FIRESTOP SUBMITTAL PACKAGE

PROJECT:						
SUBMITTED B	Y:					





HVAC Duct Work

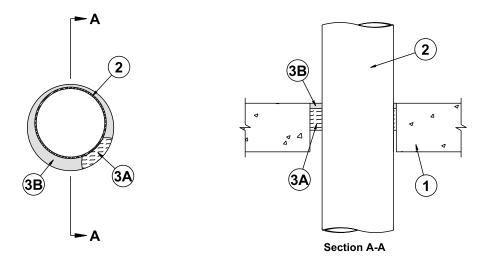
Concrete Floors

	Concrete Floors	
SYSTEM	DESCRIPTION	PRODUCT(S)
C-AJ-7023	Round steel duct (28 gauge).	SSS Sealant
C-AJ-7027	Rectangular steel duct (24 gauge)	SSS Sealant
	Masonry Walls	
SYSTEM	DESCRIPTION	PRODUCT(S)
W-J-7005	Max. 24-in. diam round steel duct. Caulk only.	SSS Sealant
W-J-7007	Max. 100 x 100-in. steel duct. Caulk only.	SSS Sealant
W-J-7011	Rectangular steel duct with 1-1/2-in. thick fiberglass duct wrap.	SSS, RED WS
W-J-7012	Max. 24 x 24-in. steel duct. Caulk only. No retaining angles.	SSS Sealant
W-J-7013	Flat oval steel duct (24 gauge)	SSS Sealant
	Gypsum Board Walls	
SYSTEM	DESCRIPTION	PRODUCT(S)
W-L-7025	Max. 100 x 100-in. steel duct. Caulk only.	SSS Sealant
W-L-7026	Max. 24-in. diam round steel duct. Caulk only.	SSS Sealant
W-L-7028	Rectangular steel duct with 1-1/2-in. thick fiberglass duct wrap.	SSS, RED WS
W-L-7029	Max. 24 x 24-in. steel duct. Caulk only. No retaining angles.	SSS Sealant
W-L-7033	Flat oval steel duct (24 gauge)	SSS Sealant
W-L-7066	Max. 6-in. round steel duct. Shaft wall assembly.	SSS Sealant
W-L-7090	Max. 8 x 8-in. exhaust duct. Shaft wall assembly.	SSS Sealant

General Certificate of Conformance

Product Data Sheets Series SSS Intumescent Sealant Series RED Wrap Strip

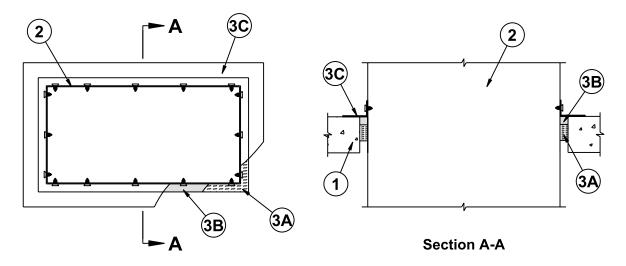
Material Safety Data Sheets Series SSS Intumescent Sealant Series RED Wrap Strip



January 06, 1999 F Rating — 2 Hr T Rating — 0 Hr

- 1. **Floor or Wall Assembly** Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 8 in.
 - See Concrete Block (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- 2. **Steel Duct** Nom 6 in. diam (or smaller) No. 28 gauge (or heavier) steel duct or nom 4 in. diam (or smaller) No. 30 gauge (or heavier) steel duct. One steel duct to be installed either concentrically or eccentrically within the firestop system. The annular space between the steel duct and the periphery of the opening shall be min 1/4 in. to a max 1-3/4 in. Steel duct to be rigidly supported on both sides of floor or wall assembly.
- 3. Firestop System The firestop system shall consist of the following:
 - A. **Packing Material** Min 2 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
 - B. **Fill, Void or Cavity Material* Sealant** Min 1/2 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall assembly.

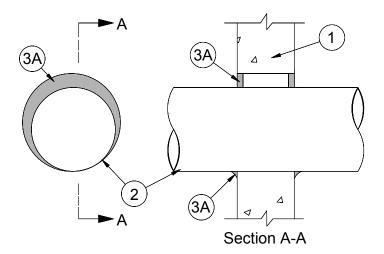
SPECIFIED TECHNOLOGIES INC — SpecSeal 100, 101, 102 or 105 Sealant



