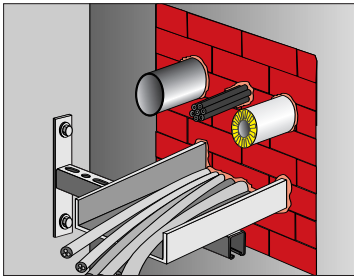


FS 657

Fire Block



System Advantage / Customer Benefits

- Suitable for re-penetration or new penetrations
- Economical in use with short installation times
- Easy installation as no special tool is required
- Ideal for use in floors—no forming is required
- Smoke resistant

Product description

- Ready-to-use, intumescent flexible block based on a two-component polyurethane foam

Product features

- Completely free from dust and fibers
- Halogen, asbestos and solvent free
- Operational immediately after installation
- Can be painted
- One sided wall systems available

Areas of application

- Sealing single or multiple penetrations in small to large openings
- Temporary or permanent sealing of cables and cable tray penetrations
- Temporary or permanent sealing of insulated and non-insulated metallic pipes and combustible pipe penetrations

For use with

- Walls (UL tested up to max. opening 52" x 48")
- Floors (UL tested up to max. opening 36" x 36")
- Concrete, porous concrete, masonry and gypsum wall assemblies
- Wall assemblies rated up to 4 hours
- Floor assemblies rated up to 3 hours

Examples

- Completely dust and fiber-free rooms and places where electrical installations are frequently used, such as computer centers, hospitals and laboratories
- New buildings in the construction phase and during renovation
- Large openings containing multiple penetrations as found in production bays, warehouses, hospitals etc.

Installation instructions for FS 657

Opening

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

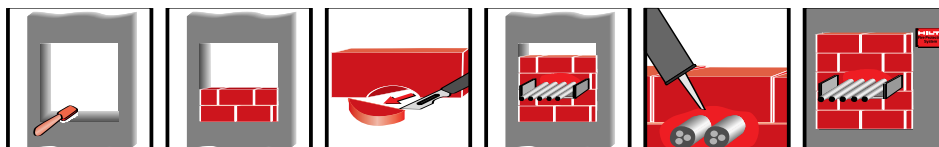
Application of Fire Blocks

- 2a. If no penetrations are located, build up FS 657 FIRE BLOCK firmly seated, within opening.
- 2b. If penetrations are located, build up FS 657 FIRE BLOCK firmly seated, while cutting blocks with a knife to suit the placed penetrations.
3. Finish building up FIRE BLOCKS until entire opening is filled.
4. Completely fill cable spaces, gaps between blocks and pipes, and joints with FS-ONE Firestop Sealant.
5. 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 FS-ONE.

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.



1. Clean opening. 2a. Build up blocks 2b. Cut blocks to size for penetrations in place 3. Build up blocks 4. Fill gaps with FS-ONE, CP 617 or CP 618 putty. 5. Fasten identification plate in place (if required)

Notice about approvals

- When making a seal using Hilti FS 657 Intumescent FIRE BLOCK, national approvals must be observed. Please refer to the UL/cUL Directory or the Hilti Firestop Manual for complete details, including restrictions as to opening size, type and thickness of wall or floor, maximum cable diameter, etc.

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 601S).

Safety precautions

- Keep out of the reach of children
- Read the Material Safety Data Sheet

Storage

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

FS 657

Technical Data

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

Density

Approx. 0.25 g/cm³

Dimensions

2" x 5" x 8"

Color

Red

Application temperature

23°F to 104°F (-5°C to 40°C)

Temperature resistance

5°F to 140°F (-15°C to 60°C)

Intumescent Activation

Approx. 572°F (300°C)

Expansion ratio (unrestricted)

Up to 1:3

Surface burning characteristics (ASTM E 84-96)

Flame Spread Index: 0

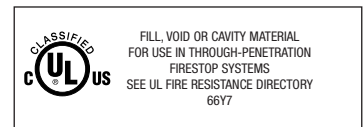
Smoke Development Index: 25

Sound transmission classification (ASTM E 90-99) 54

Tested in accordance with

- UL 1479
- ASTM E 814
- ASTM E 84
- CAN4-S115-95M
- ULC-S115-95M

Internationally tested and approved



latest product information : www.ca.hilti.com

ordering information see page:

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MATERIAL SAFETY DATA SHEET

Product identifier:	FS 657 Fire Block; CP 658T Fire Plug
Product use:	Intumescent polyurethane foam block for fire stopping openings in walls and floors
Supplier:	Hilti (Canada) Corporation, 6790 Century Avenue, Suite #300, Mississauga, Ontario L5N 2V8
Originator:	Hilti, Inc., P. O. Box 21148, Tulsa, Oklahoma, USA 74121
Emergency number:	Chem-Trec: 1 800 424 9300

HAZARDOUS INGREDIENTS

Not a hazardous chemical as defined by the Controlled Products Regulations SOR/88-66; classified as a manufactured "article".

