SECTION 078400

FIRESTOPPING

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**NOTE TO SPECIFIER**

*Use this Specification Section for Mail Processing Facilities.*

***This is a Type 1 Specification with completely editable text; therefore, any portion of the text can be modified by the A/E preparing the Solicitation Package to suit the project.***

*For Design/Build projects, do not delete the Notes to Specifier in this Section so that they may be available to Design/Build entity when preparing the Construction Documents.*

*For the Design/Build entity, this specification is intended as a guide for the Architect/Engineer preparing the Construction Documents.*

*The MPF specifications may also be used for Design/Bid/Build projects. In either case, it is the responsibility of the design professional to edit the Specifications Sections as appropriate for the project.*

*Text shown in brackets must be modified as needed for project specific requirements.* *See the “Using the USPS Guide Specifications” document in Folder C for more information.*

*The last date that USPS revised this standard specification section occurs in two places, at the end of this section and in the Table of Contents. If the date in this section matches the date in the Table of Contents, then you are using the latest version. Do not delete or revise the “last revised” date at the end of the section during the development of the Project Manual.*

*The footer in this section should be edited to replace the text, “USPS MPF SPECIFICATION” with the project name, and the blank date in the center should be replaced with the submission date, for interim design reviews, or the issue date of the completed Project Manual.*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

