

**SECTION 07 84 00
FIRESTOPPING**

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PART 1 GENERAL

3.01 REFERENCE STANDARDS

- A. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.
- B. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials; 2022.
- C. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2023a.
- D. UL 263 - Standard for Fire Tests of Building Construction and Materials; Current Edition, Including All Revisions.
- E. UL 1479 - Standard for Fire Tests of Penetration Firestops; Current Edition, Including All Revisions.

3.02 GENERAL REQUIREMENTS

THE CONTRACTOR IS REFERRED TO THE INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS, NYCHA CONTRACTS; THE SPECIAL NOTICE TO CONTRACTORS; THE FORM OF PROPOSAL; THE FORM OF BID BOND; DIVISION 01 - GENERAL REQUIREMENTS OF THE CONTRACT SPECIFICATIONS; THE CONTRACT DRAWINGS AND ALL AMENDMENTS AND ADDENDA THERETO; ALL OF WHICH GOVERN THE WORK OF THIS SECTION.

SCOPE OF WORK

THE WORK OF THIS SECTION INCLUDES ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO COMPLETE THE REQUIRED FIRESTOP AND SMOKE SEAL WORK AS INDICATED ON THE DRAWINGS AND/OR SPECIFIED HEREIN INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

- 6.01 PENETRATIONS THROUGH FIRE-RESISTANCE-RATED WALL CONSTRUCTION INCLUDING BOTH EMPTY OPENINGS AND OPENINGS CONTAINING CABLES, PIPES, DUCTS, CONDUITS, AND OTHER PENETRATING ITEMS. THIS SHALL INCLUDE EXISTING OPENINGS IN ALL THE AREAS UNDER CONSTRUCTION WHICH LACK PROPER FIRESTOPPING OR WHICH HAVE DAMAGED FIRESTOPPING.**
- 6.02 PENETRATIONS THROUGH SMOKE BARRIERS AND CONSTRUCTION ENCLOSING COMPARTMENTALIZED AREAS INVOLVING BOTH EMPTY OPENINGS AND OPENINGS CONTAINING PENETRATING ITEMS. THIS SHALL INCLUDE EXISTING OPENINGS IN ALL THE AREAS UNDER CONSTRUCTION WHICH LACK PROPER SMOKE BARRIERS OR WHICH HAVE DAMAGED SMOKE BARRIERS.**
- 6.03 SEALANT JOINTS IN FIRE-RESISTANCE-RATED CONSTRUCTION. THIS SHALL INCLUDE EXISTING JOINTS IN ALL THE AREAS UNDER CONSTRUCTION WHICH LACK PROPER SEALS OR WHICH HAVE DAMAGED SEALS.**

RELATED WORK

THE FOLLOWING SECTIONS/DIVISIONS CONTAIN REQUIREMENTS THAT RELATE TO WORK OF THIS SECTION:

- 8.01 SECTION 07 90 00 – SEALANTS AND JOINT FILLERS.**
- 8.02 DIVISION 26 - ELECTRICAL.**

SUBMITTALS

GENERAL: SUBMIT EACH ITEM ACCORDING TO THE CONDITIONS OF THE CONTRACT AND DIVISION 01, SECTION 01 33 00 – SUBMITTAL PROCEDURES.

SUBMIT MANUFACTURER'S PRODUCT LITERATURE FOR EACH TYPE OF FIRESTOP MATERIAL TO BE INSTALLED, INDICATING PRODUCT CHARACTERISTICS, TYPICAL USE, PERFORMANCE, LIMITATION CRITERIA, TEST DATA AND INDICATE THAT PRODUCTS COMPLY WITH REQUIREMENTS SPECIFIED HEREIN.

SUBMIT SHOP DRAWINGS DETAILING MATERIALS, INSTALLATION METHODS, AND RELATIONSHIPS TO ADJOINING CONSTRUCTION FOR EACH FIRESTOP SYSTEM. INCLUDE FIRESTOP DESIGN DESIGNATION OF QUALIFIED TESTING AND INSPECTION AGENCY EVIDENCING COMPLIANCE WITH REQUIREMENTS FOR EACH CONDITION INDICATED.