PHYSICAL PROPERTIES

Appearance / Physical state:	Red (rust) colour. Foam block.	Odour:	Not applicable.
Specific gravity (at 20°C):	2.6	Odour threshold:	Not applicable.
Vapour pressure (at 20°C):	Not applicable.	Vapour density:	Not applicable.
Evaporation rate:	Not applicable.	Boiling point:	Not applicable.
Freezing point:	Not applicable.	pH:	Not applicable.
Coefficient of H2O / oil distrib:	Not applicable.	Solubility in water:	Not Soluble

FIRE AND EXPLOSION DATA

Flash point / Method	Not applicable.	Flammable limits:	Not applicable.
Conditions of flammability:	Not flammable.	Auto-ignition temperature:	Not applicable.
Means of extinction:	Not applicable.		
Special fire fighting procedures:	Not applicable.		
Hazardous combustion products:	Refer to "Hazardous decomposition products" (next section).		
Sensitivity to mechanical impact / static discharge:	Not susceptible to mechanical impact or static discharge.		

REACTIVITY DATA

Stability:	Stable. Hazardous polymerization will not occur.
Incompatible materials:	None known. See special handling and storage instructions.
Conditions of reactivity:	None known.
Hazardous decomposition products:	If heated to decomposition, can yield CO _x , NO _x , HCN, HCl and/or HF.

TOXICOLOGICAL PROPERTIES

Likely routes of exposure:	<input checked="" type="checkbox"/> None known <input type="checkbox"/> Skin contact <input type="checkbox"/> Skin absorption <input type="checkbox"/> Eye contact <input type="checkbox"/> Inhalation
Exposure limits:	None established.
Acute effects of exposure:	Not applicable.
Chronic effects of exposure:	None known.
Synergistic materials:	None known.

FIRST AID MEASURES

Eyes:	No effects expected.
Skin:	No effects expected. Practice good hygiene; i.e., wash hands during breaks, before eating or smoking, and after work.
Inhalation:	Not a route of exposure.
Ingestion:	Not a likely route of exposure.
Other:	Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure.

INTRODUCTION

APPLICATIONS / PRODUCTS

SYSTEM DETAILS

ESTIMATING TABLES / TECH DATA

MSDS No.:	261C
Revision No.:	002
Revision Date:	12/03/02
Page:	2 of 2

CONTROL MEASURES AND PERSONAL PROTECTIVE EQUIPMENT

Engineering controls:	General (natural or mechanically induced fresh air movements).
Eye protection:	As appropriate for the work area or the work being done.
Skin protection:	Cloth gloves are suitable.
Respiratory protection:	None normally required. Never enter a confined space without an appropriate air supplied respirator.
Other:	Depending on exposure and on workplace standards.

PRECAUTIONS FOR SAFE HANDLING AND USE

Handling procedures and equipment:	For industrial use only. Keep out of reach of children. Observe good hygiene practices; i.e., wash after using and before eating or smoking.
Storage requirements:	Store in a cool dry area out of direct sunlight.
Spill, leak or release:	No special requirements.
Waste disposal:	Consult federal, provincial and local regulations for allowed means of disposal.
Special shipping instructions:	None known.

REGULATORY INFORMATION

WHMIS classification:	None / exempt (manufactured article).
HMIS codes:	Health 0, Flammability 0, Reactivity 0, PPE A
TDG shipping name:	Not regulated.

PREPARATION INFORMATION / CONTACTS

Prepared by:	Hilti, Inc., Tulsa, OK USA	Emergency phone number:	1 800 424 9300
Customer Service:	Hilti (Canada) Corporation, Mississauga, Ontario; 1 800 363 4458		
Health / Safety contacts:	Hilti, Inc., Tulsa, OK USA; 1 800 879 6000, Jerry Metcalf (x6704)		
Abbreviations used:	N/E = None Established. N/A = Not Applicable. N/Av = Not Available. H = Hours. HMIS: Hazardous Materials Identification System		

The information and recommendations contained herein are based upon data believed to be correct; however, no guarantee or warranty of any kind expressed or implied is made with respect to the information provided.

Certificate of Compliance

Certificate Number **20060214-R13240F**
Report Reference **2006 February 14**
Issue Date **2006 February 14**

Page 1 of 1



Issued to: **Hilti, Inc.**
5400 S 122ND East Ave
Tulsa, OK 74146 USA


This is to certify that representative samples of **Fill, Void or Cavity Materials**
FS 657, CP 658T

Have been investigated by Underwriters Laboratories Inc.® in accordance with the Standard(s) indicated on this Certificate.


Standard(s) for Safety: ANSI/UL 1479, CAN/ULC-S115-05

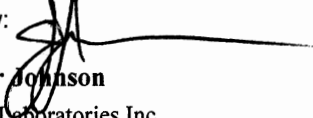
Additional Information: FS 657 Fire Block for use in Through-Penetration Firestop Systems and CP 658T Firestop Plug for use in Through-Penetration Firestop Systems as currently described in the UL Fire Resistance Directory.

Only those products bearing the UL Classification Mark should be considered as being covered by UL's Classification and Follow-Up Service.

The UL Classification Mark includes: UL in a circle symbol:  with the word "CLASSIFIED" (as shown); a control number (may be alphanumeric) assigned by UL; a statement to indicate the extent of UL's evaluation of the product; and, the product category name (product identity) as indicated in the appropriate UL Directory.

Look for the UL Classification Mark on the product

Issued by:

Mona Couloute
Underwriters Laboratories Inc.

Reviewed by:

Christopher Johnson
Underwriters Laboratories Inc.