

## HILTI CP 644 Firestop collar

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](http://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](http://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 3<sup>rd</sup> 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 644

FS 087-01 Hilti CP 670 & CP644 - Centrally mounted  
FS 088-02 Hilti CP644 - Surface mounted drywall  
FS 089-01 Hilti CP644 – Soffit & flush mounted

Data summary Additional Properties of CP 644 seals  
Data summary CP 644 - Firestop Collar – BREEAM Criteria summary  
Data summary CP 644 - Firestop Collar - 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](http://www.hilti.co.uk/cfs)

## Revision History

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

# Firestop collar CP 644

Ready-to-use, quickly installed, galvanized steel containing sections of high-performance intumescent material



### Applications

- PVC, HDPE, PP ABS pipes
- Pneumatic tube conveyors with two lines
- Sealing flammable pipes from 32 to 250 mm
- Pipes with acoustic insulation
- Pipe wall thickness 1.8 mm to 16.2 mm
- Walls from 100 mm thick and floors from 150 mm thick

### Advantages

- Ready-to-use
- Latch mechanism for quick and easy closure
- Flexible hook positioning for convenient fastening
- Can be flush fitted or surface mounted
- Can be installed in CP 670 coated board

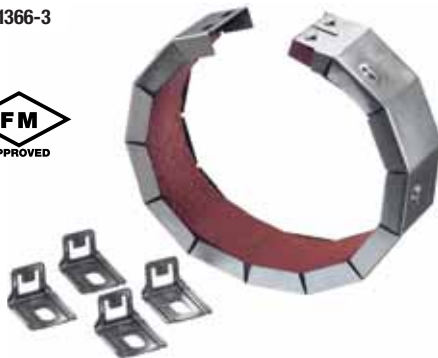
### Technical data

| CP 644                         |                            |
|--------------------------------|----------------------------|
| Fire rating                    | Up to 4 hours              |
| Base materials                 | Concrete, Drywall, Masonry |
| Colour                         | Metallic grey              |
| Temperature resistance         | -40°C to 60°C              |
| Intumescent Activation         | Approx. 200°C              |
| Expansion ratio (unrestricted) | Up to 1:10                 |

| Designation/size | Pipe outside dia. (mm) | Collar outside dia. (mm) | Collar length (mm) | No. of hooks and fasteners |
|------------------|------------------------|--------------------------|--------------------|----------------------------|
| CP 644-50/1.5"   | 32 - 51                | 66.7                     | 22.4               | 2                          |
| CP 644-63/2"     | 52 - 64                | 81.7                     | 32.4               | 2                          |
| CP 644-90/3"     | 75 - 91                | 116.7                    | 42.4               | 3                          |
| CP 644-110/4"    | 92 - 115               | 145.7                    | 47.4               | 3                          |
| CP 644-125/5"    | 116 - 125              | 166.1                    | 47.8               | 4                          |
| CP 644-160/6"    | 126 - 170              | 235.5                    | 48.2               | 6                          |
| CP 644-180/7"    | 180                    | 228                      | 152.5              | 8                          |
| CP 644-200/8"    | 200                    | 257                      | 177.5              | 8                          |
| CP 644-225/9"    | 225                    | 289                      | 202.5              | 10                         |
| CP 644-250/10"   | 250                    | 319                      | 232.5              | 12                         |



