HILTI CP 636
Firestop Mortar

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

Quality Management System Certification

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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Hilti Firestop Systems Manual Pages for Hilti CP 636

FS 075 - 01  Hilti CP 636 - Plastic Pipe – Solid Floor
FS 119 - 01  Hilti CP 636 – Damper in Masonry wall

Data summary  Additional Properties of CP 636 seals
Data summary  CP 636-Fire Rated mortar – BREEAM Criteria summary
Data summary  CP 636-Fire Rated mortar - 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  Data summaries added
May 2013  Update
Firestop mortar (suitable for walls)  
CP 636

Fire resistant cement-based mortar with thermal insulating properties for fire stopping medium to large openings

Applications

- Cables and cable trays
- Ductwork dampers
- Metal pipes

Advantages

- Suitable for wall applications
- Excellent pot life / working time
- High yield
- Stiff (forms not always required)
- Contains no asbestos, phenol, or halogen constituents.
- Good adhesion to steel, concrete, and masonry
- Simple application by trowel
- paintable

Technical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>CP 636</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire rating</td>
<td>Up to 4 hours</td>
</tr>
<tr>
<td>Base materials</td>
<td>Concrete, Concrete (porous block), Masonry</td>
</tr>
<tr>
<td>Chemical basis</td>
<td>Concrete mortar with perlite</td>
</tr>
<tr>
<td>Application temperature range</td>
<td>5°C - 40°C</td>
</tr>
<tr>
<td>Colour</td>
<td>Grey</td>
</tr>
<tr>
<td>Acoustics performance</td>
<td>Up to 59dB</td>
</tr>
<tr>
<td>Air Leakage Rating</td>
<td>0.00047 m³/h (min)</td>
</tr>
<tr>
<td>Consumption</td>
<td>100kg per Sq metre for 100mm thick seal</td>
</tr>
</tbody>
</table>

Ordering

<table>
<thead>
<tr>
<th>Order description</th>
<th>Package Contents</th>
<th>Package Quantity</th>
<th>Item number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firestop mortar</td>
<td>CP 636 firestop compound (20kg sack)</td>
<td>1 pc</td>
<td>00334897</td>
</tr>
</tbody>
</table>

Solid wall

CP 636, CP 637 or CP 638  
Firestop Mortar

Solid floor

CP 636, CP 637 or CP 638  
Firestop Mortar

Installation instructions for CP 636

Notice

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

Application

1. Preparation of the opening
   Clean and pre-moisten the opening sides. Cables and cable trays must be dry and free from dust, oil or grease. Cables must be laid and secured as stated in the respective standard.

2. Mixing the firestop mortar
   Mix CP 636 firestop mortar in the mortar-to-water ratio of about 3:1 by volume. It is important that the water and CP 636 is poured into the bucket. Thoroughly mix small quantities using a drilling machine and mixer. It is important that no further binding agents or additives are used.

3. Application of firestop mortar
   Forms should be placed on one or both sides of large openings. Openings in floors must have forming on the underside. Fill all gaps, voids and remaining openings are completely closed and sealed. Smooth the surface like ordinary concrete.

4. Follow-up installation/reworking
   CP 651 firestop cushions, CP 657 firestop bricks and CP 611 A intumescent mastic can be installed in the fire seal, while keeping in mind the maximum allowable size of the opening. Care must be taken to completely close any gaps, voids or remaining openings.

5. Identification plate
   Some countries require the cable fire seal to be marked with a lasting identification plate. This plate must be given the appropriate wording and then fastened next to the cable fire seal in a clearly visible position.

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

Wall Floor with CP 611A included

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Wall</th>
<th>Floor with CP 611A included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. building component thickness</td>
<td>160 mm</td>
<td>100 mm</td>
</tr>
<tr>
<td>Max. opening size(width x height x length)</td>
<td>1200 x 2000 mm</td>
<td>600 x 600 mm</td>
</tr>
<tr>
<td>Min. distance from cable tray to opening</td>
<td>0 mm</td>
<td>0 mm</td>
</tr>
<tr>
<td>Min. distance between cables tray</td>
<td>40 mm</td>
<td>40 mm</td>
</tr>
<tr>
<td>Min. distance between openings</td>
<td>200 mm</td>
<td>200 mm</td>
</tr>
</tbody>
</table>

Min. meat distance from cable tray to opening  
Min. distance between cables tray  
Min. distance between openings

