- Steel Tape measure
- Saw
- Plastic sheeting
- Float
- Rubbish bags and pan and brush

For supported seals (interrupted and/or large spans) using Hilti channel systems:

- Suitable Hilti anchors (normally specified)
- Spanner and socket wrench
- Appropriate drill bits for anchor installation
- Blow out pump for removing drilling swarf
- Torque wrench

For wall seals, additionally,

- A hawk
- Block making mould (when using CP 637/8 block seal method)
- Builders trowel

5. Essential information

Before any work begins, the Person Responsible must make the following details available to the operative.

- Method of shuttering including formwork support
- Mortar thickness

6. Installation Preparation

Before installation of a compound seal, ensure that all service penetrations are complete and installed to the satisfaction of the main contractor's representative.

Ductwork dampers installed in the opening must have a 'builder's' frame fitted and be secured to prevent movement. Floor dampers and ductwork weight have to be supported independently of the mortar seal. Dampers are to be in line with the floor or wall.

Plastic pipes must have a Hilti Intumescent Pipe Device (CP 644, 643N, 648, 649, 645) fitted and located at the pour level to be cast in. Any annulus to be sealed with CP 611A prior to pour.

Insulation on metal pipes that needs to remain in place has to incorporate a CP 645 sleeve. If the pipe insulation must not be touched then Hilti Intumescent Pipe Collars (CP 644 or 643N) of appropriate size must be fitted around the insulation and positioned at pour level so that they can be cast in. CP 648 Pipe wrap may also be used.

Clean away all loose materials, debris, and laitance from the opening sides, the penetrations and the surrounding area and opening sides are grease and oil free. Ensure that opening sides are perpendicular to the floor or wall depending on what type of seal is being installed. Dampen substrate sides to enhance bonding.

7. Formwork & support

For good Health & Safety practice, a risk assessment of the task should be carried out to ensure that the mortar compound seal can be installed safely. Plastic sheeting may be required beneath the opening to catch falling debris.

Formwork can be conventional rigid shuttering (e.g. plywood) or, as is more commonly used, mineral wool batts as permanent formwork. Hilti CP 670 coated board can be used for floor seals, the coating preventing water migration into the mineral wool, therefore retaining its stiffness whilst curing takes place. For wall seals a removable formwork can be used, demounted and used again once the CP 637/8 has cured. Formwork must be adequately supported to **ensure that no deflection of the formwork occurs during curing.**

Cut and seal the formwork around the services to prevent mortar leakage. Position the formwork to give the required thickness of CP 637 or 638 mortars.

In the case of mineral wool batt formwork, a strengthening and sealing layer of 20-25 mm of compound may be poured first to increase the rigidity of the formwork. This layer must be taken into account when positioning the formwork, i.e. **it cannot be included as part of the structural thickness.**

Seal support

Where additional support is to be provided for interrupted and/or large spans, this may be by using Hilti channel support systems. For layout and frequency refer to Hilti for advice. Ensure operative competency on use of Hilti channel support systems. Refer to Technical data for method of use and ensure all brackets, clamps and fittings are secured through correct tightening. Adhere to recommended torque settings where provided by Hilti.

8. Thickness of pours

In the majority of instances, Hilti CP 637 and 638 compounds do not require reinforcement. Seal thicknesses should be determined by the architect or engineer responsible for the project, using advice from Hilti (Gt. Britain) Limited. If this is left to the Specialist Contractor, advice must be taken from Hilti (Gt. Britain) Limited before seals are poured.

Floor seals:

Maximum recommended clear spans are as follows:

CP 637 - 800 mm

CP 638 - 1600 mm

The required thickness of finished mortar is determined by either the fire rating or the structural requirement. A slab thickness of at least 100mm is recommended for fire ratings. **For load bearing seals a minimum of 100mm is required.**

Where dampers are to be sealed, the seal minimum thickness must suit the depth of the damper and frame, which is typically 80 mm thickness, so increase mortar depth to 100mm. **Any initial strengthening layer of compound must not be included in the required thickness of compound seal.** Structural requirements take priority in any seal depth determination. Contact Hilti for advice.