EN 1366-3

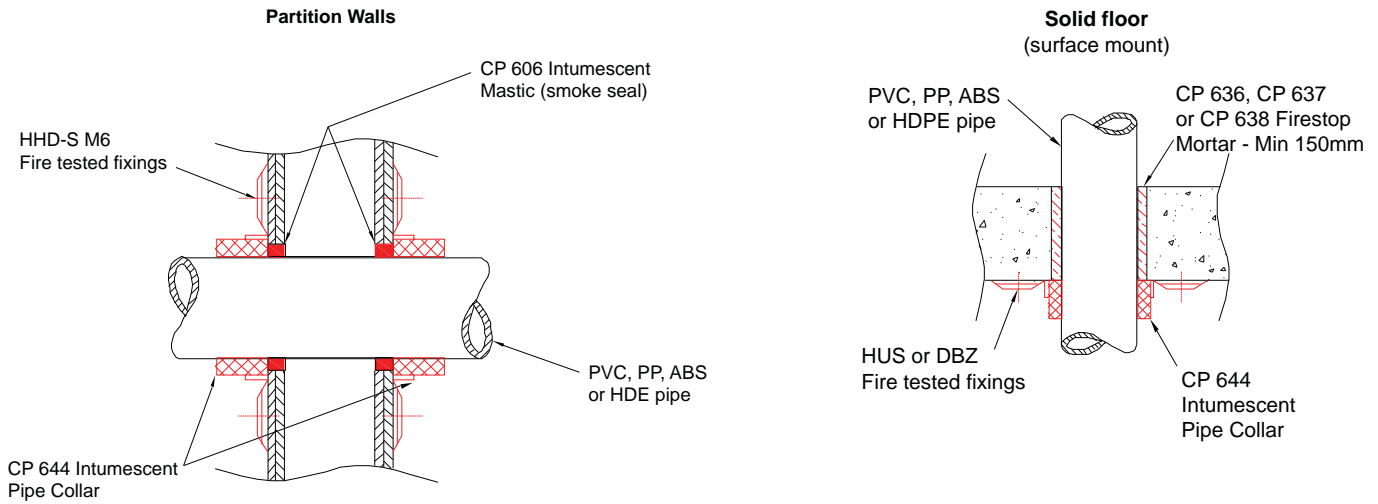


### Ordering

| Order description              | Pipe diameter - range | Package Quantity | Item number |
|--------------------------------|-----------------------|------------------|-------------|
| Firestop collar CP 644-50/1.5" | 32 - 51mm             | 1 pc             | 00304332    |
| Firestop collar CP 644-63/2"   | 52 - 64mm             | 1 pc             | 00304333    |
| Firestop collar CP 644-90/3"   | 79 - 91mm             | 1 pc             | 00304335    |
| Firestop collar CP 644-110/4"  | 92 - 115mm            | 1 pc             | 00304336    |
| Firestop collar CP 644-125/5"  | 116 - 125mm           | 1 pc             | 00304337    |
| Firestop collar CP 644-160/6"  | 126 - 170mm           | 1 pc             | 00304338    |
| Firestop collar CP 644-180/7"  | 171 - 180 mm          | 1 pc             | 00304339    |
| Firestop collar CP 644-200/8"  | 181 - 200 mm          | 1 pc             | 00304340    |
| Firestop collar CP 644-225/9"  | 201 - 225 mm          | 1 pc             | 00304342    |
| Firestop collar CP 644-250/10" | 226 - 250 mm          | 1 pc             | 00304343    |

All the above include fixing brackets

# Technical Information



For more standard details and technical information register online at the Hilti Firestop Design Centre at [www.hilti.co.uk/cfs](http://www.hilti.co.uk/cfs)

|   | Wall  | Floor                        |
|---|---|------------------------------|
| Material                                      | Cellular concrete, masonry and solid concrete | Cellular concrete            |
| Min thickness of building component for pipes | 100mm   | 150mm                        |
| Min pipe dia.                                 | 32mm  | 32mm                         |
| Max pipe dia.                                 | 170mm   | 170mm                        |
| CP 644 N                                      | two mounted, one on each side                 | one mounted on the underside |

## Installation instructions for CP 644

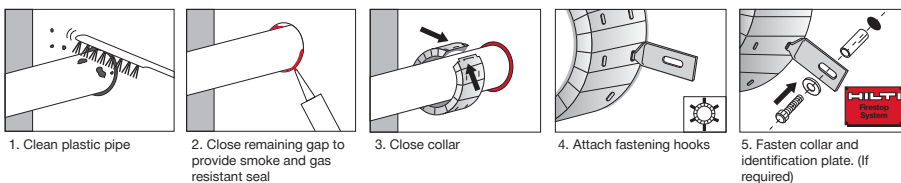
- Notice**
- Before handling, read Material Safety Data Sheet and product label for safe usage and health information.
- Opening**
- Clean the plastic pipes. Expansion of the intumescent material during a fire acts to close the plastic pipe. Very dirty pipes, (ie: with remains of mortar) may lead to a delay in this closing action. Soiled plastic pipes should, therefore, be cleaned in the area where the CP 644 Firestop Collar is to be installed.
- Application of firestop system**
- Seal the opening. Gaps must be closed with CP 606. The approved methods vary.
  - Close the CP 644 Firestop Collar. Place the CP 644 Firestop Collar around the plastic pipe and lock the closure by applying firm pressure until it latches.
  - Attach fastening hooks. The fastening hooks can be attached to various points on the metal housing. This allows the fastening points to be made to suit the space available in each case. The hooks must be positioned as symmetrically as possible. The required number of fastening hooks is indicated on the packaging.
  - Fastening the CP 644 Firestop Collar. Only when fastened properly can CP 644 offer protection against fire passing through.
    - Mark the fastening points.
    - Drill holes with a Hilti rotary hammer drill (i.e. TE 4-A22) or, depending on base material, fasten using Hilti powder-actuated tool.
    - To secure the CP 644 Firestop Collar, use Hilti anchors/fasteners.
    - For maintenance reasons, a penetration can be permanently marked with an identification plate and fastened in a visible position next to the seal.

