

**SECTION 07 84 13  
PENETRATION FIRESTOPPING**

**PART 1 - GENERAL**

**1.01 SCOPE:**

- A. Provide all of the labor, materials, equipment and services to furnish and install the penetration seals.
- B. Work, in general, includes, but is not limited to, providing fire and smoke barrier penetration seals for openings in floors, walls, and other elements of construction.

**1.02 QUALITY ASSURANCE:**

- A. Applicator qualifications: Two years' experience installing UL Classified fire stopping materials.
- B. Performance: Materials shall have been tested to provide fire rating equal to that of the construction.

**1.03 SUBMITTALS:**

- A. Prior to installation, submit to the Architect for his review the following:
  - 1. Shop drawings showing each condition requiring penetration seals in dictating proposed UL systems materials, anchorage, methods of installation, and actual adjacent construction.
  - 2. Copy of UL illustration of each proposed system indicating manufacturer approved modifications.
  - 3. Manufacturer's data: Specifications, recommendations, installation instructions, and maintenance data for each type of material required. Include letter indicating that each material complies with the requirements and is recommended for the applications shown.
  - 4. Qualifications statement: Past projects indicating required experience.

**1.04 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, abused, and moisture. Follow manufacturer's instructions.

**1.05 PROJECT CONDITIONS:**

- A. Existing conditions:
  - 1. Verify existing conditions and substrates before starting work. Correct unsatisfactory conditions before proceeding.
  - 2. Proceed with installation only after penetrations of the substrate and supporting brackets have been installed.
- B. Environmental requirements:
  - 1. Furnish adequate ventilation if using solvent.
  - 2. Furnish forced air ventilation during installation if required by manufacturer.
  - 3. Keep flammable materials away from sparks of flame.

4. Provide masking and drop cloths to prevent contamination of adjacent surfaces by fire stopping materials.

**1.06 GUARANTEE:**

- A. Submit copies of written guarantee agreeing to repair or replace joint sealers which fail in joint adhesion, cohesion, abrasion resistance, weather resistance, extrusion resistance, migration resistance, stain resistance, or general durability or appear to 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 the Date of Substantial Completion.

**PART 2 - PRODUCTS**

**2.01 MANUFACTURERS:**

- A. Subject to compliance with requirements, provide products of one of the manufacturers approved by UL for the type of installation condition listed herein.

**2.02 PRODUCTS:**

- A. Provide materials classified by UL to provide fire stopping equal to time rating of construction being penetrated.
- B. Provide asbestos free materials that comply with applicable codes and have been tested under positive pressure in accordance with UL 1479 or ASTM E814.

**PART 3 - EXECUTION**

**3.01 PREPARATION:**

- A. Clean surfaces to be in contact with penetration seal materials, of dirt, grease, oil, loose materials, rust, or other substances that may affect proper fitting, adhesion, or the required fire resistance.

**3.02 INSTALLATION:**

- A. Install penetration seal materials in accordance with printed instructions of the UL Fire Resistance Directory 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 4" 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.

**3.03 FIELD QUALITY CONTROL:**

- A. Examine penetration sealed areas to ensure proper installation before concealing or enclosing areas.
- B. Keep areas of work accessible until inspection by applicable code authorities.
- C. Perform under this section patching and repairing of fire stopping caused by cutting or penetration

by other trades.

**3.04 ADJUSTING AND 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.

**3.05 SYSTEMS AND APPLICATION SCHEDULE INCLUDES, BUT IS NOT LIMITED TO:**

- A. Metal pipe or conduit through round opening.
- B. Insulated metal pipe through round opening.
- C. Metal pipes or conduits through large opening.
- D. Blank opening.
- E. Non-metallic (plastic) pipe or conduit through opening.
- F. Metal pipe or conduit through gypsum board wall.
- G. Non-metallic (plastic) pipe or conduit through gypsum board wall.
- H. Cables through gypsum board wall.
- I. Insulated metal pipe through gypsum board wall.

**- END OF SECTION -**