1. GENERAL
   1. SUMMARY
      1. Section Includes:
         1. Firestopping in fire-rated wall assemblies.
      2. Related Documents: The Contract Documents, as defined in Section 011000 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other documents.
   2. REFERENCES
      1. American Society for Testing and Materials (ASTM):
         1. ASTM E 119 - Test Methods for Fire Tests of Building Construction and Materials.
         2. ASTM E 814 - Test Methods for Fire Tests of Through Penetration Fire Stops.
      2. Underwriters' Laboratories, Inc. (UL):
         1. UL 1479 - Fire Tests of Through-Penetration Firestops.
   3. DEFINITIONS
      1. Firestopping: Sealing material or assembly placed in spaces between building materials to stop movement of smoke, heat, gasses, or fire through wall openings.
   4. SYSTEM DESCRIPTION
      1. Firestopping Materials: ASTM E 119, ASTM E 814, UL 1479 to achieve a fire rating as indicated on Drawings.
   5. SUBMITTALS
      1. Section 013300 - Submittal Procedures: Procedures of submittals.
         1. Product Data: Product characteristics, performance, and limitation criteria.
         2. Assurance/Control Submittals:
            1. Certificates: Manufacturer's certificate that Products meet or exceed specified requirements.
            2. Qualification Documentation: Firestopping installer documentation of experience indicating compliance with specified qualification requirements.
   6. QUALITY ASSURANCE
      1. Installer Qualifications: Company specializing in performing work of this Section with minimum 5 years documented experience.
   7. DELIVERY, STORAGE, AND HANDLING
      1. Deliver Products in manufacturer's original unopened containers or packages with labels intact, identifying product and manufacturer, date of manufacture, lot number, shelf life, curing time, and mixing instructions, where applicable.
      2. Store and handle materials to prevent deterioration or damage due to moisture, temperature changes, contaminants, or other causes.
   8. PROJECT CONDITIONS OR SITE CONDITIONS
      1. Environmental Requirements:
         1. Do not install materials when temperature of substrate material and ambient air is below 60 degrees F.
         2. Maintain minimum temperature before, during, and for 3 days after installation of materials.
         3. Keep away from heat, open flame, sparks, or other sources of ignition until curing is complete. Use only with adequate ventilation.
2. PRODUCTS
   1. MANUFACTURERS
      1. Subject to compliance with project requirements, manufacturer's offering firestopping materials which may be incorporated in the work include the following:
         1. Nelson Firestop Products, Tulsa, OK (800) 331-7325.
         2. Hilti Firestop Systems, Tulsa, OK (800) 879-8000.
         3. The Rectorseal Corporation, Houston, TX (800) 231-3345.
         4. Specified Technologies, Incorporated (STI), Somerville, NJ (800) 992-1180.
         5. 3M Fire Protection Products, St. Paul, MN (800) 328-1687.
         6. Tremco Firestop System, Beechwood, OH (800) 321-7906.
         7. Specified Technologies, Inc., Somerville, NJ (800) 992-1180.
      2. Other products such as USG Firestop System by U.S. Gypsum Co. are acceptable if complying with requirements.
      3. Section 016000 - Product Requirements: Product options and substitutions. Substitutions: Permitted.
   2. MATERIALS
      1. Intumescent Latex Sealant: Single-component, intumescent, latex formulation.
         1. LBS, by Nelson Firestop Products.
         2. Metacaulk 950 or 1000, by RectorSeal.
         3. SpecSeal SSS100, by STI.
         4. CP 25WB+, by 3M.
         5. TREMstop WBM, by Tremco.
      2. Intumescent Solvent-Release-Curing Sealant: Single component, intumescent, synthetic-polymer based, non-sag grade.
         1. CP 25N/S, by 3M.
         2. TREMstop WBM, by Tremco.
      3. Intumescent Wrap/Strip: Single-component, elastomeric sheet with aluminum foil on one face.
         1. WRS, by Nelson Firestop Products.
         2. Metacaulk Wrap Strip, by RectorSeal.
         3. SpecSeal SSWRED Wrapstrip, by STI.
         4. FS-195+ Wrap/Strip, by 3M.
         5. TREMstop WS, by Tremco.
      4. Intumescent Putty: Single-component, non-hardening, dielectric, intumescent putty.
         1. FSP, by Nelson Firestop Products.
         2. Metacaulk Fire Rated Putty, by RectorSeal.
         3. SpecSeal Putty, by STI.
         4. Moldable Putty+, by 3M.
      5. Silicone Sealant: Single-component, moisture-curing, silicone-based elastomeric, non-sag grade.
         1. CLK N/S, by Nelson Firestop Products.
         2. FS 601, by Hilti.
         3. Metacaulk 835+, by RectorSeal.
         4. SpecSeal PEN 300, by STI.
         5. 2000+ Silicone, by 3M.
         6. FYRE SIL, by Tremco.
      6. Silicone Foam: Two-component, silicone-based liquid elastomer that, when mixed, expands and cures in place to produce a flexible, nonshrinking foam.
         1. FS Fireblocks, by Hilti.
         2. SpecSeal PEN 200, by STI.
         3. 2001 Silicone RTV Foam, by 3M.