**Not for use**

- With metal pipes
- In highly corrosive surroundings
- With unapproved anchors/fasteners

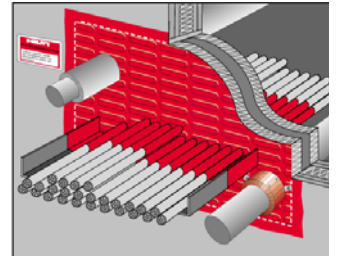
**Storage**

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



# Hilti CP 670 Firestop acoustic board and CP 644 collar

**APPLICATION**

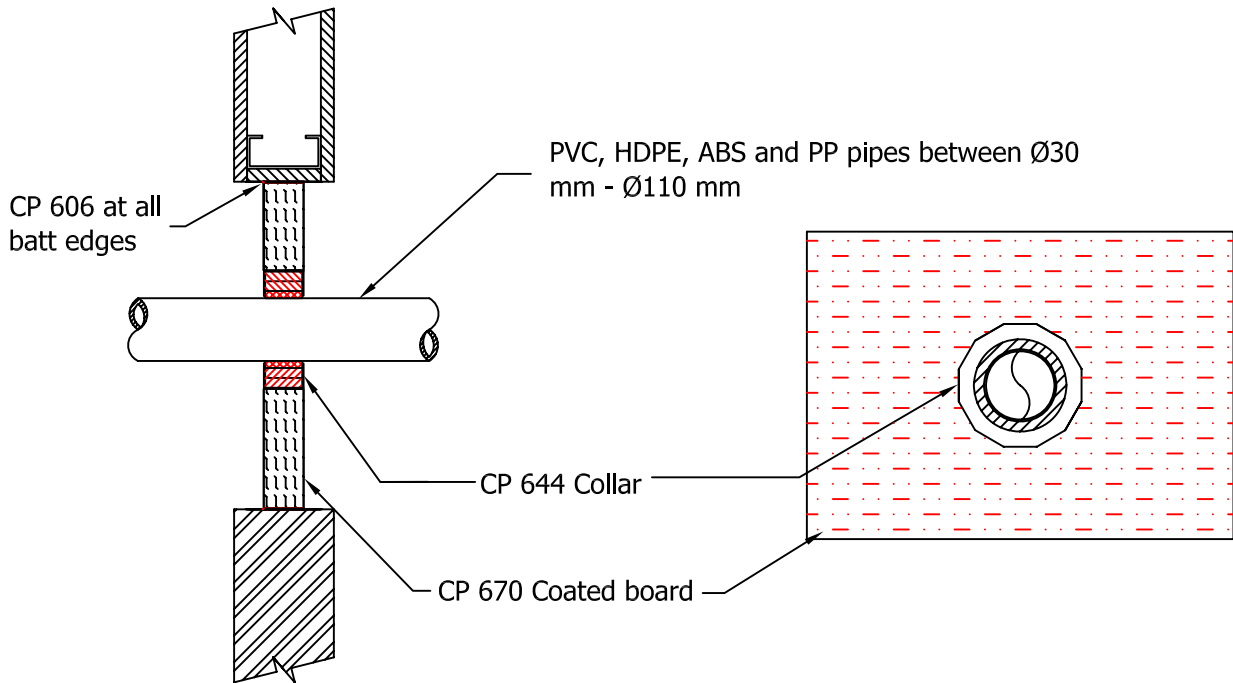


Plastic pipe  
passing through

CP 670 coated batt

|                |          |
|----------------|----------|
| Test           | Up to    |
| Fire Integrity | 2 hr     |
| Insulation     | 2 hr     |
| Acoustics      | 39 dB    |
| Air Tightness  | ✓        |
| Age Testing    | 30 years |

|           |
|-----------|
| Approvals |
| EN 1366-3 |
|           |
|           |
|           |
|           |



The CP 670 coated board should be installed tightly around the service pipe. CP 606 Intumescent mastic must be used at all batt edges in accordance with the installation guidelines.