September 18, 1996

F Rating — 2 Hr T Rating — 0 Hr

- Floor or Wall Assembly Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max area of opening is 364 sq in. with max dimensions of 26 in.
- See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers. **Steel Duct** Nom 24 by 12 in. (or smaller) No. 24 gauge (or heavier) steel duct. One duct to be installed within the firestop system with a nom 1 in. annular space. Steel duct to be rigidly supported on both sides of floor or wall assembly.
- **Firestop System** The firestop system shall consist of the following:
 - Packing Material Min 2 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor and from both surfaces of wall as required to accommodate the required thickness of fill material.
 - Fill, Void or Cavity Material* Sealant Min 1 in. thickness of fill material applied within the annulus, flush with top surface of floor and both surfaces of wall.
 - SPECIFIED TECHNOLOGIES INC SpecSeal 100, 101, 102 or 105 Sealant
 - Steel Angle Min 2 in. wide by 2 in. high by 0.108 in. thick steel angle cut to fit the contour of the duct with a 1 in. lap on the top surface of floor or both surfaces of wall. Legs of angles secured to duct with min two No. 12 by 3/4 in. sheet metal screws per side, spaced a max 4 in. OC.



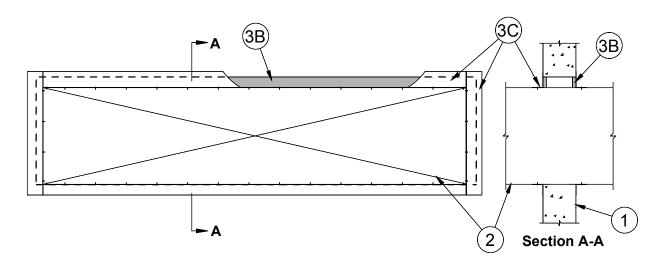
F Rating — 2 Hr T Rating — 0 Hr

- Wall Assembly Min 6 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks* Max diam of opening is 25-1/2 in.

 See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

 Steel Duct — Nom 24 in. diam (or smaller) No. 28 gauge (or heavier) galv steel vent duct or No. 24 gauge (or heavier) spiral wound
- galv steel duct. One steel duct to be installed either concentrically or eccentrically within the firestop system. An annular space of min 0 in. (point contact) to max 1-1/2 in. is required within the firestop system. Steel duct to be rigidly supported on both sides of the wall
- Fill, Void or Cavity Material* Sealant Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall. At the point contact location between through penetrant and concrete, a min 3/8 in. diam bead of fill material shall be applied at the through penetrant/concrete interface on both surfaces of wall.

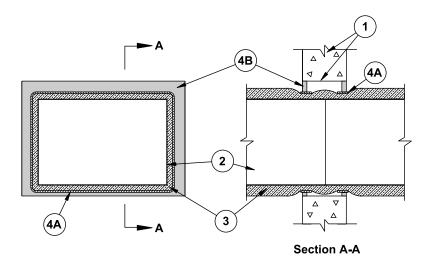
SPECIFIED TECHNOLOGIES INC — SpecSeal 100, 101, 102, 105, 120 or 129 Sealant.



F Rating — 2 Hr T Rating — 1/2 Hr

- Wall Assembly Min 6 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks* Max area of opening is 73.67 sq ft with max dimension of 104 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- 2. **Steel Duct** Nom 100 in. by 100 in. (or smaller) No. 24 gauge (or heavier) galv steel duct to be installed either concentrically or eccentrically within the firestop system. The space between the steel duct and periphery or opening shall be min 0 in. (point contact) to max 2 in. Steel duct to be rigidly supported on both sides of the wall assembly.
- 3. **Firestop System** The firestop system shall consist of the following:
 - A. **Packing Material** (Optional, Not Shown) Polyethylene backer rod, mineral wool batt insulation or fiberglass batt insulation friction fitted into annular space of opening. Packing material to be recessed from both surfaces of wall as required thickness of fill material.
 - B. **Fill, Void or Cavity Material* Sealant** Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point contact location between steel duct and concrete wall, a min 1/4 in. diam bead of fill material shall be applied at the concrete/steel duct interface on both surfaces of wall assembly.
 - SPECIFIED TECHNOLOGIES INC SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

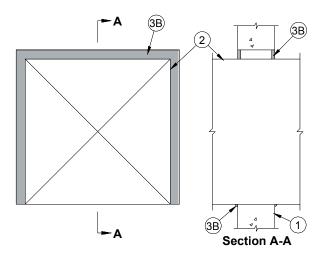
 C. Steel Retaining Angles Min No. 16 gauge galv steel angles sized to lap steel duct a min of 2 in. and lap wall surfaces a min 1 in. Angles attached to steel duct on both sides of wall with min No. 10 by 1/2 in. long steel sheet metal screws spaced a max of 1 in. from each end of steel duct and spaced a max 6 in. OC.



