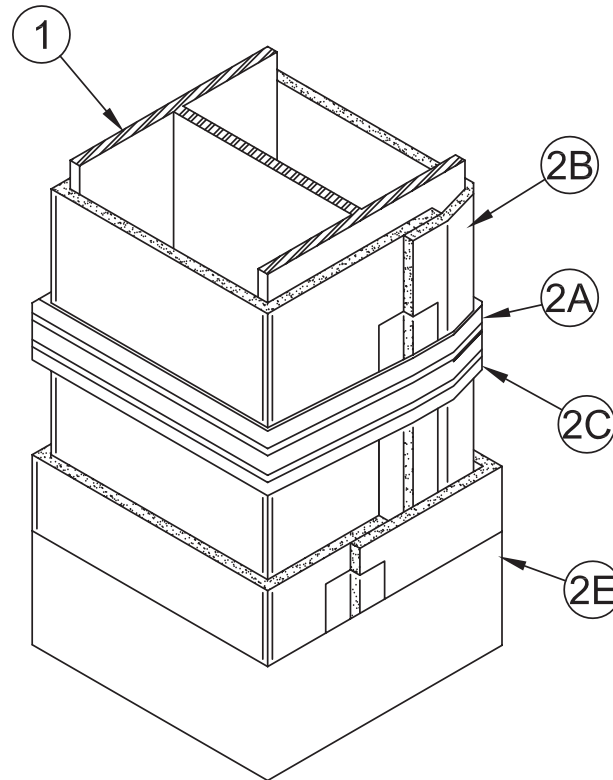


System No. XR202

October 15, 2014

Ratings — 1/2, 3/4, 1, 1-1/2, 2, 3 and 4 Hr.



1. **Steel Column** — Min size of column W10x49.
2. **Mat Materials*** — The column protection assembly consists of endothermic mat, aluminum foil tape, and aluminum cladding. The details of the column assembly are summarized below:
 - A. **Mat Materials* — Endothermic Mat** — Flexible mat supplied in rolls. Each layer of foil-faced mat installed by cutting to size and tightly wrapping around the column and itself such that a min 2 in. overlap is present along the vertical seam. Seams to be located on the column flange. Sections are temporarily held in place with several strips of 3M Type 898 filament tape (approx. 24 in. long). Adjacent sections of material on the same layer abut one another forming the circumferential edge seam. Successive layers of mat installed in same manner with butted end seams offset a min 2 in. from butted end seams of preceding layer. For single layer construction only, a 4 in. wide endothermic mat collar is wrapped around each taped circumferential butt joint with a 2 in. overlap on itself. Circumferential edges of collar are sealed with foil tape. Stainless steel bands are applied as described under Item 2C. All seams in each layer of mat to be sealed with foil tape (Item 2B) prior to installation of subsequent layer of mat or collars. The hourly rating of the column assembly is dependent upon the number of endothermic mat layers as shown in the following table:

Min Layers of Endothermic Mat Material	Hr Fire Rating
1	1/2
1	3/4
2	1
2	1-1/2
3	2
3	3
4	4

3M COMPANY — Type E-5A-3, E-5A-4, E-53A, E-53C, E-54A or E-54C.

3M COMPANY 3M FIRE PROTECTION PRODUCTS — Interam™ Types E-54A, E-5A-4 or E-54C. Additionally evaluated for acid and solvent spray exposure.

- B. **Aluminum Foil Tape*** — (Shown at vertical seam but not shown at butt joints, collars or cladding for clarity) Nom 4 in. wide pressure-sensitive aluminum foil tape supplied in rolls. Used to secure the vertical overlap and circumferential butt joint seams of the endothermic mat (Item 2A) and joints in the aluminum cladding (Item 2E).

3M COMPANY 3M FIRE PROTECTION PRODUCTS — Type 425.
- C. **Steel Banding Straps** — Min 1/2 in. wide by 0.020 in. thick stainless steel banding straps used in conjunction with No. 26 gauge galv steel wing-type crimp clips. Steel banding straps installed at the center and 2 in. from end of mat sections. Steel banding straps applied approx. 1 in. from edges of collars. Steel banding straps installed at the center and 1 in. from top and 1-1/2 in. from bottom of cladding sections.

Design No. XR202 *continued*

- D. **Fill, Void or Cavity Material — Caulk*** — (Not Shown) Thick bead of caulk to be applied as a gasket between the endothermic mat (Item 2A) and the floor or ceiling surface. The bead of caulk applied around entire perimeter of endothermic mat at interface of floor or ceiling surface prior to and after each layer of mat material and after installation of the cladding.

3M COMPANY 3M FIRE PROTECTION PRODUCTS — Type CP 25WB+, or FB 3000 WT.

- E. **Aluminum Cladding Jacket** — Optional. After installation of the mats, collars, foil tape and steel banding straps, aluminum corner cladding pieces with nominal 12 in. wide legs, 36 in. long and min No. 27 gauge (0.014 in.) thick installed and overlapped on each other to cover column and form outer jacket. Adjacent lengths of cladding to overlap the preceding length a min of 2 in. Cladding jacket secured in place with steel banding straps as noted under Item 2C. All seams of cladding material to be sealed with foil tape after banding has been installed.
- F. **Stainless Steel Cladding Jacket** — Optional. (Alternate to Aluminum Cladding Jacket, Item E) - After installation of the mats, nominal 36 in. wide by minimum 0.009 in. thick stainless steel jacket wrapped around endothermic mat and lapping itself approximately 6 in. Adjoining lengths of stainless steel jacket to overlap a minimum of 4 in. Stainless steel jacket secured in place with steel banding straps (item 2C) spaced max. 12 in. OC and max. 1 in. from all seams.
- G. **Insulation Jacketing Tape*** — Optional. (Alternate to Aluminum Cladding Jacket, Item E) - After installation of the mats, nominal 23 in. wide by minimum 0.007 in. thick multilayered laminate coated with an aggressive cold weather acrylic pressure sensitive adhesive wrapped around endothermic mat and lapping itself approximately 3 in. Adjoining lengths of insulation jacketing tape to overlap approximately 3 in. Insulation jacketing tape secured in place by self-adhesive bond to the endothermic mat. See Tape, General Use (BVYS).

3M COMPANY 3M FIRE PROTECTION PRODUCTS — VentureClad(R) 1577CW, 1577CW-E, or 1579CW

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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Flexible Wraps

Endothermic Mat

Structural Protection

XR