



# Fire Protection Products



ENGINEERING JUDGMENT FOR:
6/19/2020
Ryan Fenstermaker
3M FPP Sales
Northeast Territory
East Brunswick, NJ

<b>Project:</b> Centrotherm	<b>Contractor:</b> Centrotherm
<b>Firestopping Category:</b> Pen Seals / Non-metal Pipe	<b>Hourly Rating / Type:</b> 1 and 2 Hour / F
<b>Assembly Penetrated:</b> Concrete Wall/Concrete Floor	<b>Opening Size:</b> Sized to accomodate penetrant and max annular space
<b>Penetrating Item:</b> FRPP (Flame Retardant Polypropylene Pipe)	<b>Annular Space:</b> Max: 0.25 inch
<b>Space Between Penetrants:</b> Single Penetrating Item	

**Special Conditions:** Field condition with 6 in., 8 in, 10 in, or 12 in. FRPP penetrating through a concrete wall or concrete floor assembly.

**Application Details:** To firestop this application, install in accordance with 3M/PHV 120-07 with the following modifications/clarifications:

- For wall applications, firestop is to be installed symmetrically on both sides of the wall assembly.
- For floor applications, firestop is to be installed on the underside of floor assembly.
- Install minimum 5/8 in. depth of CP 25WB+ Sealant, IC 15WB+ Sealant, or FB 3000WT Sealant into the annular space around the pipe such that the sealant is flush with the surface of the wall.
- Install FS-195+ Wrap Strip in lieu of Ultra GS Wrap Strip in accordance with the following table. See details for installation in accordance with pipe size below.

Pipe Size	Number of Layers of FS-195+ Wrap Strip	Number of Stacks
6 in.	4 layers	2 stacks
8 in.	5 layers	3 stacks
10 in.	6 layers	3 stacks
12 in.	6 layers	2 stack
	4 layers	1 stack
	Plenum Wrap 5A+	8 in. long
	2 layers	1 stack

**For 6 in., 8 in. and 10 in. pipes:**

- Fasten the collar with each tab to the stack above it with 3/4 in. self-tapping sheet metal screws in addition to using the 1/2 in. wide stainless steel band clamps with worm gear tightening mechanisms with clamps located approximately 1 in. from each end of the wrap strips.
- All anchor tabs must be attached to the underside of floor and both faces of wall in accordance with system parameters.

**For 12 in. pipes:**

- Install 6 layers of FS-195+ Wrap Strip and install a RC-1 Restricting Collar around the wraps. Fasten the collar with each tab to underside of concrete floor and each face of wall per system parameters. Band the collar with stainless steel banding.
- Install 6 layers of FS-195+ Wrap Strip and install a RC-1 Restricting Collar around the wraps. Fasten the collar with each tab of the stack above it with 3/4 in. self-tapping sheet metal screws. Band the collar with stainless steel banding.
- Install 4 layers of FS-195+ Wrap Strip and install a RC-1 Restricting Collar around the wraps. Fasten the collar with each tab of the stack above it with 3/4 in. self-tapping sheet metal screws. Band the collar with stainless steel banding.
- Install one wrap of Plenum Wrap 5A+ from the bottom of the collar in Step b. Plenum Wrap 5A+ should extend 8 in. down the pipe and must overlap onto itself a minimum 3 in. Tape the Plenum Wrap+ in place with filament tape or bands.

**3M Industrial Adhesive and Tapes**

**Fire Protection Products**

3M Center, Building 230-B-S-37-03  
 St. Paul, MN 55144-1000  
 Phone: 800-328-1687

- e. Install 2 wraps of FS-195+ Wrap Strip over the Plenum Wrap 5A+ as the next stack of wraps and install a RC-1 Restricting Collar around the wraps. Fasten the collar with each tab to the stack above it with  $\frac{3}{4}$  in. self-tapping sheet metal screws. Band the collar with stainless steel banding.


**3M Fire Barrier Material:** FS-195+ Wrap Strip and Plenum Wrap 5A+ and CP 25WB+ Sealant, IC 15WB+ Sealant, or FB 3000WT Sealant, RC-1 Collar

**Based On:** 3M/PHV 120-07, C-AJ-2005

**Additional Referenced System(s):** (See Attached Drawing)

This Engineering Judgment (EJ) is based upon the sole and exclusive use of 3M brand Fire Protection Products as described within. Modification of any of the parameters of this EJ, including, without limitation, the use of non-3M brand Fire Protection Products, shall render this EJ null and void. The firestop design is expected to achieve the hourly rating indicated above. This engineering judgment is based on performance results obtained in testing with independent laboratories and / or internal 3M fire tests, which have been tested in accordance to ASTM E 814 (UL 1479) and CAN/ULC S115, CAN/ULC S102.