Solid floor

CP 649 Intumescent Pipe Wrap flush to soffit

CP 649 Intumescent Pipe Wrap mounted central

100-140mm

CP 636, CP 637 or CP 638 Firestop Mortar

CP 651 Firestop cushions, CP 657 Firestop bricks and CP 611 A Intumescent mastic can be installed in the fire seal, while keeping in mind the maximum allowable size of the opening. Care must be taken to completely close any gaps, voids or remaining openings.
Firestop mortar (suitable for walls)
CP 636
Fire resistant cement-based mortar with thermal insulating properties for fire stopping medium to large openings

Applications
- Cables and cable trays
- Ductwork dampers
- Metal pipes

Advantages
- Suitable for wall applications
- Excellent pot life / working time
- High yield
- Stiff (forms not always required)
- Contains no asbestos, phenol, or halogen constituents.
- Good adhesion to steel, concrete, and masonry
- Simple application by trowel
- Paintable

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<td>0.00047 m³/h (min)</td>
<td></td>
</tr>
<tr>
<td>Consumption</td>
<td>100kg per 5m² for 100mm thick seal</td>
<td></td>
</tr>
</tbody>
</table>

Technical Information

Solid wall
CP 636, CP 637 or CP 638 Firestop Mortar

Solid floor
CP 636, CP 637 or CP 638 Firestop Mortar

PVC pipe

CP 649 Intumescent Pipe Wrap mounted central

100-140mm

Installation instructions for CP 636

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

Applications
1. Preparation of the opening
   - Clean and pre-moisten the opening sides. Cables and cable trays must be dry and free from dust, oil or grease. Cables must be laid and secured as stated in the respective standard.

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   - Mix CP 636 firestop mortar in the mortar-to-water ratio of about 3:1 by volume. It is important that first water then CP 636 is poured into the bucket. Thoroughly mix small quantities using a drilling machine and mixer. It is important that no further binding agents or additives are used.

3. Application of firestop mortar
   - Forms should be placed on one or both sides of large openings. Openings in floors must have forming on the underside. Smooth the surface like ordinary concrete.

4. Follow-up installation/rewarking
   - CP 651 firestop cushions, CP 657 firestop bricks and CP 611 A intumescent mastic can be installed in the fire seal, while keeping in mind the maximum allowable size of the opening. Care must be taken to completely close any gaps, voids or remaining openings.

5. Identification plate
   - Some countries require the cable fire seal to be marked with a lasting identification plate. This plate must be given the appropriate wording and then fastened next to the cable fire seal in a clearly visible position.

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For more details register online at www.hilti.co.uk/cfs

Visit the Hilti Firestop Design Centre Register today at www.hilti.co.uk/cfs
Hilti CP 637 & CP 638
Structural Firestop Mortar

<table>
<thead>
<tr>
<th>Test</th>
<th>Up to</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Integrity</td>
<td>2 hr</td>
<td>BS476 pt 20</td>
</tr>
<tr>
<td>Insulation</td>
<td>2 hr</td>
<td>LUL</td>
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<tr>
<td>Acoustics</td>
<td>50dB</td>
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<tr>
<td>Age Testing</td>
<td>30 Years</td>
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</tbody>
</table>

**APPLICATION**

- Combustible Pipes
  - Through
  - Solid floor

**Solid floor**

- PVC pipe 50mm - 160mm dia
- CP 648 or CP 649 pipe wrap flush to mortar soffit
- Min 100 mm
- PU backing rod to seal between the pipe and the Batt

**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.

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 636 Fire rated Mortar

<table>
<thead>
<tr>
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<th>Up to</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Integrity</td>
<td>4 hr</td>
<td>BS476 pt 20</td>
</tr>
<tr>
<td>Insulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acoustics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Tightness</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Age Testing</td>
<td>30 years</td>
<td></td>
</tr>
</tbody>
</table>

![Diagram showing application of CP 636 Mortar]

- **Damper**: 550 x 550 mm fitted with Builders frame
- **Initial supports for ductwork to be within 500 mm of each face of the seal**
- **CP 636 Mortar to minimum 90 mm depth**

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

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3. All installations should be carried out in accordance with Hilti’s installation instructions, by competent, experienced installers using Hilti branded products.
### Additional Properties of CP 636 Firestop mortar

