SECTION 07 8400

FIRESTOPPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Firestopping perimeter of and penetrations through fire rated assemblies.

B. Related Sections:
1. Division 01: Administrative, procedural, and temporary work requirements.

1.2 REFERENCES

A. ASTM International (ASTM):
1. E814 - Standard Test Method for Fire Tests of Through-Penetration Firestops.
2. E1966 - Standard Test Method for Fire-Resistive Joint Systems.

B. Underwriters Laboratories, Inc. (UL):
1. 1479 - Fire Tests of Through-Penetration Firestops.
2. 2079 - Fire Resistance of Building Joint Systems.

1.3 SYSTEM DESCRIPTION

A. Provide continuous protection against passage of heat, fire, smoke, and gases at perimeter of and penetrations through rated assemblies.

1.4 SUBMITTALS

A. Submittals for Review:
1. Product Data:
a. Firestopping schedule; prepare in tabular format and identify:
1) Type of assembly receiving firestop and required fire rating.
2) Type of penetrating item.
3) Proposed firestop system.
b. Include UL or equivalent details for each firestop system.
2. Test Reports: Indicate conformance with ASTM E814, ASTM E1966, UL 1479, or UL 2079.

B. Quality Control Submittals:
1. Certificates of Compliance: Indicate conformance of installed systems with specified requirements.

1.5 QUALITY ASSURANCE

A. Applicator Qualifications: Minimum 5 years experience in work of this Section.

B. Fire-stopping: Fire resistance rating equivalent to adjacent construction; tested to ASTM E814, ASTM E1966, UL 1479, or UL 2079.

1.6 PROJECT CONDITIONS

A. Do not apply sealants, mortars, or putties when temperature of substrate material and surrounding air is below 40 degrees F or is anticipated to drop below that temperature within 24 hours after installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturers:
   1. Hilti, Inc. (www.us.hilti.com)
   2. 3M Fire Protective Products. (www.3m.com)
   3. Nelson Firestop Products. (www.nelsonfirestop.com)
   4. Specified Technologies, Inc. (www.stifirestop.com)
   5. Tremco, Inc. (www.tremcosealants.com)
   6. Or equal

2.2 MATERIALS

A. Fire-stopping: One or more of the following:
   1. Silicone elastomer compound: Single or multiple component, low modulus, moisture curing silicone sealant.
   2. Ceramic sealant: Single component, moisture curing ceramic sealant.
   3. Intumescent sealant: Single component, water based intumescent sealant.
   4. Acrylic sealant: Single component acrylic sealant, suitable for painting.
   5. Putty: Single component ceramic fiber base putty or intumescent elastomer putty that expands on exposure to surface heat gain.
   6. Mortar: Hydraulic cementitious mortar.
   7. Pillows or blocks: Formed intumescent or mineral fiber pillows or blocks.
   8. Intumescent strips: Solvent free intumescent wrap strips.
   9. Mechanical devices: Incombustible fillers or silicone elastomer covered with sheet stainless steel jacket, joined with collars, penetration sealed with flanged stops.
   10. Cast-in-place devices: Containing intumescent material and smoke/water seals.

2.3 ACCESSORIES

A. Forming and Damming Materials: As recommended by fire-stopping manufacturer for intended use.
   1. Permanent: Mineral fiber board, mineral fiber matting, or mineral fiber putty.
   2. Temporary: Plywood, particle board, or other.

PART 3 - EXECUTION

3.1 PREPARATION

A. Prepare openings to receive fire-stopping as directed by manufacturer:
   1. Remove incidental and loose materials from penetration opening.
   2. Remove free liquids and oil from involved surfaces and penetration components.
   3. Install damming materials to accommodate and ensure proper thickness and fire rating requirements and provide containment during installation.
   4. Remove combustible materials and materials not intended for final penetration seal system.

3.2 INSTALLATION

A. Install fire-stopping at perimeter of and penetrations through fire rated assemblies.

B. Apply materials in accordance with manufacturer's instructions.

C. Apply fire-stopping material in sufficient thickness to achieve required ratings.

D. Compress fibered material to achieve a density of 40 percent of its uncompressed density.

E. Place foamed material in layers to ensure homogenous density, filling cavities and spaces. Place sealant to completely seal junctions with adjacent dissimilar materials.

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F. Place intumescent coating in sufficient coats to achieve rating required.

G. Remove dam material after fire-stopping material has cured.

H. Finish exposed surfaces to smooth, flush appearance.

END OF SECTION