Wall seals:

Thickness of the seal depends on required fire rating. Wall seals are not anticipated to have load bearing capabilities. Where dampers are to be sealed the minimum thickness of seal needs to correspond with the depth of the damper, normally 80 mm.

See the Hilti Technical Guide to CP 637 and CP 638 for more information on depth of seals.

9. Mixing

Health and safety procedures should be observed when using any chemical product. Suitable PPE should be worn. As well as the minimum required when working on a construction site the following additional equipment is recommended:

- Gloves
- Overalls
- Eye protection
- Dust mask

When using any chemical product, do not eat, smoke or drink. **Consult the MSDS for CP 637 and CP 638 prior to use**

Mixing should be done with a drilling machine and mixing paddle (not stirring by hand). Mixing of larger quantities can be done in a larger powered mixer (cement mixer) or a pan mixer. A sufficient quantity should be mixed to complete each application in one pour.

Mix the mortar with water by weight.

The dry mortar must be added to the water. 6 to 7 Litres of water per 20kg bag for CP 638 and 10 to 12 litres of water per 20kg bag of 637.

The ratio can be varied to change the workability of the mortar, i.e. add less powder to make the mixture more pourable, add more powder to make the mixture thicker for installation in walls. See table below for full mix details.

Coverage of mortars for a 100mm thick seal:-

CP 638 – 7-8 bags/m²

CP 637 – 5-6 bags/m²

The pot life of the mixture is about 45 minutes. **Do not try to add more water or to remix after the mortar starts to set as this will result in decreased strength.**

Ensure that the bucket and mixing implements are clean before starting to mix the next batch. The chemical process gives off heat when the mortar sets, and a new mix will set very rapidly if contaminated with even a small amount of partially cured mortar. A tip is to use at least two mixing receptacles and alternate between the two.

Another tip is for achieving a 'pourable' mix is to have another operative add the mortar powder gradually to the water whilst being mixed by another.

Mix the water and mortar for several minutes. This ensures thorough mixing, mixing in all powder that may have accumulated at the bottom of the mixing receptacle. It also makes the mix workable and easy to place around services. It is essential to mix compound with mechanical equipment in order for the finished product to provide the expected load bearing capacity.

Workability	Water: Solids ratio by weight	Wet density (kg/m ³)	Wet strength (N/mm ²)	Dry density (kg/m ³)	Dry strength (N/mm ²)
CP637					
Pourable	0.7	1300	3.5	850	6.8
Plastic	0.65	1350	4.8	900	9.5
Stiff	0.60	1400	6.0	950	12.5
CP638					
Pourable	0.35	1750	8.0	1450	17.0
Plastic	0.32	1820	11.0	1530	21.0
Stiff	0.30	1900	12.5	1600	25.0

10. Installation

Floor seals:

Install the mortar to the full depth and full span as previously determined. It is important that the CP 637 and CP 638 compounds are poured in one thickness. **Do not pour in layers** as this will reduce the structural performance. For this reason it is important **not** to take the shuttering layer into account, i.e. if a 100mm layer is required and a 25mm layer is installed to stiffen the shutter, then the total slab thickness will be 125mm.

If the seal is large or complicated and cannot be installed in one pour, then cast the slab to full depth and full span in several parts. Ensure that each part has cooled, indicating that the mortar has set, before the adjacent section is cast. Alternatively each section should be insulated, using mineral wool batt, to prevent a flash set. Consult Hilti for guidance.

Wall seals:

With the CP 637 or CP 638 mixed to a stiff enough consistency build up the seal against formwork. For larger seals it is possible to form blocks from CP 637 and CP 638. These can then be built up employing masonry techniques using CP 637 or CP 638 mortar where appropriate as the block bonding material. The thickness of the blocks and any wall seal has to be appropriate to the fire resistance required.