MATERIAL SAFETY DATA SHEETS: SUBMIT MSDS FOR EACH FIRESTOP PRODUCT.

SUBMIT QUALIFICATIONS OF FIRESTOP INSTALLER, INCLUDING LETTER FROM FIRESTOP MANUFACTURER OF PRODUCTS PROPOSED TO BE INSTALLED, WHEREIN MANUFACTURER APPROVES OR RECOGNIZES AS TRAINED / OR CERTIFIES INSTALLER FOR INSTALLATION OF THAT MANUFACTURER'S PRODUCTS.

- 14.01 MANUFACTURER'S LETTERS: FOR INSTALLATIONS OR CONFIGURATIONS NOT COVERED BY A U.L. OR WARNOCK HERSEY DESIGN NUMBER, A RECOMMENDATION SHALL BE OBTAINED FROM THE MANUFACTURER, IN WRITING, FOR THE SPECIFIC APPLICATION.**

14.02 COPY OF MEA OR BSA APPROVAL.

REFERENCES

ASTM E814: "STANDARD METHOD OF FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS".

UL 1479, UBC 7-5: (BOTH ARE SAME AS A. ABOVE).

ASTM E119" "STANDARD METHOD OF FIRE TESTS OF BUILDING CONSTRUCTION AND MATERIALS".

UL 263, UBC 7-1: (SAME AS C. ABOVE).

PUBLISHED THROUGH-PENETRATION SYSTEMS BY RECOGNIZED INDEPENDENT TESTING AGENCIES.

UL FIRE RESISTANCE DIRECTORY, VOLUME II OF CURRENT YEAR.

WARNOCK HERSEY CERTIFICATION LISTINGS, CURRENT YEAR.

MATERIAL MUST HAVE B.S.A. APPROVAL FOR USE IN NEW YORK CITY.

QUALITY ASSURANCE

GENERAL: PROVIDE FIRESTOPPING SYSTEMS THAT ARE PRODUCED AND INSTALLED TO RESIST THE SPREAD OF FIRE, AND THE PASSAGE OF SMOKE AND OTHER GASES.

FIRESTOPPING MATERIALS SHALL CONFORM TO FLAME (F) AND TEMPERATURE (T) RATINGS AS REQUIRED BY LOCAL BUILDING CODE AND AS TESTED BY NATIONALLY ACCEPTED TEST AGENCIES PER ASTM E814 OR UL 1479. THE F RATING MUST BE A MINIMUM OF ONE (1) HOUR BUT NOT LESS THAN THE FIRE RESISTANCE RATING OF THE ASSEMBLY BEING PENETRATED. T RATING, WHEN REQUIRED BY CODE, SHALL BE BASED ON MEASUREMENT OF THE TEMPERATURE RISE ON THE PENETRATING ITEM(S). THE FIRE TEST SHALL BE CONDUCTED WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCHES OF WATER COLUMN.

FIRESTOPPING PRODUCTS SHALL BE ASBESTOS FREE AND FREE OF ANY PCBs.

DO NOT USE ANY PRODUCT CONTAINING SOLVENTS OR THAT REQUIRES HAZARDOUS WASTE DISPOSAL.

DO NOT USE FIRESTOP PRODUCTS WHICH AFTER CURING, DISSOLVE IN WATER.

DO NOT USE FIRESTOP PRODUCTS THAT CONTAIN CERAMIC FIBERS OR ETHYLENE GLYCOL.

FOR FIRESTOPPING EXPOSED TO VIEW, TRAFFIC, MOISTURE, AND PHYSICAL DAMAGE, PROVIDE PRODUCTS THAT DO NOT DETERIORATE WHEN EXPOSED TO THESE CONDITIONS.

31.01 FOR PIPING PENETRATIONS FOR PLUMBING, PROVIDE MOISTURE-RESISTANT THROUGH-PENETRATION FIRESTOP SYSTEMS.

31.02 FOR FLOOR PENETRATIONS WITH ANNULAR SPACES EXCEEDING 4 INCHES OR MORE IN WIDTH AND EXPOSED TO POSSIBLE LOADING AND TRAFFIC, PROVIDE FIRESTOP SYSTEMS CAPABLE OF SUPPORTING THE FLOOR LOADS INVOLVED EITHER BY INSTALLING FLOOR PLATES OR BY OTHER MEANS.