      7. Intumescent Collar: Factory-fabricated, intumescent collar.
         1. PCS, by Nelson Firestop Products.
         2. CP 642, by Hilti.
         3. Metacaulk Pipe Collar, by RectorSeal.
         4. SpecSeal SSC Collars, by STI.
         5. Plastic Pipe Device, by 3M.
         6. TREMstop D, by Tremco.
      8. Intumescent Composite Sheet or Pillows and Mortar: Intumescent sheet used to firestop large openings.
         1. CPS, by Nelson Firestop Products.
         2. SpecSeal SSB Pillows and SpecSeal SSM Firestop Compound, by STI.
         3. CS-195+ Composite Sheet, by 3M.
         4. TREMstop PS, by Tremco.
      9. Fire Rated Cable Pathway Devise for low voltage and optical fiber cabling.
         1. EZ-Path Firestop System by Specified Technologies, Inc.
      10. Packing Material: Manufacturer's standard mastic, putty, ceramic fiber blanket, or mineral wool to be used as fill or backing material for firestopping.
          1. FSB or Mineral Wool, by Nelson Firestop Products.
          2. Mineral Wool, by Hilti.
          3. Fire Safing or Backer Rod, by RectorSeal.
          4. Mineral Wool Safing, by STI.
          5. FireMaster Mastic, FireMaster Putty, or FireMaster Bulk, by 3M.
          6. Cerablanket, by Tremco.
3. EXECUTION
   1. EXAMINATION
      1. Section 017300 - Execution: Verification of existing conditions before starting work.
      2. Verification of Conditions: Verify that field measurements, surfaces, and conditions are as required, and ready to receive Work.
      3. Report in writing to Contracting Officer prevailing conditions that will adversely affect satisfactory execution of the Work of this Section. Do not proceed with Work until unsatisfactory conditions have been corrected.
      4. By beginning Work, Contractor accepts conditions and assumes responsibility for correcting unsuitable conditions encountered at no additional cost to United States Postal Service.
   2. PREPARATION
      1. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter which may affect bond of firestopping material.
      2. Remove incompatible materials which may affect bond.
      3. Place hangers or damming materials in penetration to hold firestopping materials where required.
   3. INSTALLATION
      1. Follow manufacturer charts for appropriate material to achieve required fire rating in various locations.
      2. Install firestopping at penetrations of fire rated wall materials by sleeves, piping, ductwork, conduit, and other items in accordance with manufacturer's published instructions.
   4. CLEANING AND PROTECTION
      1. Clean excessive fill materials and sealants adjacent to openings and joints as work progresses by methods and with cleaning materials approved by manufacturer's of firestopping Products and of products in which opening and joints occur.
      2. Protect firestopping during and after curing period from contact with contaminating substances or from damage resulting from construction operations.
      3. If damage occurs, cut out and remove damaged or deteriorated firestopping and install new materials.
   5. FIELD QUALITY CONTROL
      1. Section 014000 - Quality Requirements: Inspection procedures.
      2. Contracting Officer will inspect each firestopping installation. Do not cover firestopping installations that will be concealed by other construction until Contracting Officer inspection.
   6. SCHEDULES
      1. Provide firestopping complying with UL assemblies specified below.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Penetration | Assembly | Nelson | Hilti | RectorSeal | STI | 3M | Tremco |
| Metal Pipe | CMU Wall 8" Thick or Less | CAJ1224 or  CAJ1203 | CAJ1150 or  CAJ1158 | CAJ1114 or  CAJ1115 | CAJ1079 or  CAJ1217 | CAJ1001 or CAJ1009 | CAJ1179 or  CAJ1187 |
|  | Gypsum Board Partition | WL1083 or  WL1030 | WL1052 or  WL1054 | WL1026 or  WL1034 | WL1049 or  WL1079 | WL1003 or WL1009 | WL1020 or  WL1051 |
| Non-Metallic Pipe | CMU Wall 8" Thick or Less | CAJ2086 | CAJ2095 or  CAJ2109 | CAJ2021 or  WJ2025 | CAJ2064 or  CAJ2045 | CAJ2005 | CAJ2082 or  FA2024 |
|  | Gypsum Board Partition | WL2071 | WL2078 | WL2015 or  WL2104 | WL2093 or  WL2029 | WL2002 or WL2005 | WL2083 or  WL2082 |
| Cable Tray | CMU Wall 8" Thick or Less | CAJ8049 or CAJ4033 | CAJ4017 | CAJ8043 | CAJ4020 or  CAJ4029 | CAJ4003 or CBJ4020 | CAJ4007 or  WJA4005 |
|  | Gypsum Board Partition | WL4003 | WL4006 | N/A | WL4005 or  WL4008 | WL4004 | WL3043 or  WL3044 |
| Insulated Metal Pipe | CMU Wall 8"  thick or Less | CAJ5008 or CAJ5059 | CAJ5045 | WJ5016 or  CAJ5070 | CAJ5021 or  CAJ5029 | CAJ5001 or CAJ5002 | CAJ5052 or  CBT5005 |
|  | Gypsum Board Partition | WL5036 | WL5022 or  WL5029 | WL5057 | WL5014 or  WL5051 | WL5001 | WL5034 |
| Construction Gaps | CMU Wall to Metal Deck | N/A | HW-D-0008 | TRC/PV120-14 | U900Z020 | U900Z028 | U900Z013 or  U900Z014 |
|  | Gypsum Board Partition to Metal Deck | N/A | HW-D-0003 or  HW-D-0004 | HWD0014 or  TRC/PV120-14 | HWD1001 | U400V | WHPV60.01 or  U900Z014 |

END OF SECTION

USPS MPF Specification Last Revised: 10/1/2022