

SECTION 07 84 00 FIRESTOPPING

PART 1 GENERAL

1.01 REFERENCES

A. The following is a list of standards that may be referenced in this section:

1. ASTM International (ASTM): E814, Test Method for Fire Tests of Through-Penetration Firestops.
2. UL:
 - a. 1479, Fire Tests of Through-Penetration Firestops.
 - b. 2079, Tests for Fire Resistance of Building Joint Systems.

1.02 SUBMITTALS

A. Action Submittals:

1. Shop Drawings: Show layout, profiles, and product components; include UL Systems Number on Shop Drawings and diagram of UL approved assembly.
2. Product Data: Include manufacturer's SPEC-DATA® product sheet for products selected for use.

B. Informational Submittals:

1. Manufacturer's installation instructions.
2. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
3. Certificates: Manufacturer's Certificate of Proper Installation in accordance with Section 01 67 00, Product Requirements.
4. Special Guarantee documents specified below.

1.03 QUALITY ASSURANCE

A. Installer Qualifications: Experienced in performing Work of this section and specialized in the installation of work similar to that required for this Project.

B. Preinstallation Meetings: Conduct preinstallation meeting to identify where seals are required and verify Project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Coordinate delivery of materials with scheduled installation date to allow minimum storage time at Project Site.
- B. Deliver materials in manufacturer's original, unopened, undamaged containers with identification and UL listing mark intact.
- C. Store materials under cover and protect from weather and damage in compliance with manufacturer's requirements.
- D. Follow recommended procedures, precautions, or remedies described in Material Safety Data Sheets as applicable.

1.05 SEQUENCING AND SCHEDULING

- A. Firestopping requirements may be created by mechanical and electrical portions of the Work:
 - 1. Identify locations requiring firestopping.
 - 2. Schedule installation of firestopping after completion of penetrating item installation but prior to covering or concealing of openings.

1.06 SPECIAL GUARANTEE

- A. Provide manufacturer's extended guarantee or warranty, with beneficiary named in writing, as special guarantee. Special guarantee shall provide for correction, or at the option of the Contracting Officer, removal and replacement of Work specified in this section found defective during a period of 2 years after the date of Substantial Completion. Duties and obligations for correction or removal and replacement of defective Work shall be as specified in the General Conditions.

PART 2 PRODUCTS

2.01 MANUFACTURERS AND PRODUCTS

- A. Hilti Construction Chemicals; High Performance Firestop Systems.
- B. Or equal.

2.02 PHYSICAL CHARACTERISTICS

- A. General: Furnish firestop system from a single manufacturer.
- B. System: Provide systems of material or combination of materials used to fill openings around penetrating items to prevent the spread of fire and retain integrity of fire rated construction by maintaining an effective barrier against

spread of flame, smoke, water, and hot gases through penetrations in fire rated wall and floor assemblies.

- C. Mixes: For those products requiring mixing prior to application, follow firestopping manufacturer's directions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other procedures needed to produce firestopping products of uniform quality with optimum performance characteristics for application indicated.

2.03 FUNCTIONAL CHARACTERISTICS

- A. Provide Fire Safing:
 - 1. At slot gaps between edge of floor slabs and exterior walls.
 - 2. Gaps between top of walls and structure above.
 - 3. Expansion joints in walls, floors, and ceilings.

2.04 PERFORMANCE CHARACTERISTICS

- A. Provide firestop systems with materials that have been manufactured and installed to maintain performance criteria stated by manufacturer without defects, damage, or failure.
- B. Firestop Systems: Meet requirements of ASTM E814, UL 1479, or UL 2079 tested assemblies that provide a fire rating equal to that of construction being penetrated.
- C. Proposed Firestop Materials and Methods: Conform to applicable governing codes having local jurisdiction.
- D. Meet F and T ratings of ASTM E814 for a period equal to construction penetrated.
- E. UL classified as fill, void, or cavity materials under UL 1479.

PART 3 EXECUTION

3.01 EXAMINATION

- A. With manufacturer's representative, examine substrates and conditions for compliance with requirements for opening configurations, penetrating items, substrates, and other conditions affecting performance of firestopping. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Surface Cleaning:

1. Clean openings and joints immediately prior to installing firestopping in accordance with firestop manufacturer recommendations and the following requirements:
 - a. Remove foreign materials from surfaces of opening and joint substrates and from penetrating items that could interfere with adhesion of firestopping.
 - b. Clean opening and joint substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with firestopping. Remove loose particles remaining from cleaning operation.
 - c. Remove laitance and form release agents from concrete.

B. Priming: Prime substrates where recommended by firestopping manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

C. Masking Tape: Use masking tape to prevent firestopping from contacting adjoining surfaces that will remain exposed upon completion of Work and that would otherwise be permanently stained or damaged by such contact or by cleaning methods used to remove smears from firestopping materials. Remove tape as soon as it is possible to do so without disturbing firestopping seal with substrates.

3.03 INSTALLATION

A. Manufacturer's Instructions: Follow manufacturer's instructions for installation of through-penetration systems selected for use.

1. Seal holes or voids made by penetrations for pipes, conduits and ducts through fire-rated floors, walls, and roofs and to ensure air and water resistant seals.
2. Receive Contracting Officer's approval prior to installation of UL firestop systems that might hamper the performance of fire dampers as it pertains to duct work.

B. Fire Safing: Install, following manufacturer's instructions, to completely fill gaps between tops of fire-rated walls and floor or roof deck above, between edge of floors and walls, and other locations indicated on the Drawings.

C. Meet UL and Factory Mutual requirements.

3.04 FIELD QUALITY CONTROL

- A. Examine sealed penetration areas to ensure proper installation before concealing or enclosing areas.
- B. Keep areas of Work accessible until inspection by applicable code authorities.
- C. Perform patching and repairing of firestopping caused by cutting or penetrating existing firestop systems.

3.05 PROTECTION

- A. Protect installed product from contact with contaminating substances and from damage during construction.

END OF SECTION