31.03 FOR PENETRATIONS INVOLVING INSULATED PIPING, PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS NOT REQUIRING REMOVAL OF INSULATION.

DELIVERY, STORAGE AND HANDLING

DELIVER MATERIALS IN MANUFACTURER'S ORIGINAL UNOPENED CONTAINERS WITH MANUFACTURER'S NAME, PRODUCT IDENTIFICATION, LOT NUMBERS, UL OR WARNOCK HERSEY LABELS, AND MIXING AND INSTALLATION INSTRUCTIONS, AS APPLICABLE.

STORE MATERIALS IN THE ORIGINAL, UNOPENED CONTAINERS OR PACKAGES, AND UNDER CONDITIONS RECOMMENDED BY MANUFACTURER.

ALL FIRESTOP MATERIALS SHALL BE INSTALLED PRIOR TO EXPIRATION OF SHELF LIFE.

PROJECT CONDITIONS

VERIFY EXISTING CONDITIONS AND SUBSTRATES BEFORE STARTING WORK

DO NOT USE MATERIALS THAT CONTAIN SOLVENTS, SHOW SIGN OF DAMAGE OR ARE BEYOND THEIR SHELF LIFE.

DURING INSTALLATION, PROVIDE MASKING AND DROP CLOTHS AS NEEDED TO PREVENT FIRESTOPPING PRODUCTS FROM CONTAMINATING ANY ADJACENT SURFACES.

CONFORM TO VENTILATION REQUIREMENTS IF REQUIRED BY MANUFACTURER'S INSTALLATION INSTRUCTIONS OR MATERIAL SAFETY DATA SHEET.

WEATHER CONDITIONS: DO NOT PROCEED WITH INSTALLATION OF FIRESTOP PRODUCTS WHEN TEMPERATURES ARE IN EXCESS OR BELOW THE MANUFACTURER'S RECOMMENDATIONS.

SCHEDULE INSTALLATION OF FIRESTOP PRODUCTS AFTER COMPLETION OF PENETRATING ITEM INSTALLATION BUT PRIOR TO COVERING OR CONCEALING OF OPENINGS.

COORDINATE THIS WORK AS REQUIRED WITH WORK OF OTHER TRADES.

SEQUENCING AND SCHEDULING

PRE-INSTALLATION CONFERENCE: CONVENE A PRE-INSTALLATION CONFERENCE TO ESTABLISH PROCEDURES TO MAINTAIN OPTIMUM WORKING CONDITIONS AND TO COORDINATE THIS WORK WITH RELATED AND ADJACENT WORK.

SEQUENCE: PERFORM WORK OF THIS AND OTHER SECTIONS IN PROPER SEQUENCE TO PREVENT DAMAGE TO THE FIRESTOP SYSTEMS AND TO ENSURE THAT THEIR INSTALLATION WILL OCCUR PRIOR TO ENCLOSING OR CONCEALING WORK.

INSTALL ALL FIRESTOP SYSTEMS AFTER VOIDS AND JOINTS ARE PREPARED SUFFICIENTLY TO ACCEPT THE APPLICABLE FIRESTOPS SYSTEM.

DO NOT COVER FIRESTOP SYSTEMS UNTIL THEY HAVE BEEN PROPERLY INSPECTED AND ACCEPTED BY THE AUTHORITY HAVING JURISDICTION.

