

## **SECTION 16210 – FIRE-STOPPING**

### **PART 1 – GENERAL**

#### **1.1 DESCRIPTION OF WORK:**

- A. Fire-stopping materials and accessories.

#### **1.2 CODES AND STANDARDS:**

- A. Standard Building Code
- B. Underwriters Laboratories – Fire Resistance Directory
  - 1. ASTM E84 – Test Method for Surface Burning Characteristics of Building Materials (UL 723).
  - 2. ASTM E119 – Method for Fire Tests of Building Construction and Materials (UL263).
  - 3. ASTM E814 – Test Method of Fire Tests of Through-Penetration Fire stops (UL1479).

#### **1.3 QUALITY ASSURANCE:**

- A. Fireproofing Materials:
  - 1. ASTM E119 and/or ASTM E814 to achieve a fire rating as noted on Drawings.
  - 2. All fireproofing shall be UL classified for the appropriate UL system number.
- B. Surface Burning:
  - 1. ASTM E84 with a flame-spread smoke developed rating of 0/5.
- C. Manufacturer:
  - 1. Company specializing in manufacturing the products specified in this Section with minimum three years experience.

#### **1.4 SUBMITTALS:**

- A. Submit under provisions of Section 16010 – Electrical General.

- B. Product Data: Provide data on product characteristics, performance and limitation criteria.
- C. Manufacturer's Installation Instructions: Indicate preparation and installation instructions. Include the UL System Numbers, which apply to each application.
- D. Conform to applicable code for fire resistance ratings and surface burning characteristics.
- E. Provide certificate of compliance from authority having jurisdiction indicating approval.
- F. Provide mock-up of applied fire stopping material for each type of application.
- G. If accepted, mock-up will demonstrate minimum standard for the work.
- H. Mock-up may remain as part of the work.
- I. Do not apply materials when temperature of substrate material and ambient air is below 40 degrees F.
- J. Maintain this minimum temperature before, during, and for 3 days after installation of materials.
- K. Provide ventilation in areas to receive solvent cured materials. Use water based materials in occupied areas.
- L. Sequence work to permit fire-stopping materials to be installed after and surrounding work is complete.

#### 1.5 DELIVERY, STORAGE, AND HANDLING:

- A. Deliver materials undamaged in manufacturer's clearly labeled, unopened containers, identified with brand, type, grade, and UL label where applicable.
- B. Coordinate delivery with scheduled installation date to allow minimum storage time at site.
- C. Store materials in clean, dry, ventilated location. Protect from soiling, abuse, and moisture. Follow manufacturer's instructions.

#### 1.6 GUARANTEE:

- A. Submit copies of written guarantee agreeing to repair or replace joint sealers which fail in adhesion, cohesion, abrasion resistance, weather resistance, extrusion resistance, migration resistance, stain resistance, or general durability or appear or deteriorate in any other manner not clearly specified by submitted

manufacturer's data as an inherent quality of the material for the exposure indicated. The guarantee period shall be one year from date of substantial completion.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS:

- A. 3M brand CP25 Fire Barrier Caulk, CS195 Composite Sheet, FS195 Wrap/Strip, RC-1 Restricting Collars, Interam Fire Dam 150 caulk or moldable putty. Other approved manufacturers are GE "Pensil" Systems and Dow Corning Fire Stop Systems.
- B. Primer: Type recommended by fire-stopping manufacturer for specified substrate surfaces.

### 2.2 ACCESSORIES:

- A. Dam Materials: Mineral fiberboard, mineral fiber matting, sheet metal or alumina silicate fire board.

## PART 3 – EXECUTION

### 3.1 GENERAL:

- A. Verify site conditions.
- B. Verify that openings are ready to receive the Work of this Section.

### 3.2 PREPARATION:

- A. Clean substrate surfaces of dirt, dust, grease, and oil. Loose materials or other matter, which may affect bond of fire-stopping material.
- B. Remove incompatible materials which affect bond.

### 3.3 INSTALLATION:

- A. Install penetration seal materials in accordance with printed instructions of the UL Fire Resistance Directory and in accordance with manufacturer's instruction.
- B. Seal holes or voids made by penetrations to ensure an effective smoke barrier.
- C. Where floor openings without penetrating items are more than four inches in width and subject to traffic or loading, install fire stopping materials capable of supporting same loading as floor.

- D. Protect materials from damage on surfaces subject to traffic.
- E. Examine penetration sealed areas to ensure proper installation before concealing or enclosing areas.
- F. Keep areas of work accessible until inspection by applicable code authorities.
- G. Perform under this section patching and repairing of fire stopping caused by cutting or penetration by other trades.
- H. Install backing materials to arrest liquid material leakage.

#### 3.4 APPLICATION:

- A. Apply materials in accordance with manufacturer's instructions.
- B. Apply fire-stopping material in sufficient thickness to achieve rating to uniform density and texture.
- C. Install material at floors, walls or partition openings containing penetrating sleeves, piping, ductwork, conduit and other items requiring fire-stopping.

#### 3.5 CLEANING:

- A. Clean up spills of liquid components.
- B. Neatly cut and trim materials as required.
- C. Remove equipment, materials and debris, leaving area in undamaged, clean condition.
- D. Protect finished work.
- E. Protect adjacent surfaces from damage by material installation.

#### 3.6 SYSTEMS AND APPLICATION SCHEDULE:

Construction Condition	UL Designation
Metal Pipe or Conduits Through Round Opening	49, 95, 138, 202, 319, 321
Metal Pipes or Conduits Through Large Opening	49, 63, 93, 94, 137, 233, 234, 319, 321
Busway through Rectangular	97, 99

Blank Opening 61, 62, 92, 102, 104, 136, 318

Non-metallic (Plastic) Pipe or  
Conduit through Opening 64

Metal Pipe or Conduit  
Through Gypsum Board Wall 147, 322

Non-Metallic (Plastic) Pipe  
Or Conduit through Gypsum  
Board Wall 148

Cables through Gypsum  
Board Wall 149

- A. The following sections have applications for fire ratings less than 2-hours: 64, 65, 91, 147, 148, 160, 168, 169 and 320.
- B. The following sections have applications for fire ratings of 4-hours: 91, 95, 233 and 234.
- C. All sections (including those previously listed) listed have applications for fire ratings of 2-hours or less.

END OF SECTION 16210