Determination of applied thickness

The depth of seals should be determined in advance of application. This should be done with the approval of a competent person from the site management.

We recommend:-

1. shuttering layers must be ignored as structural elements
2. The full area of seal must be split into smaller manageable sections
3. Each section of seal must be poured the **full depth and span in a single pour (floor seals)**
4. All services flammable or otherwise must be treated with a suitable Hilti firestop device in accordance with tests data

11. Curing

Formwork can be removed after 2-3 hours. Loads should not be applied to a seal made with CP637 and CP638 Compound for at least 48 hours. It is recommended that notices to that effect be placed near the seals.

12. Protection of seal from water

CP637 and CP638 compounds are water-resistant but are not waterproof. The seal must be protected from water (e.g. rainwater) whilst it cures. Refer to 'CP 637 and CP 638 Mortar Technical Guide' for details or contact Hilti Technical Service for advice.

13. Clean up

Tools and equipment should be washed in water and dried off. Waste and debris should be swept up and disposed of in accordance with local regulations and/or site requirements. Hands should be cleaned with soap and water.

14. Use of CP 637 and CP 638 seals

-Subsequent Installation of new services:

Hilti should be consulted prior to repenetrating of CP 637 and CP 638. Opening sizes should be made within any support framing. Openings in adjacent grids to be avoided. Hilti should be consulted prior to proposed installation of new services.

Drilling or cutting CP 637 and CP 638 to facilitate the installation of new tenant services must be done with dry or wet diamond coring. Percussive or hammer action drilling or coring must not be used. Cutting of MQ support frame where fitted is **not** permitted. If support framing obstructs proposed openings Hilti must be consulted prior to commencement of works.

Holes for subsequent installation of services must not be larger than necessary. New services should penetrate the CP 637 or CP 638 seal with their own service opening made as prescribed above.

-Firestopping of new services

New services to be suitably firestopped with appropriate Hilti Firestop products. Mixing of different manufacturers firestop systems are not permitted on grounds of compliance with Building Standards and insurers requirements.

-Loading of CP 637 and CP 638 seals

The size of load to be applied to each CP 637 and CP 638 seal will be predetermined by the project engineer or architect and this must not be exceeded. Loading of CP 637 and CP 638 seals is to be of a temporary nature (i.e. for short term maintenance access only). It must be understood that CP 637 and CP 638 must not be used for storage areas or for constantly trafficked areas. Notices to this effect should be displayed within the riser area and included in O&M manual.

The following types of loading should avoided on a CP 637 and CP 638 seal;

- Concentrated point loads

- Shock loads
- Vibro-hammer action from tools
- Fluctuating and dynamic loads
- Long term applied loading (eg storage cabinets, switch cabinets etc)

Access equipment should be placed on timber spreaders (e.g. scaffold boards or 25 mm plywood).

This information is intended as a guide to the installation of Hilti CP 637 and CP 638 Compounds. It does not replace specific site requirements nor is it a substitute for a contractor's own health and safety policy or practice. If there are questions relating to these guidelines or requirements for further assistance or advice then contact Hilti (Gt. Britain) Limited on 0800 886 100.

**HILTI TECHNICAL ADVISORY SERVICE
TELEPHONE 0800 886 100**

IMPORTANT NOTES

1. The information and recommendations given herein are believed to be correct at the time of writing. The data has been obtained from tests done under laboratory, or other controlled, conditions and it is the users' responsibility to use the data given in the light of conditions on site and taking account of the intended use of the products concerned. Whilst Hilti (Gt. Britain) Limited can give general guidance and advice, the nature of Hilti products means that the ultimate responsibility for selecting the correct product for a particular application must lie with the customer.
2. All products must be used, handled and applied in accordance with current instructions for use published by Hilti (Gt. Britain) Limited.
3. All products are supplied, and advice given, subject to Hilti (Gt. Britain) Limited terms of business.
4. Hilti's policy is one of continuous development. We therefore reserve the right to alter specifications etc. without notice.
5. Construction materials and conditions vary on different sites. If it is suspected that the base material has insufficient strength to achieve a suitable fixing, contact the Hilti Technical Advisory Service.



