



## 3M Fire Protection Products

### Technical Broadcast

BROADCAST NO.: T11-006

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Issued by: Kate Baker, Ernie Schmidt, Michele Whyte, Andy Voorhees

**TITLE: NEW SYSTEM: ELECTRICAL CIRCUIT PROTECTIVE SYSTEM NO. 34**

**DESCRIPTION:** UL Electrical Circuit Protective System No. 34 was generated to provide a complete solution to firestop the through penetration and to protectively wrap electrical circuitry within a conduit.

#### System No. 34

- F rating: 2 hour
- Assembly: Min 2 hour F-rated concrete floor/wall.
- Penetrant: Nominal 4 in. to 6 in. rigid steel conduit. Cables within conduit: minimum 16 AWG jacketed multi-conductor cables and/or minimum 12 AWG single-conductor copper power cables. Conduit supported with minimum 3/8 in. threaded steel rod. Conduit and cables must be installed per current National Electrical Code.
- Opening: Max 1-1/2 in. larger than OD of conduit.
- Annular space: Point contact to max 3/4 in. Eccentric/concentric installation
- Annular space protection
  - Minimum 4 pcf mineral wool installed the full depth of the floor/wall. Mineral wool to be tightly packed and recessed 1/2 in. to accommodate the required depth of sealant.
  - 1/2 in. depth of 3M™ Fire Barrier Sealant CP 25WB+ flush with top of floor or each side of the wall.
- Electrical circuit protection
  - Minimum 4 layers of 3M™ Interam™ Endothermic Mat E-5A-4 installed with minimum 2 in. longitudinal overlaps.
  - All seams sealed with 3M™ Aluminum Foil Tape 425
  - 3M™ Fire Barrier Sealant CP 25WB+ installed at interface of each layer of 3M™ Interam™ Endothermic Mat E-5A-4 and the floor/wall.
  - 3M™ Fire Barrier Sealant CP 25WB+ installed in any joint in the protective material exceeding 1/16 in.
  - Minimum 1/2 in. wide by .020 in. stainless steel banding installed a max 8 in. OC.
  - Hangers not required to be wrapped.





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- Products used: 3M™ Interam™ Endothermic Mat E-5A-4, 3M™ Aluminum Foil Tape 425, 3M™ Fire Barrier Sealant CP 25WB+

#### TARGET MARKET & TYPICAL APPLICATIONS:

Electricians, general contractors, insulation contractors and firestop contractors will find this essential when faced with protecting circuits in industrial and commercial applications. New and retrofit installations alike will benefit from this 2 hour system that combines a re-enterable electrical circuit protective enclosure with an easy to install “stuff and caulk” firestop system. One system addresses both the through penetration and the circuit protection. The primary and secondary electrical circuits servicing critical services such as fire pumps, emergency generator sets, and communications backbones all require a fire-resistance rating. This system allows flexibility in design where these circuits are to be routed, and provides an envelope that's more easily re-entered when compared to circuits encased in gypsum enclosures or concrete.

For those applications requiring variations on to this hourly rating, Intertek Design ECP 525 for 1 hour applications and Intertek Design ECP 528 for 3 hour should be considered.



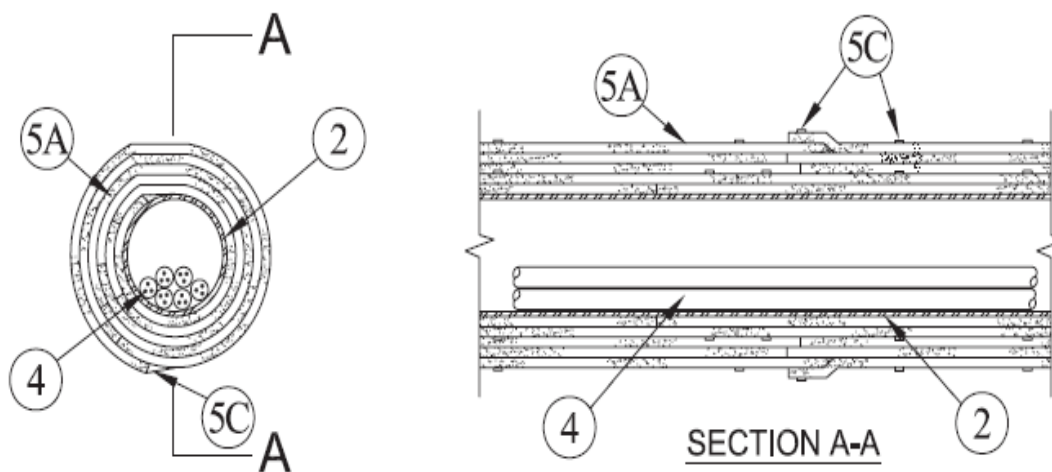
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### System No. 34

January 31, 2011

Fire Rating – 2Hr



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Building and Commercial Services Division  
St. Paul, MN 55144-1000  
1-800-328-1687  
[www.3M.com/firestop](http://www.3M.com/firestop)

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