<table>
<thead>
<tr>
<th>Property</th>
<th>Test regime</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Fire</td>
<td>BS 476 - 20</td>
<td>✓</td>
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<tr>
<td></td>
<td>BS EN 1366-3</td>
<td>pr EN</td>
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<tr>
<td></td>
<td>FM approval (Class 4990)</td>
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<tr>
<td></td>
<td>ETA</td>
<td></td>
</tr>
<tr>
<td>Acoustic</td>
<td>EN ISO 20 140-10: 1992</td>
<td>Dnw 59 dB</td>
</tr>
<tr>
<td>Ageing</td>
<td>DIBT</td>
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<tr>
<td></td>
<td>DA/STB</td>
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<td></td>
<td>Fire test after ageing</td>
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<tr>
<td>Air sealing</td>
<td>DIN 1026</td>
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<tr>
<td></td>
<td>Pressure difference 50Pa</td>
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<tr>
<td></td>
<td>Pressure difference 200Pa</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre sealing with Hilti Mastic/Mortar</td>
<td></td>
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<tr>
<td>Electrical resistance</td>
<td>Surface resistance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Volume resistivity</td>
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<td></td>
<td>Insulator</td>
<td>1088 Ohm-cm</td>
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<tr>
<td>Water resistance</td>
<td>Rain Resistance</td>
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<tr>
<td></td>
<td>Mold and Mildew resistance</td>
<td>ISO 846 Class 2-3</td>
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<td></td>
<td>Water tightness</td>
<td>UL 1479 N.R</td>
</tr>
<tr>
<td>VOC</td>
<td>LEED 2009</td>
<td>LEED 3.0 &lt;1 g/l</td>
</tr>
<tr>
<td>Chemical Resistance</td>
<td>Contact Hilti Technical Advisory Service with details of type, concentration, duration and ambient temperature of exposure conditions</td>
<td>N.R Not relevant Meets standard</td>
</tr>
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# CP 636 - Firestop mortar - BREEAM criteria

## BREEAM Section

<table>
<thead>
<tr>
<th>Section</th>
<th>Criteria</th>
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<tbody>
<tr>
<td><strong>Management construction site impact</strong></td>
<td></td>
</tr>
<tr>
<td>Dust free installation</td>
<td>✓</td>
</tr>
<tr>
<td>Saves water during application</td>
<td>×</td>
</tr>
<tr>
<td>No water pollution</td>
<td>×</td>
</tr>
<tr>
<td>Low VOC* (air quality)</td>
<td></td>
</tr>
<tr>
<td>No ozone depletion potential (ODP)</td>
<td></td>
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<tr>
<td><strong>Health and wellbeing</strong></td>
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<tr>
<td>Low global warming potential (GWP)</td>
<td>×</td>
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<tr>
<td>Smoke and gas tightness</td>
<td></td>
</tr>
<tr>
<td>Noise reduction</td>
<td></td>
</tr>
<tr>
<td>Air tightness</td>
<td></td>
</tr>
<tr>
<td>Avoidance of air infiltration</td>
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</tr>
<tr>
<td>Product Carbon Footprint or LCA Data</td>
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<tr>
<td>Thermal insulation</td>
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<tr>
<td>Recycling of packaging</td>
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<tr>
<td><strong>Waste</strong></td>
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</tr>
<tr>
<td>Reuse of materials</td>
<td>×</td>
</tr>
<tr>
<td>Re-penetration in existing opening (No waste)</td>
<td>×</td>
</tr>
</tbody>
</table>

- **Product contributes to Green Building under this clause**: ✓
- **Not applicable for this product**: NA
- **Product makes No contribution to green Building under this clause**: ×
CP 636 - 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.

340 INTUMESCENT MORTARS
- A fire resistant, gypsum based mortar with thermal insulating properties used to seal medium sized penetrations. Designed for use in walls and floors, in concrete, porous concrete and masonry.
- Tested to BS 476: Part 20, 1987 and EN 1366-3.
- Fire resistance 1 - 4 hours
- Manufacturer: Hilti (Gt Britain) Ltd, 1 Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200. Website www.hilti.com.uk.
- Product reference: CP 636 Fire Resistant Compound

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

<table>
<thead>
<tr>
<th>Penetration product selector</th>
<th>Other product features</th>
<th>Joints product selector</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Penetration product selector" /></td>
<td><img src="image2" alt="Other product features" /></td>
<td><img src="image3" alt="Joints product selector" /></td>
</tr>
<tr>
<td>Interactive product selector for firestopping openings through walls and floors</td>
<td>Find out more about the benefits of using Hilti firestop systems</td>
<td>Interactive product selector for wall to wall, top of wall, curtain wall, floor to floor and floor to wall applications.</td>
</tr>
</tbody>
</table>

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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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