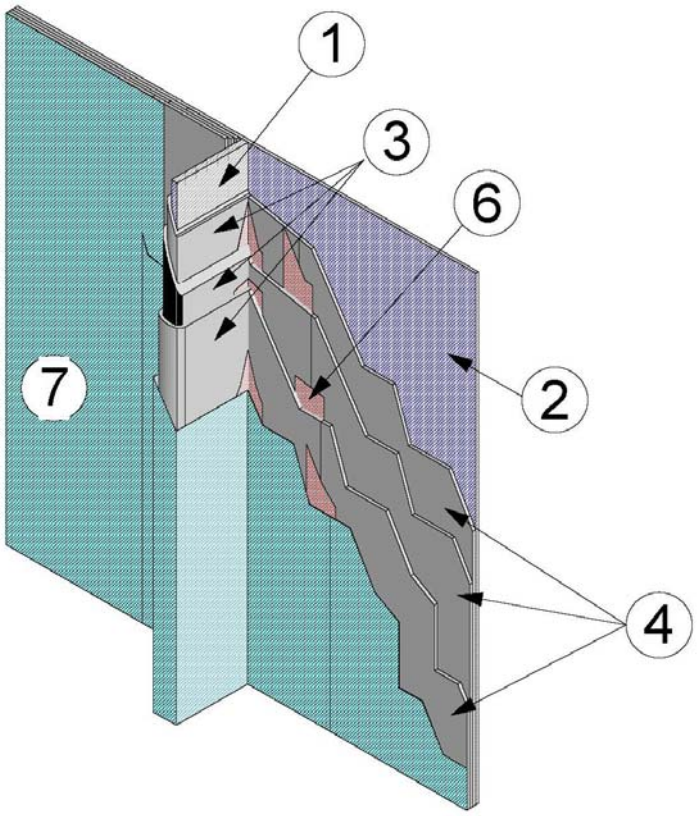
Design Number 3MU/AF 240-04
APPLIED FIREPROOFING
Jet Fire
3M Company
3M™ Interam™ E-5 and E-5A-4 Series Endothermic Mat
ISO 22899-1:2007(E), Determination of the Resistance to Jet Fires of Passive Fire Protection Materials
Temperature Rise 5°C – Time 15 minutes
Temperature Rise 26°C – Time 30 minutes
Temperature Rise 76°C – Time 60 minutes
Temperature Rise 182°C – Time 120 minutes
Temperature Rise 275°C – Time 180 minutes
Temperature Rise 356°C – Time 240 minutes



1. STRUCTURAL STEELWORK: Use structural steel having a minimum thickness of 20 +/- 0.25 mm (0.79 +/- 0.01 in.).

2. STEEL PANEL: A steel panel constructed of 10mm (0.39) thick steel complying with ISO 630:1995, Grade Fe 430 representing steelwork with no corners or edge features.

3. CERTIFIED MANUFACTURER: 3M Company

   CERTIFIED PRODUCT: Applied Fireproofing

   MODEL: 3M™ Interam™ E-5 and E-5A-4 Series Endothermic Mat

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ENDOTHERMIC MAT: Install 3 layers of foil faced flexible mat tightly over the Structural Steelwork (Item 1) and Steel Panel (Item 2). Install first layer with continuous vertical sections of Endothermic Mat. Each layer shall have one single piece of Endothermic Mat over the Structural Steelwork (Item 2) with the foil facing away from the Structural Steelwork. Adhere first layer to the Structural Steelwork (Item1) using 3M Hi-Strength 90 Adhesive applied to the steel and the back of the first layer being applied. Use rollers over the entire layer to ensure complete adhesion is achieved. Install each additional layer with a single piece of continuous vertical sections of Endothermic Mat and foil facing away from the previous layer. Adhere each additional layer to the previous layer of Endothermic Mat using 3M Hi-Strength 90 Adhesive applied to the face of the previous layer and to the back of the current layer being applied. Use rollers over the entire layer to ensure complete adhesion is achieved.

4. CERTIFIED MANUFACTURER: 3M Company

   CERTIFIED PRODUCT: Applied Fireproofing

   MODEL: 3M™ Interam™ E-5 and E-5A-4 Series Endothermic Mat

   ENDOTHERMIC MAT: Install 3 layers of foil faced flexible mat tightly over the steel panel (Item 1). Install first layer with continuous vertical sections of Endothermic Mat with vertical joints fit tightly together and foil facing away from the steel panel. Adhere first layer to the steel panel (Item1) using 3M Hi-Strength 90 Adhesive applied to the steel and the back of the first layer being applied. Use rollers over the entire layer to ensure complete adhesion is achieved. Tape all joints of first layer with Aluminum Tape (Item 6) and use rollers over tape to ensure complete adhesion. Install each additional layer with continuous vertical sections of Endothermic Mat with vertical joints fit tightly together and foil facing away from the previous layer. Install each additional layer with joints offset minimum 51mm (2 in.) from joints of the previous layer. Adhere each additional layer to the previous layer of Endothermic Mat using 3M Hi-Strength 90 Adhesive applied to the face of the previous layer and to the back of the current layer being applied. Use rollers over the entire layer to ensure complete adhesion is achieved. Tape all joints of each additional layer with Aluminum Tape (Item 6).

5. CERTIFIED MANUFACTURER: 3M Company

   CERTIFIED PRODUCT: Caulk

   MODEL: 3M™ Fire Barrier CP 25WB+

   CAULK (Not Shown): Install caulk in any joints between Endothermic Mat or between the Endothermic Mat and any steel member that exceed 3mm (1/8 in).

6. ALUMINUM TAPE: Apply 102mm (4 in.) wide pressure sensitive tape with aluminum foil facing to all joints of each layer of the Endothermic Mat (Item 2).

7. STEEL SHEATHING: Install 1 layer of 28 GA (0.39mm (0.0156 in.) thick) T-304 stainless steel sheeting over the Endothermic Mat (Item 2) in continuous vertical sheets. Install steel sheathing with minimum 76mm (3 in.) overlap at joints to create a stepped surface installation. Adhere each piece of Steel Sheathing to the final layer of Endothermic Mat (Item 2) using 3M Hi-Strength 90 Adhesive applied to the edges of the back of the Steel Sheathing face of the corresponding locations on the final layer of Endothermic Mat (Item 2).

8. PINS (Not Shown): Install nominal 35mm (1-3/8 in.) long, 12 GA (2.70mm (0.106 in.) thick) stainless steel cup head pins with a minimum 38mm (1-1/2 in.) washer. Install pins by pre-drilling holes through the Steel Sheathing (Item 4) and the Endothermic Mat (Item 2)

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with a 11mm (7/16 in.) drill bit and welding the pins to the Structural Steelwork (Item1). Pins shall be spaced both vertically and horizontally 305mm (12 in.) on center and centered over the overlap of each joint in the Steel Sheathing (Item 7).

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