NOTE:
PROVIDE, INSTALL & CONNECT ADDITIONAL CONTACTS AND/OR CONTACTORS COMPLETE WITH ENCLOSURES AS REQUIRED PER APPLICATION, SEE ELECTRICAL DRAWINGS TO DETERMINE EXACT NUMBER OF POLES. SEE ELECTRICAL DRAWINGS FOR ACTUAL CIRCUIT NUMBERS. PROVIDE MINIMUM OF (2) ADDITIONAL/SPARE CONTACTS.

6 CONTACTOR 'LC1' SCHEMATIC – PHOTOCELL & TIMECLOCK CONTROLLED

SCALE: NTS

5 FIRE ALARM MOUNTING HEIGHT DETAIL

SCALE: NTS

NOTES:
1. ALL SURFACES TO BE CLEAN (FREE OF DIRT, GREASE, SCALE, PAINT, ETC.)
2. WIRE BRUSH ALL LOOSE MATERIAL AS REQUIRED.
3. PRIME EXISTING ROOF AND FLASHING W/ SB ELASTOMERIC PRIMER.
4. 5 COURSE: 2 PLYS TIETEX W/ SB ELASTOMERIC GEL (FEATHER SECOND PLY) AT MIN. 40 MIL UNCURED PER COURSE.
5. TOP COAT W/ K–2 EXTREME DUTY ELASTOMER (MATCH ROOF COLOR)
6. DETAIL SHOW FOR WEATHERPROOFING PENETRATION ONLY. CONTRACTOR SHALL PROVIDE FIRESTOPPING AS REQUIRED TO MAINTAIN FIRE RATING OF ROOF.

BLAKE L. SUDDETH LICENSE No. 69060 STATE OF FLORIDA PROFESSIONAL ENGINEER

Blake Suddeth
Jan 17 2018 2:49 PM

4 ROOF PENETRATION WEATHERPROOF DETAIL

SCALE: NTS

Product Information HILTI

Firestop Putty Pad (CP 617, CP 617L and CP 617XL)

Product description
- A moldable firestop putty designed to help protect electrical outlet boxes

Product features
- Applied by hand
- Fast installation

Areas of application
- Protection of electrical outlet boxes

For use with
- Gypsum wall assemblies with wood or metal studs

Examples
- Where two outlets are within a single stud/cavity or within 24" measured horizontally (not back to back unless specified by the specific UL approval)

Technical Data*	CP 617
Dimensions (LxWxH)	CP 617: 6" x 7" x 1/8" (15 x 18 x 0.3 cm) CP 617L: 7" x 7" x 1/8" (18 x 18 x 0.3 cm) CP 617XL: 9" x 9" x 1/8" (23 x 23 x 0.3 cm)
Consistency	Moldable putty
Color	Red
Application temperature	40°F (5°C) to 95°F (35°C)
Storage temperature	40°F (5°C) to 104°F (40°C)
Curing time	Non-curing
Density	1.48 g/cm³
Intumescent activation	Approx. 220°F to 250°F (104°C to 121°C)
Volatile solvents	None
Asbestos fibers	None
Surface burning characteristics (ASTM E 84-98)	Flame Spread: 15 Smoke development: 10
Sound transmission classification (ASTM E 90-97)	59 (Relates to specific construction)
Tested in accordance with • UL 263 • ASTM E 84 • ASTM G21	

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

WALL OPENING PROTECTIVE MATERIAL FIRE RESISTANCE CLASSIFICATION SEE PRODUCT CATEGORY IN UL FIRE RESISTANCE DIRECTORY XHHT

FM APPROVED

Installation instructions for CP 617

Notice
- Before handling, read Material Safety Data Sheet and product label for safe usage and health information.
- Instructions below are general guidelines — always refer to the applicable listing (CLN) in the UL Fire Resistance Directory or Hilti Firestop Systems Guide for complete installation information

Application of firestop putty
1. After ensuring box is cleaned of loose debris, dirt, oil, moisture, frost and wax, remove label from one side of pad. For a 1 to 2 hour fire rating, one CP 617 pad is required. Exposed side of pad is placed against box.
2. CP 617 Firestop Putty Pads are to be installed to completely cover the exterior surfaces of the outlet box (except for the side of the outlet box against the stud) and completely seal against the stud within the stud cavity.
3. Reshape CP 617 to fit around conduit or cables.
4. Press CP 617 to all sides of electrical box.
5. Remove other side of label.