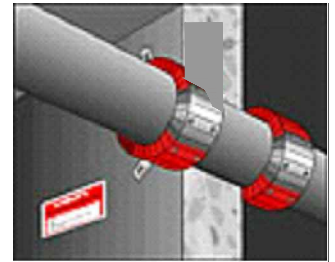
Care must be taken to ensure that the service pipe is supported either side of the seal system

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 644 intumescent firestop collar

**APPLICATION**



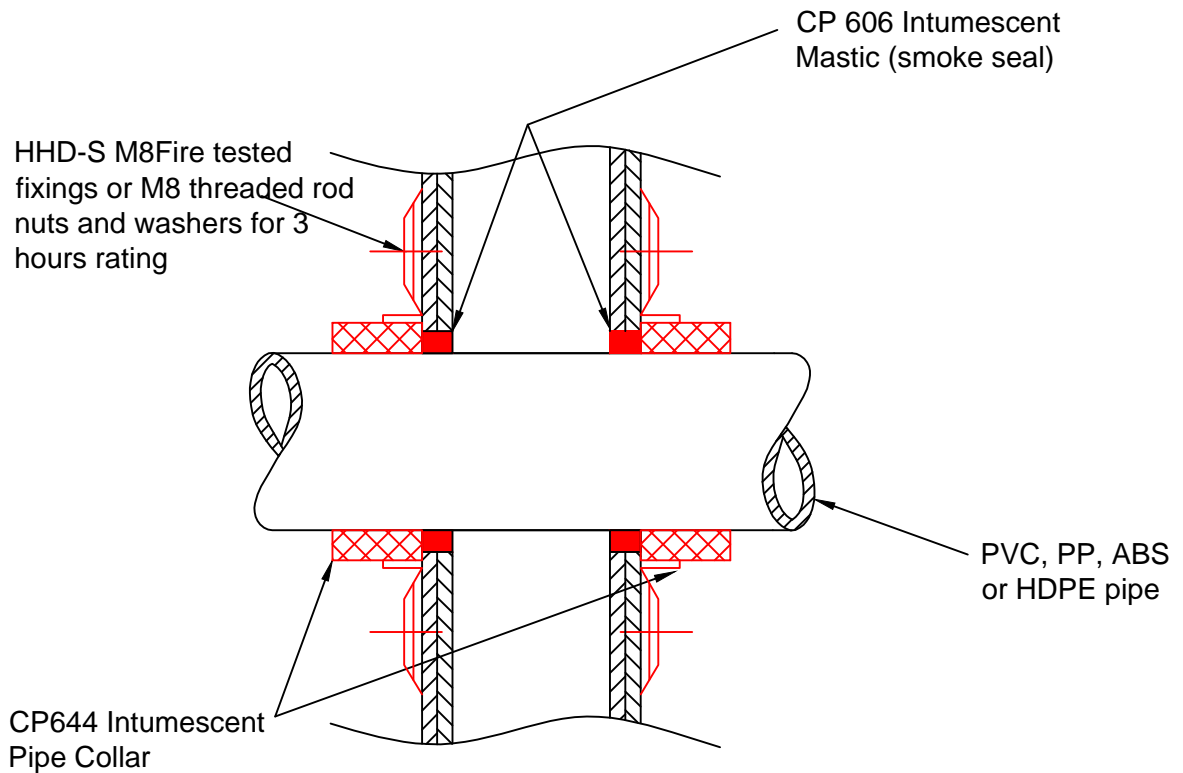
Plastic pipe  
passing through

Drywall

|                |  |
|----------------|--|
| Test           | Up to                                      |
| Fire Integrity | 3 hr                                       |
| Insulation     | 3 hr                                       |
| Acoustics      | Fill remaining annulus with CP 606 sealant |
| Air Tightness  | J  |
| Age Testing    | 30 years                                   |

|                |
|----------------|
| Approvals      |
| BS476 pt 20    |
| Factory Mutual |
| BSEN 1366-3    |