Engineering Judgment Prepared By:



Gabriela R. Mattos  
Technologist - Application Engineering

Reviewed By:

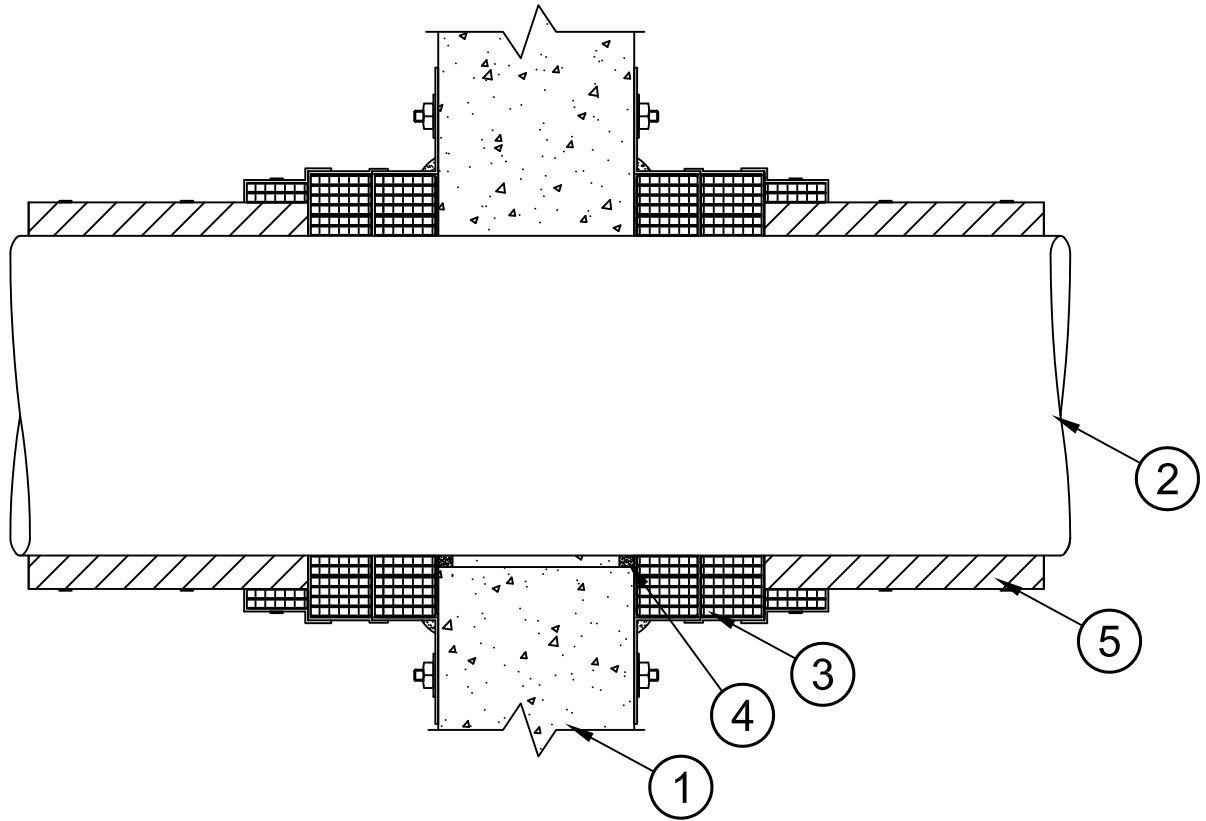


608753  
cc: Ryan Fenstermaker  
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**Technical Information, Product Selection and Use**

The technical information, guidance and other statements contained in this document are based upon records, tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed and may not be indicative of field conditions. Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the 3M product and determining whether it is appropriate and suitable for customer's application. 3M product purchases are subject to the terms, conditions and limitations set forth in the applicable Technical Data Sheet

3M ENGINEERING JUDGEMENT NO. 608753  
 MODIFIED SYSTEM NO. 3M/PHV 120-07, C-AJ-2005  
 REQUESTED F RATING - 1 AND 2 HR / F



1. CONCRETE WALL.
2. PENETRATING ITEM PER APPROPRIATE VERSION OF CORRESPONDING EJ.
3. WRAP STRIP/COLLAR ASSEMBLY AS OUTLINED IN APPROPRIATE VERSION OF CORRESPONDING EJ.
4. FIRESTOP SEALANT AS OUTLINED IN APPROPRIATE VERSION OF CORRESPONDING EJ.
5. FIRE BARRIER PLENUM WRAP 5A+

SEE APPLICATION DETAIL NOTES ON APPROPRIATE VERSION OF CORRESPONDING EJ.

CONFIGURATION OR ORIENTATION OF PENETRANT(S)/OPENING(S) MAY NOT MATCH SITE CONDITION(S).

CONSULT CURRENT INDEPENDENT TESTING LABORATORIES (UL/INTERTEK) FOR SYSTEMS OR DESIGN DETAILS

PROJECT: <b>CENTROTHERM</b>				SIGNATURE: <i>Anthony Kilmer</i>	
REV:	DATE:	DESCRIPTION	DRWN BY:	THIS ELEMENTARY FIRESTOP DRAWING IS TO BE USED ALONG WITH THE CORRESPONDING ENGINEERING JUDGMENT AND REFERENCED LISTED/TESTED SYSTEMS FROM INDEPENDENT TESTING LABORATORIES (UL/INTERTEK). DRAWING NOT TO SCALE.	DWG. LOCATION: <b>608753.DWG</b>
0	06-22-20	ORIGINAL ISSUE	AEK		DATE: <b>06-22-20</b>
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