Hilti (Gt. Britain) Ltd is a member of the Association for Specialist Fire Protection.

Additional Properties of CP 638 High strength Structural Firestop Compound seals

Property	Test regime	Notes	
Fire	BS 476 - 20		✓
	Certifire		656
	FM approval (Class 4990)		3024387
	ETA		
Acoustic	BS EN ISO 140-3:1995	Rw	50 dB
Water resistance	Rain Resistance		✓
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 638 – Additional Properties of CP High strength Structural Firestop Compound - BREEAM criteria

BREEAM Section

Management construction site impact	No power tools required for installation (no energy source required)	x
	Dust free installation	x
	Saves water during application No water pollution	x
Health and wellbeing	Low VOC* (air quality)	✓
	No ozone depletion potential (ODP)	✓
	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	✓
Waste	Recycling of packaging	✓
	Reuse of materials	x
	Re-penetration in existing opening (No waste)	x
Product contributes to Green Building under this clause	✓	
Not applicable for this product	NA	
Product makes No contribution to green Building under this clause	x	

CP 637 – Structural grade firestop mortar - NBS specification clauses

This page is to be used in conjunction with the NBS Specification clauses in the introduction to the Hilti Firestop Specifiers Binder.

Application: Imperfections of fit of building components and Service penetrations through fire rated walls and floors requiring treatment to reinstate the fire performance of said walls and floors

P12 FIRE STOPPING SYSTEMS

PRODUCTS

- 340 INTUMESCENT MORTARS
- A fire resistant, gypsum based mortar with thermal insulating properties used to seal medium to very large penetrations and provide loadbearing properties . Designed for use in walls and floors, in concrete, porous concrete and masonry.
 - Tested to BS 476: Part 20, 1987.
 - Fire resistance 1 - 4 hours
 - Manufacturer: Hilti (Gt Britain) Ltd, 1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200. Website www.hilti.co.uk.
- Product reference: **CP 638 high Strength Compound**

EXECUTION

- 670 APPLYING FIRE RATED MORTAR
- Installers: use trained and 3rd party accredited installers as recommended by manufacturer of mortar
 - Sequence: Install mortar after services have been permanently installed, allowing access to remote corners. Co-ordinate installation with mechanical and electrical service installers. Dampers to be fitted in line with floor or wall, with builders frames and to be held rigidly in position by adequate supporting framework
 - Base material suitability: Remove loose builders material, degrease and ensure that opening bounded by suitable structural elements
 - Shuttering: Install suitable shuttering panels to opening, providing adequate support for wet weight of mortar
 - Support framework: Install support framework as recommended by manufacturer and in accordance with said manufacturer's recommendations where required
 - Temperature: Do not apply mortar when it could be damaged by frost
 - Powder /:water ratio: To manufacturer's recommendations. Contractor to submit proposals and manufacturer's written instructions
 - Mortar Cure: Do not disturb mortar before final set has taken place
 - Load bearing: Only permit foot traffic after curing has taken place and only when manufacturer's written evidence has been provided to prove suitability
 - Shuttering: Remove combustible shuttering after mortar has cured

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
		
<p>Interactive product selector for firestopping openings through walls and floors</p>	<p>Find out more about the benefits of using Hilti firestop systems</p>	<p>Interactive product selector for wall to wall, top of wall, curtain wall , floor to floor and floor to wall applications.</p>

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Copies of these "Terms and Conditions of sale" are available on request.

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- shall be sent to the Company's premises at the Buyer's expense;
- 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.
- The Buyer may not cancel an order of the Goods including but without limitation, any Goods that involve special requirements of the Buyer once the order has been inputted onto the Company's ordering system, without the prior written consent of the Company.

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