## Plastic pipes 30 mm - 170 mm diameter

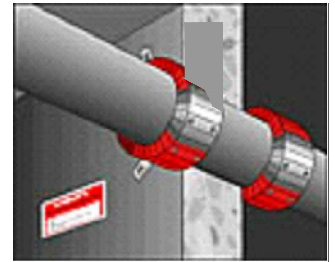


The above applications are not exhaustive. For further details please contact

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 644 intumescent firestop collar

**APPLICATION**

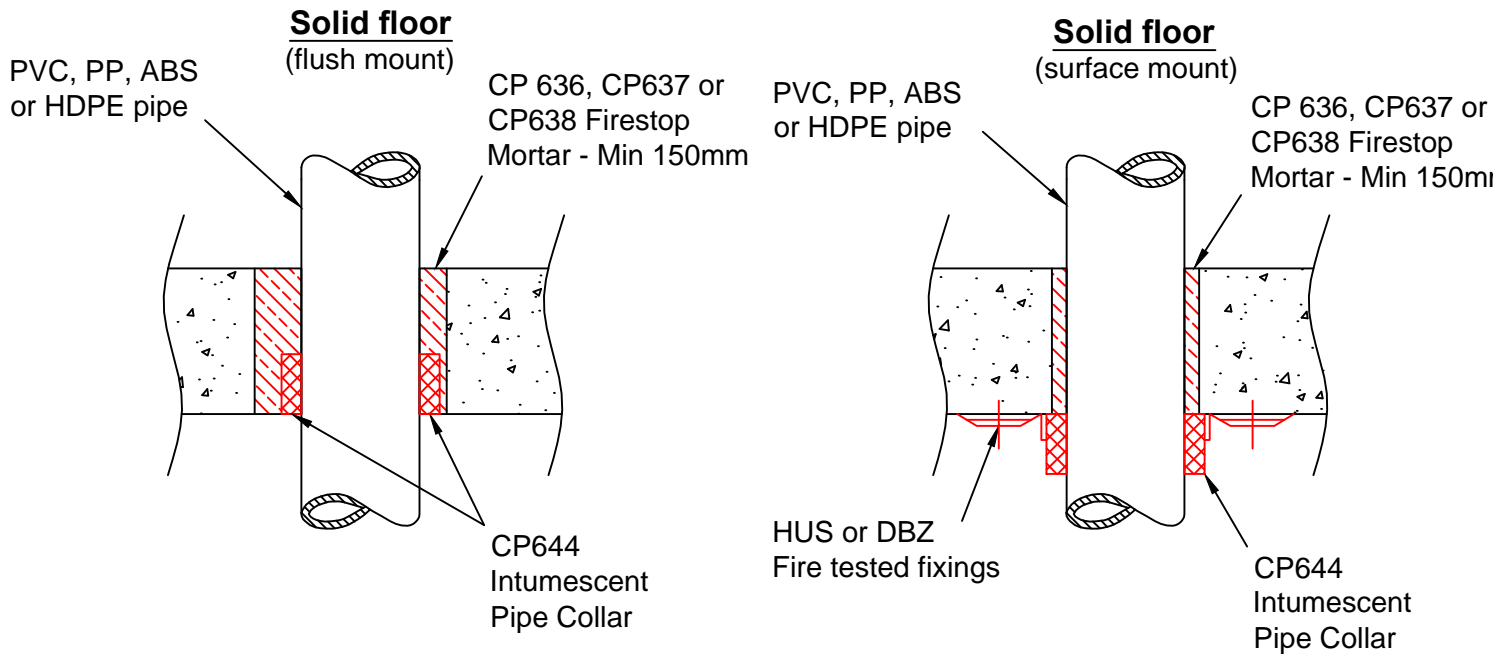


Plastic pipe  
passing through  
Solid floor

|                |   |
|----------------|---|
| Test           | Up to   |
| Fire Integrity | 4 hr  |
| Insulation     | 4 hr  |
| Acoustics      | Fill remaining annulus with fire rated mortar |
| Air Tightness  | J   |
| Age Testing    | 30 years                                      |

|                |
|----------------|
| Approvals      |
| BS476 pt 20    |
| Factory Mutual |
| BSEN 1366-3    |

Plastic pipes 32mm - 250mm diameter



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.