PART 2 PRODUCTS

49.01 ACCEPTABLE MANUFACTURERS

SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS OF ONE OF THE FOLLOWING MANUFACTURERS OR EQUAL:

50.01 TREMCO

50.02 BIO-FIRESHIELD

50.03 3M

50.04 SPECIFIED TECHNOLOGIES INC.

50.05 U.S. GYPSUM CO.

50.06 NELSON

50.07 HILTI

50.08 OR EQUAL.

FIRESTOPPING GENERAL

COMPATIBILITY: PROVIDE FIRESTOPPING COMPOSED OF COMPONENTS THAT ARE COMPATIBLE WITH EACH OTHER, THE SUBSTRATES FORMING OPENINGS, AND THE ITEMS, IF ANY, PENETRATING THE FIRESTOPPING UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY FIRESTOPPING MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

ACCESSORIES: PROVIDE COMPONENTS FOR EACH FIRESTOPPING SYSTEM THAT ARE NEEDED TO INSTALL FILL MATERIALS. USE ONLY COMPONENTS SPECIFIED BY THE FIRESTOPPING MANUFACTURER AND APPROVED BY THE QUALIFIED TESTING AND INSPECTING AGENCY FOR THE DESIGNATED FIRE-RESISTANCE-RATED SYSTEMS.

ACCESSORIES INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING ITEMS:

53.01 PERMANENT FORMING/DAMMING/BACKING MATERIALS INCLUDING THE FOLLOWING:

- A. Semi-refractory fiber (mineral wool) insulation.
- B. Sealants used in combination with other forming/damming materials to prevent leakage of fill materials in liquid state.
- C. Fire-rated form board.
- D. Joint fillers for joint sealants.

53.02 TEMPORARY FORMING MATERIALS.

53.03 SUBSTRATE PRIMERS.

53.04 COLLARS.

53.05 STEEL SLEEVES.

APPLICATIONS: PROVIDE FIRESTOPPING SYSTEMS COMPOSED OF MATERIALS SPECIFIED IN THIS SECTION THAT COMPLY WITH SYSTEM PERFORMANCE AND OTHER REQUIREMENTS.

PART 3 EXECUTION

55.01 EXAMINATION

EXAMINE SUBSTRATES AND CONDITIONS WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR OPENING CONFIGURATION, PENETRATING ITEMS, SUBSTRATES, AND OTHER CONDITIONS AFFECTING PERFORMANCE OF FIRESTOPPING. DO NOT PROCEED WITH INSTALLATION UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

CONDITIONS REQUIRING FIRESTOPPING

INTERIOR WALLS AND PARTITIONS

58.01 CONSTRUCTION JOINTS BETWEEN TOP OF FIRE RATED WALLS AND UNDERSIDE OF FLOORS ABOVE, SHALL BE FIRE-STOPPED.

58.02 FIRESTOP SYSTEM INSTALLED SHALL HAVE BEEN TESTED BY EITHER UL OR WARNOCK HERSEY, INCLUDING EXPOSURE TO HOSE STREAM TEST AND INCLUDING FOR USE WITH CONCRETE DECK FLOOR ASSEMBLIES.

58.03 FIRESTOP SYSTEM USED SHALL ALLOW FOR DEFLECTION OF FLOOR ABOVE.

PENETRATIONS

59.01 PENETRATIONS INCLUDE CONDUIT, CABLE, WIRE, PIPE, DUCT, OR OTHER ELEMENTS WHICH PASS THROUGH ONE OR BOTH OUTER SURFACES OF A FIRE RATED FLOOR, WALL, OR PARTITION.

59.02 EXCEPT FOR FLOORS ON GRADE, WHERE A PENETRATION OCCURS THROUGH A STRUCTURAL FLOOR OR ROOF AND A SPACE WOULD OTHERWISE REMAIN OPEN BETWEEN THE SURFACES OF THE PENETRATION AND THE EDGE OF THE ADJOINING STRUCTURAL FLOOR OR ROOF, PROVIDE FIRESTOPPING TO FILL SUCH SPACES IN ACCORDANCE WITH ASTM E814.

PROVIDE FIRESTOPPING TO FILL MISCELLANEOUS VOIDS AND OPENINGS IN FIRE RATED CONSTRUCTION IN A MANNER ESSENTIALLY THE SAME AS SPECIFIED HEREIN BEFORE.

INSTALLING THROUGH PENETRATION FIRESTOPS

GENERAL: COMPLY WITH THE THROUGH PENETRATIONS FIRESTOP MANUFACTURER'S INSTALLATION INSTRUCTIONS AND DRAWINGS PERTAINING TO PRODUCTS AND APPLICATIONS INDICATED.

