

Section 07 84 00
Firestopping

The following paragraphs are for insertion into sections of generic specifications or proprietary specifications covering gypsum board products manufactured by National Gypsum. The Gold Bond® BRAND product name follows the generic description in parentheses.

Part 1 General

1.01 Summary

- A. Section Includes: A firestopping system consisting of mineral wool insulation and a setting type sealing compound for penetrations in fire-rated floors and walls as follows:

(Specifier Note: Edit list of floor and wall types below to be firestopped to conform to projects requirements).

1. Cast-in-place concrete floors.
2. Pre-cast concrete floors.
3. Cast-in-place concrete walls.
4. Masonry walls.
5. Plaster partitions.
6. Veneer plaster partitions.
7. Gypsum board partitions.
8. Shaftwalls.
9. Area separation walls.

(Specifier Note: Edit list below to conform to project requirements. Verify section numbers and titles. Add sections relating to mechanical and electrical penetrations of rated floors and walls).

- B. Related Sections:
1. Section 03 30 00, Cast-In-Place Concrete.
 2. Section 03 40 00, Pre-cast Concrete.
 3. Section 04 20 00, Unit Masonry.
 4. Section 09 23 00, Plaster.
 5. Section 09 26 00, Veneer Plaster.
 6. Section 09 29 00, Gypsum Board.
 7. Section 09 21 16.23, Shaftwall.
 8. Section 09 21 16.33, Area Separation Walls.
 9. Section 09 72 00, Pre-finished Gypsum Wall Panels.

(Specifier Note: Use the paragraph below to identify alternatives described in Division 01, Section 01 23 00, that includes work of this section).

- C. Alternates:

1.02 References

(Specifier Note: Normally retain all references).

- A. American Society for Testing and Materials (ASTM):

(Specifier Note: Only ASTM C 665 and ASTM E 84 are referenced by this specification. ASTM E 119 is referenced by ASTM E 84, ASTM C 569 and ASTM E 84 are referenced by ASTM E 119).

1. ASTM C 569, Test Method for Indentation Hardness of Preformed Thermal Insulations.
2. ASTM C 665, Specification for Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
3. ASTM E 84, Test Method for Surface Burning Characteristics of Building Materials.
4. ASTM E 119, Standard Methods for Fire Tests of Building Construction and Materials.
5. ASTM E 814, Standard Methods for Fire Tests of Through-Penetration Fire Stops.

(Specifier Note: UL tests listed below are identical to ASTM tests listed above. Only 1479 is referenced by the specification, the others are referenced by 1479).

- B. Underwriters' Laboratories, Inc. (UL):
1. UL 263, Fire Tests of Building Construction and Materials.
 2. UL 723, Surface Burning Characteristics of Building Materials.
 3. ANSI/UL 1479, Fire Tests of Through-Penetration Fire-stops.

1.03 System Description

("A fire stop shall be considered as meeting the requirements for an F rating when it remains in the opening during the fire test and hose stream test," See ASTM E 84, paragraphs 10.1.2 and 10.1.3, for limitations).

- A. Performance Requirements: Provide firestopping systems that meet the requirements for an F Rating, for time periods equal to or exceeding the fire resistance ratings of the construction assemblies being penetrated, when tested in accordance with ASTM E 84 or ANSI/UL 1479.

1.04 Submittals

- A. Product Data: Manufacturer's specifications and installation instructions for each product specified.
- B. Shop Drawings: Show materials and installation details for penetrations in each type of construction to be firestopped. Shop Drawings are not required for types of penetrations illustrated in the Product Data.
- C. Quality Control Submittals:
1. Test Reports: Showing that firestopping system has been tested and that it meets the specified Performance Requirements.
 2. Certificates:

(Specifier Note: Modify paragraph a. Below if there are no local VOC regulations).

- a. Manufacturer's certification that the products provided comply with local regulations controlling the use of volatile organic compounds (VOCs) and are nontoxic.

(Specifier Note: Retain paragraph b. below only if installer qualifications in the following article is retained).

- b. Contractor's certification that the installer has the specified experience.

1.05 Quality Assurance

- A. Installer Qualifications: Experience in the installation of firestopping that is similar in material, design, and extent to the firestopping indicated for this Project.
- B. Mock-Ups:
 - 1. Install a mock-up of each type of floor and wall penetration firestop to show materials used and quality of workmanship. Obtain the Architect's approval of mock-up locations.
 - 2. Do not start firestopping work until mock-ups are approved by the Architect. Remove mock-ups that are not approved and provide additional mock-ups, at the same location, as necessary to obtain approval.
 - 3. Approved mock-ups may be left in place as part of the Work.

(Specifier Note: Modify notice requirement below as appropriate).

- C. Pre-Installation Conference: Prior to beginning of firestopping, hold a meeting at the job site with the firestopping materials manufacturer and installer to review the firestopping requirements. Notify the Owner and the Architect at least 3 days in advance of the meeting.

1.06 Delivery, Storage, and Handling

- A. Packaging and Shipping: Have materials shipped in manufacturer's original packages showing manufacturer's name and product brand name.
- B. Storage and Protection: Store materials inside and protected from damage by the elements.

1.07 Project Conditions

- A. Environmental Requirements: Install firestopping only after the building is enclosed and the permanent heating, ventilating, and air conditioning system is in operation. Maintain the temperature in the building at 50 deg. F or above during installation.

Part 2 Projects

2.01 Manufacturers

(Specifier Note: If other manufacturers are being added to this section, then add listings of their proprietary product names).

(Specifier Note: Proprietary product names may be listed in this article or in the "materials" article below. Listing them in both articles is overkill and invites coordination errors).

- A. National Gypsum, ProForm[®] BRAND Fire-Shield[®] FS 90 Compound, Fire and Smoke Stop.

2.02 Materials

(Specifier Note: This article includes generic descriptions of firestopping products, the names of the corresponding Gold Bond[®] products follow in parenthesis. If this section is being edited to be generic, then these product names should be deleted).

(Specifier Note: If other manufacturers are being added to this section, then (1) add the proprietary product names of those manufacturers, or (2) if the proprietary names are listed in the "Manufacturers" article above, then delete them from this article all together).

- A. Insulation: A combination of mineral fibers manufactured from glass and thermosetting resins, with a min. density of 0.5 pcf, complying with ASTM C 665, Type I (blankets without membrane facing).
- B. Sealing Compound: A lightweight, low density, vinyl based, non-asbestos setting compound formulated to mix easily with water (National Gypsum, ProForm[®] BRAND Fire-Shield[®] FS 90 Compound, Fire and Smoke Stop).

PART 3 EXECUTION

3.01 INSTALLATION

(Specifier Note: If other manufacturers were added in Part 2 then reference their installation recommendations below, include title and publication date).

- A. In accordance with the manufacturer's recommendations:
 - 1. "Gypsum Construction Guide" and "National Gypsum, ProForm[®] BRAND Fire-Shield[®] FS 90 Compound, Fire and Smoke Stop," 110684; National Gypsum Company.

3.02 PROTECTION

- A. Protect firestopping installations from damage and deterioration until the date of Substantial Completion.