Not for use
- In areas exposed to water

Storage
- Store only in the original packaging in a location at temperatures 40°F (5°C) to 104°F (40°C)

1. Remove label from one side of CP 617
2. Adhere CP 617 to outlet box
3. Reshape CP 617 to fit around box
4. Press CP 617 to all sides of outlet box
5. Remove other side of label

Hilti Firestop
Saving lives through innovation and education

Hilti. Outperform. Outlast.

Hilti, Inc. (U.S.) 1-800-879-8000 • www.us.hilti.com • en español 1-800-879-5000 • Hilti Firestop Systems Guide

3 OUTLET BOX MOUNTED IN FIRE RATED WALL

SCALE: NTS

UL/cUL SYSTEM NO. W-J-1020

METAL PIPE THROUGH CONCRETE WALL OR BLOCK WALL

F-RATING = 2-HR.
T-RATING = 0-HR. OR 1/4-HR.
L-RATING AT AMBIENT = LESS THAN 1 CFM/SQ. FT.
L-RATING AT 400°F = 4 CFM/SQ. FT.

WJ1020e.091699

1. CONCRETE WALL ASSEMBLY (2-HR. FIRE-RATING):
   A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MIN. 5" THICK).
   B. ANY UL/ULC CLASSIFIED CONCRETE BLOCK WALL.
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
   A. MAXIMUM 4" NOMINAL DIAMETER COPPER PIPE.
   B. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.
   C. MAXIMUM 4" NOMINAL DIAMETER EMT.
3. MINERAL WOOL (MIN. 4 PCF DENSITY), BACKER ROD, OR HILTI CF 128 FILLER FOAM TO BE USED AS A BACKER.
4. HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT:
   A. MINIMUM 1/4" DEPTH WHEN EMT OR STEEL CONDUIT IS THE PENETRATING ITEM.
   B. MINIMUM 1/2" DEPTH WHEN COPPER PIPE IS THE PENETRATING ITEM.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 8".
2. ANNULAR SPACE = MINIMUM 3/4", MAXIMUM 3-1/2".
3. FOR HOLLOW BLOCK WALLS, USE NO. 8 STEEL WIRE MESH TO AID IN THE INSTALLATION.

HILTI FIRESTOP SYSTEMS	HILTI, Inc. Tulsa, Oklahoma USA (918) 252-6000	Sheet 1 of 1	Drawing No. WJ 1020e
		Scale 1/8" = 1"	
		Date SEPT. 16, 1999	

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2 UL FIRE RATED DETAIL (W–J–1020)

SCALE: NTS

UL/cUL SYSTEM NO. W-L-1175

METAL PIPE THROUGH GYPSUM WALL ASSEMBLY

F-RATING = 1-HR. OR 2-HR.
T-RATING = 0-HR.
L-RATING AT AMBIENT = 1 CFM/SQ. FT.
L-RATING AT 400°F = 1 CFM/SQ. FT.

WL1175b.032206

1. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED U300 OR U400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN).
2. [NOT SHOWN] WOOD STUDS TO CONSIST OF NOMINAL 2" x 4" LUMBER. STEEL STUDS TO BE MINIMUM 2-1/2" WIDE.
3. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
   A. MAXIMUM 4" NOMINAL DIAMETER EMT.
   B. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.
4. MINIMUM 5/8" DEPTH HILTI CP 618 FIRESTOP PUTTY STICK.
5. MINIMUM 1/4" CROWN HILTI CP 618 FIRESTOP PUTTY STICK AT POINT OF CONTACT.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 5-1/2".
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1".

Hilti Firestop Systems	HILTI, Inc. Tulsa, Oklahoma USA (918) 252-6000	Sheet 1 of 1	Drawing No. WL 1175b
		Scale 3/16" = 1"	
		Date Mar. 22, 2006	

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1 UL FIRE RATED DETAIL (W–L–1175)

SCALE: NTS

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	1/18/2018	ISSUE FOR PERMIT

REVISION HISTORY

No.	Date	Description

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SUMMER BAY APTS. II
LAKE COUNTY, FL

Drawn:	MJR/KCM
Checked:	BLS/AJB
Approval:	BLS/AJB
Date:	11/10/2017
Project #:	5389

DETAILS - ELECTRICAL

E6.04