INSTALL FILL MATERIALS FOR THROUGH PENETRATION FIRESTOP SYSTEMS BY PROVEN TECHNIQUES TO PRODUCE THE FOLLOWING RESULTS:

63.01 COMPLETELY FILL VOIDS AND CAVITIES FORMED BY OPENINGS, FORMING MATERIALS, ACCESSORIES, AND PENETRATING ITEMS.

63.02 APPLY MATERIALS SO THEY CONTACT AND ADHERE TO SUBSTRATES FORMED BY OPENINGS AND PENETRATING ITEMS.

63.03 FOR FILL MATERIALS THAT WILL REMAIN EXPOSED AFTER COMPLETING WORK, FINISH TO PRODUCE SMOOTH, UNIFORM SURFACES THAT ARE FLUSH WITH ADJOINING FINISHES.

INSTALLING FIRE RESISTIVE JOINT SEALANTS

GENERAL: COMPLY WITH ASTM C1193, AND WITH THE SEALANT MANUFACTURER'S INSTALLATION INSTRUCTIONS AND DRAWINGS PERTAINING TO PRODUCTS AND APPLICATIONS INDICATED.

INSTALL JOINT FILLERS TO PROVIDE SUPPORT OF SEALANTS DURING APPLICATION AND AT POSITION REQUIRED TO PRODUCE THE CROSS SECTIONAL SHAPES AND DEPTHS OF INSTALLED SEALANTS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY AND DEVELOP FIRE RESISTANCE RATING REQUIRED.

INSTALL SEALANTS BY PROVEN TECHNIQUES RESULTING IN SEALANTS DIRECTLY CONTACTING AND FULLY WETTING JOINT SUBSTRATES, COMPLETELY FILLING RECESSES PROVIDED FOR EACH JOINT CONFIGURATION, AND HAVING UNIFORM, CROSS SECTION SHAPES AND DEPTHS THAT MAXIMIZE SEALANT MOVEMENT CAPABILITY. INSTALL SEALANTS AT THE SAME TIME JOINT FILLERS ARE INSTALLED.

TOOL NO SAG SEALANTS IMMEDIATELY AFTER SEALANT APPLICATION AND PRIOR TO THE TIME SKINNING OR CURING BEGINS. FORM SMOOTH, UNIFORM BEADS OF CONFIGURATION INDICATED OR REQUIRED TO PRODUCE FIRE RESISTANCE RATING, AS WELL AS TO ELIMINATE AIR POCKETS, AND TO ENSURE CONTACT AND ADHESION OF SEALANTS WITH SIDES OF JOINT. REMOVE EXCESS SEALANT FROM SURFACES ADJACENT TO JOINT. DO NOT USE TOOLING AGENTS THAT DISCOLOR SEALANTS OR ADJACENT SURFACES OR ARE NOT APPROVED BY SEALANT MANUFACTURER.

FIELD QUALITY CONTROL

INSPECTING AGENCY EMPLOYED AND PAID BY NYCHA WILL EXAMINE COMPLETED FIRESTOPPING TO DETERMINE, IN GENERAL, IF IT IS BEING INSTALLED IN COMPLIANCE WITH REQUIREMENTS.

INSPECTING AGENCY WILL REPORT OBSERVATIONS PROMPTLY AND IN WRITING TO CONTRACTOR AND NYCHA.

DO NOT PROCEED TO ENCLOSE FIRESTOPPING WITH OTHER CONSTRUCTION UNTIL REPORTS OF EXAMINATIONS ARE ISSUED.

WHERE DEFICIENCIES ARE FOUND, REPAIR OR REPLACE FIRESTOPPING SO THAT IT COMPLIES WITH REQUIREMENTS.

CLEANING

CLEAN OFF EXCESS FILL MATERIALS AND SEALANTS ADJACENT TO OPENINGS AND JOINTS AS WORK PROGRESSES BY METHODS AND WITH CLEANING MATERIALS APPROVED BY MANUFACTURERS OF FIRESTOPPING PRODUCTS AND OF PRODUCTS IN WHICH OPENING AND JOINTS OCCUR.

END OF SECTION 07 84 00