**Additional Properties of CP 644 – Firestop collars**

| Property            | Test regime   | Notes   |                |
|---------------------|---|---------|----------------|
| Fire                | BS 476 - 20   |         | ✓              |
|                     | BS EN 1366-3  |         | ✓              |
|                     | FM approval (Class 4990)  |         | ✓              |
|                     | ETA   |         | ✓              |
| Acoustic            | EN ISO 20 140-10: 1992  | Dnw     | NR             |
| Ageing              | DIBT  |         | ✓              |
| Air sealing         | Pre sealing with Hilti Mastic/Mortar  |         | ✓              |
| Water resistance    | Rain Resistance   |         | N.R            |
|                     | Mold and Mildew resistance  | ISO 846 | Class 0-1      |
|                     | Water tightness   | UL 1479 | N.R            |
| VOC                 | LEED 2009 (LEED 3.0)  |         | 7.6 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 644 –Firestop collars - BREEAM criteria**

BREEAM Section

|   |  |    |
|---|--|----|
| Management construction site impact                               | No power tools required for installation (no energy source required) | x  |
|   | Dust free installation   | x  |
| Health and wellbeing  | Saves water during application                                       | ✓  |
|   | No water pollution   | ✓  |
|   | Low VOC* (air quality)   | ✓  |
|   | No ozone depletion potential (ODP)                                   | ✓  |
|   | Low global warming potential (GWP)                                   | ✓  |
| Energy  | Smoke and gas tightness  | ✓  |
|   | Noise reduction  | ✓  |
|   | Air tightness  | ✓  |
| Materials   | Avoidance of air infiltration  | ✓  |
|   | Product Carbon Footprint or LCA Data                                 | ✓  |
|   | Thermal insulation   | NA |
| Waste   | Recycling of packaging   | ✓  |
|   | Reuse of materials   | ✓  |
|   | Re-penetration in existing opening (No waste)                        | NA |
| 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 644 –Firestop collars - 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

380

##### PIPE COLLARS-SURFACE MOUNTED INTUMESCENT

- Manufactured from galvanised sheet steel and containing sections of intumescent material, which foams and expands in a fire. The CP644 Firestop Jacket is designed to be used to seal flammable pipes ranging in diameter from 32mm to 250 mm with pipe wall thickness from 1.8 to 22.8 mm. It is suitable for B1/B2 pipes, PVC, PP, PE, ABS, Pneumatic tube conveyors, and pipes with acoustic insulation. To be used on solid walls and floors and partition walls.
  - Tested to BS 476 Pt 20;1987 and BS EN 1366-3:2004
  - Fire resistance: up to 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.com](http://www.hilti.com)
- Product reference: **CP 644**

#### EXECUTION

730

##### FIXING PIPE COLLARS

- Collar fixing: secured with metal fire rated anchors as recommended by manufacturer
- Gap around pipe: Gap to be between 10 and 30 mm and sealed with backing foam and CP 606 fire rated filler to depth recommended by manufacturer. Wider gaps to be filled with Hilti CP 637 fire rated mortar. Wide gaps can be sealed with Hilti CP 670 fire safety board and Hilti Collars mounted thereafter. Contractor to submit proposals based on manufacturers recommendations.

Visit our web site at [www.Hilti.co.uk/cfs](http://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> |

**Important note:**

**All sales are subject to Hilti (Gt Britain) Ltd. "Terms and Conditions of Sale".**

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

All descriptions and illustrations in this publication are intended for guidance only and shall not constitute a "sale by description / picture". All dimensions given are nominal and Hilti (Gt Britain) Limited may change the information, products and specifications from time to time for a variety of reasons, without prior notice. The information in this publication is provided "as is" at the date specified on the front cover. (Updates will not be issued automatically)  
 This information is not intended to have any legal effect, whether by way of advice, representation or warranty (express or implied). Hilti (Gt Britain) Ltd accepts no liability whatsoever (to the extent permitted by law) if you place any reliance on this publication and you must do so at your own risk.

**RETURNS AND CANCELLATIONS**

Subject to condition 6.3 of the Company's Terms and Conditions, Goods supplied pursuant to the Contract cannot be returned without the Company's prior written authorisation. Duly authorised returns:

- 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.

Right of technical and programme changes reserved S.E&O; no liability accepted for printing errors or other deficiencies, earlier catalogues are thus rendered non valid.

**Hilti = registered trademark of Hilti Corp. Schaan**