

**CITY OF NEW YORK  
DEPARTMENT OF BUILDINGS**

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use in accordance with the Report of Materials and Equipment Acceptance (MEA) Division.

Satish K. Babbar, R.A., Acting Commissioner  
MEA 394-00-M

Report of Material and Equipment Acceptance Division

Manufacturer - 3M Company, SCPD Bldg. 225-4S-08, St. Paul, MN 55144.

Trade Name - Interam™ Mat.

Product - Endothermic Mat for Fire Protection in UL Design No. X204.

Pertinent Code Section(s) -27-323.

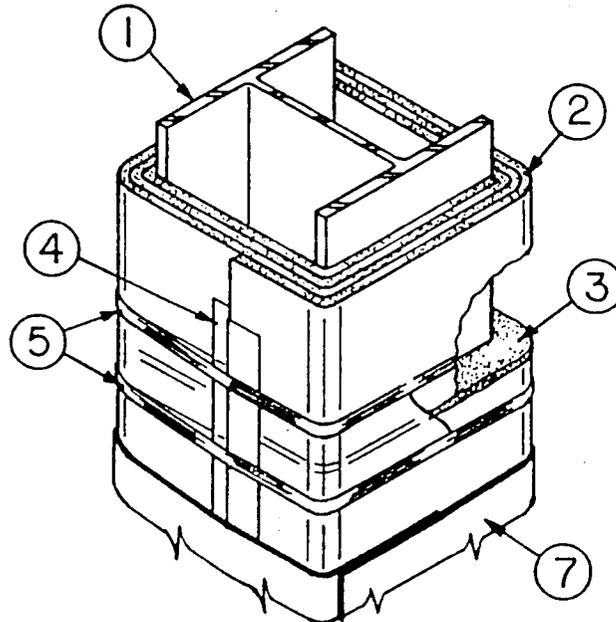
Prescribed Test(s) - RS 5-2 (ASTM 119).

Laboratory - Underwriters Laboratories Inc. and Omega Point Laboratories.

Test Report(s) - UL File R10125-6, Project 87NK2298 dated April 15, 1987 and OPL Project #9006-98944 dated March 19, 1996.

Description - The 3M Interam E-Series Mats are endothermic blankets that are designed to be wrapped around items requiring protection from fire exposure such as structural steel and electrical systems. The endothermic property of the mat means that they block specified heat penetration by chemically absorbing heat energy. When exposed to high temperatures, the Interam mats release chemically bound water to cool the outer surfaces of the wrap material and significantly retard heat transfer. The mats can provide up to 1, 2 and 3-hour structural steel fire protection and 30 minute, 1-hour and 3-hour rated electrical system protection. The endothermic blankets shall be used in accordance with Underwriters Laboratories Inc. Design No. X204 in achieving fire resistance rating listed below:

Design No. X204  
Rating - 2 and 3 Hr.



Design No. X204

1. Steel Column - Minimum size of column W10x49 with outside dimensions of 10 by 10 in., a flange thickness of 9/16 in., a web thickness of 5/16 in. and a cross-sectional area of 14.4 in.<sup>2</sup>.
2. Mat Materials\* - Flexible endothermic mat faced on one side with aluminum foil, supplied in nominal 24 in. wide rolls. Starting at the column flange edge at the base of the column, a continuous length of mat is circumferentially wrapped around the column, with the foil side facing outward, to attain the required number of mat layers. For the 2 h fire rating, the mat wrap length shall result in a minimum two layer cover over three sides of the column and a three layer cover over one flange face. For the 3 h fire rating, the mat wrap length shall result in a minimum three layer cover over three sides of the column and a four layer cover over one flange face. Butted circumferential joint between adjoining lengths of mat wrap to be sealed with endothermic caulk (Item 3) and covered with aluminum foil tape (Item 4). Vertical seam of adjoining lengths to align with one another and to be sealed with aluminum foil tape.

Minnesota Mining & Mfg. Co. - Type E-5A or E-53A mat.

3. Endothermic Caulk\* - Applied to completely fill butted circumferential joint between adjoining lengths of mat material. Additional endothermic caulk to be applied to butted joints after installation of banding straps, as necessary, to fill all gaps. The endothermic caulk is UL Classified Type FD-150 caulk manufactured by Minnesota Mining & Mfg. Co. (See Fill, Void or Cavity Materials, XHHW, in UL Building Materials Directory.)
4. Aluminum Foil Tape - Nominal 4 in. wide minimum 2 mil thick pressure-sensitive aluminum foil tape supplied in rolls. Used to cover vertical seam of mat wrap and to cover butted circumferential joint between adjoining lengths of mat wrap after installation of the endothermic caulk.

5. Steel Banding Straps - Minimum 5/8 in. wide by 0.020 in. thick stainless steel banding straps used in conjunction with stainless steel crimp clips. Steel banding straps spaced maximum 12 in. OC and maximum 2 in. from and on both sides of the butted circumferential joints to secure mat. Additional steel banding straps required to secure stainless steel jacket (Item 7).
6. Intumescent Caulk\* - (Not shown) - Thick bead of caulk to be applied around entire perimeter of endothermic mat (Item 2) at its interface with the floor and ceiling surfaces. The intumescent caulk is UL Classified Type CP-25 S/L or CP-25 N/S caulk manufactured by Minnesota Mining & Mfg. Co. (See Fill, Void or Cavity Materials, XHHW, in UL Building Materials Directory.)
7. Stainless Steel Jacket - After completion of the mat wrap installation, nominal 36 in. wide by minimum 0.009 in. thick stainless steel jacket wrapped around the endothermic mat and lapping itself approximately 6 in. Adjoining lengths of stainless steel jacket to overlap a minimum of 4 in. Steel jacket secured in place with stainless steel banding straps (Item 5) spaced maximum 12 in. OC and maximum 1 in. from all seams.

\*Bearing the UL Classification Marking

Recommendation - That the above described column assemblies, with endothermic mat protection installed and secured as described, be accepted as having the fire resistance ratings listed, when members framing into the column have at least the same fire resistance rating and provided that materials are protected from abrasion or displacement for the full height of the column. The installation of the fireproofing material shall be subject to the controlled inspection requirements of Section 27-132. All shipments and deliveries of such equipment shall be provided with a metal tag, suitably placed, certifying that the equipment shipped or delivered is equivalent to those tested and accepted for use, as provided for in Section 27-131 of the Building Code.

Final Acceptance Nov. 22, 2000  
Examined By S. Derkhdan