System No. C-AJ-2811

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<tr>
<th>ANSI/UL1479 (ASTM E814)</th>
<th>CAN/ULC S115</th>
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<td>F Rating - 3 Hr</td>
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<td>T Rating - 3 Hr</td>
<td>FT Rating - 3 Hr</td>
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<td>L Rating At Ambient - Less Than 1 CFM/ft²</td>
<td>FH Rating - 3 Hr</td>
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<td>L Rating At 400 F - Less Than 1 CFM/ft²</td>
<td>FTH Rating - 3 Hr</td>
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L Rating At Ambient - Less Than 5.1 L/s/m²
L Rating At 400 F - Less Than 5.1 L/s/m²

System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

1. **Floor or Wall Assembly** - Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 8 in. (203 mm).
   See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Steel Sleeve** - (Optional, not shown) - Nom 8 in. (203 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe or nom 8 in. (203 mm) diam (or smaller) No. 24 GA (0.028 in. or 0.71 mm thick) sheet metal sleeve with square flange spot welded to the sleeve at approx mid-height and sized to be a min of 2 in. (51 mm) larger than the sleeve diam cast or grouted into floor or wall assembly, flush with floor or wall surfaces.

3. **Through Penetrants** - One nonmetallic pipe or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between the pipe and the periphery of the opening shall be min 0 in. (point contact) to max 1-3/8 in. (35 mm). Pipe or conduit to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of nonmetallic pipe may be used:
   A. **Polyvinyl Chloride (PVC) Pipe** - Nom 6 in. (152 mm) diam (or smaller) Schedule 40 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
   B. **Rigid Nonmetallic Conduit+** - Nom 6 in. (152 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70).
   C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** - Nom 6 in. (152 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.
4. **Firestop System** - The firestop system shall consist of the following:

A. **Fill, Void or Cavity Materials** - **Wrap Strip** - Nom 3/8 in. (10 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (38 mm) wide strips. Two layers of wrap strip are individually or continuously wrapped around the through penetrant. When wrap strips are individually wrapped, ends of wrap strips shall be butted and held in place with tape. Butted ends in successive layers may be aligned or offset. The edge of the wrap strips shall abut the surface of the concrete floor or wall assembly. In floors, the two layers of wrap strip are installed on the bottom side of the concrete floor. In wall assemblies, the two layers of wrap strips are installed on each side of the concrete wall.

**SPECIFIED TECHNOLOGIES INC** - SpecSeal SSW375-12 Wrap Strip

B. **Steel Collar** - Collar fabricated from coils of precut 0.016 in. (0.4 mm) thick (30 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be nom 1-1/2 in. (38 mm) deep with min six 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs for securement to the concrete floor or wall. Retainer tabs, 3/4 in. (19 mm) wide tapering down to 1/4 in. (6 mm) wide and located opposite the anchor tabs, are folded 90 degree toward through penetrant surface to maintain the annular space around wrap strips and through penetrant and to retain the wrap strips. Steel collar wrapped around wrap strips and through penetrant with a 1 in. (25 mm) wide overlap along its perimeter joint and secured together by means of a min 1/2 in. (13 mm) wide by 0.028 in. (0.7 mm) thick stainless steel hose clamp at the mid-height of the collar. Collar secured to concrete surface with 1/4 in. (6 mm) diam by min 1-1/4 in. (32 mm) long steel concrete screws in conjunction with min 1 in. (25 mm) diam steel fender washers through each of a min of six symmetrically-located anchor tabs. As an alternate to the steel concrete screws, nom 1-1/4 in. (32 mm) long steel powder actuated fasteners provided with 3/4 in. (19 mm) diam steel washers may be used to secure anchor tabs. In floor assemblies, one collar is used on the bottom side of the concrete floor. In wall assemblies, a collar is used on each side of the concrete wall.

C. **Fill, Void or Cavity Material** - **Sealant** - Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall. At point contact location between penetrating item and concrete, a min 1/4 in. (6 mm) diam bead of fill material shall be applied at the pipe/concrete interface on the top surface of floor or on both surfaces of wall.

**SPECIFIED TECHNOLOGIES INC** - SpecSeal Series SSS Sealant or SpecSeal LCI Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.