December 16, 1998 F Rating — 2 Hr T Rating — 3/4 Hr

- Wall Assembly Min 6 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may be constructed of any UL Classified Concrete Blocks*. Rectangular opening in wall to be max 4-3/4 in. higher and wider than steel duct (Item 2). Max area of opening is 364 sq in. with a max single dimension of 22-3/4 in.
 - See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Steel Duct Nom 18 by 12 in. (or smaller) No. 24 gauge (or heavier) steel duct to be installed within the opening. Min clearance between the duct and the edge of opening in wall is 1-1/2 in. Steel duct to be rigidly supported on both sides of the wall assembly.
- Batt and Blankets* Max 1-1/2 in. thick light density (min 3/4 pcf) glass fiber blanket insulation jacketed on the outside with a foil-scrim-kraft facing. Longitudinal and transverse joints sealed with foil-scrim-kraft tape. During the installation of the blanket insulation, blanket to be compressed approx 50 percent in thickness such that the annular space within the firestop system shall be min 1/2 in. to max 2 in.
 - See Batts and Blankets (BKNV) category in the Building Materials Directory for names of manufacturers. Any batt or blanket meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
- Firestop System The firestop system shall consist of the following:
 - Fill. Void or Cavity Material* Wrap Strap Nom 1/4 in. thick intumescent material faced on both sides with a plastic film. supplied in 1-1/2 in. wide strips. Single layer of wrap strip wrapped around to compress the duct insulation (Item 3) with the ends butted and and held in place by means of two layers of foil tape. Wrap strip installed such that 1-1/4 in. of the wrap strip extends into the wall. One set of wrap strips to be installed on each side of the wall.
 - SPECIFIED TECHNOLOGIES INC SpecSeal RED Wrap Strip
 Fill, Void or Cavity Material* Sealant Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of the wall. A min 1/4 in. bead of fill material shall be applied at the wrap strip/ insulated through-penetrant interface on both sides of the wall.

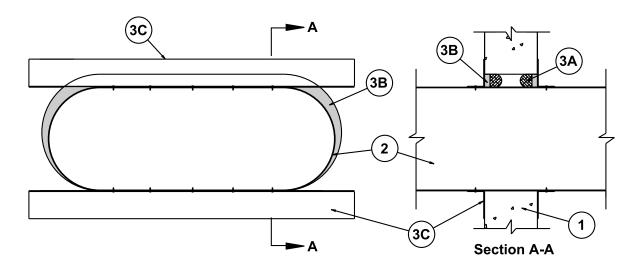
SPECIFIED TECHNOLOGIES INC — SpecSeal 100, 101,102 or 105 Sealant



F Rating — 1 Hr T Rating — 1/4 Hr

- Wall Assembly Min 6 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks* Max area of opening is 690 sq in. with a max single dimension of 27 in. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- 2. **Steel Duct** Nom 24 by 24 in. (or smaller) No. 24 gauge (or heavier) steel duct to be centered within the opening. The space between the steel duct and the periphery of the opening shall be min 0 in. (point contact) to max 1-1/2 in. Steel duct to be rigidly supported on both sides of the wall assembly.
- 3. **Firestop System** The firestop system shall consist of the following:
 - A. **Packing Material** (Optional, Not Shown) Mineral wool batt insulation, foam backer rod or glass fiber insulation installed as a permanent form to facilitate installation of fill material (Item 3B).
 - B. Fill, Void or Cavity Material* Sealant Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. diam bead of fill material applied at steel duct/concrete interface on both surfaces of wall

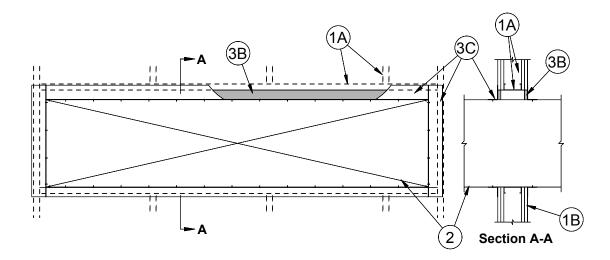
SPECIFIED TECHNOLOGIES INC — SpecSeal 100, 101, 102, 105, 120 or 129 Sealant



January 18, 1999 F Rating — 2 Hr T Rating — 0 Hr

- Wall Assembly Min 6 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max opening shall be 1-1/2 in. larger than the outside dimension of the steel duct. See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- 2. **Steel Duct** Nom 36 by 18 in. (or smaller) No. 24 gauge (or heavier) steel flat oval duct to be installed within the opening. The annular space within the firestop system shall be min 0 in. (point contact) to max 1-1/2 in. Steel duct to be rigidly supported on both sides of the wall assembly.
- 3. **Firestop System** The firestop system shall consist of the following:
 - A. **Packing Material** Polyethylene backer rod, mineral wool batt insulation or fiberglass batt insulation friction fit into annular space. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material (Item 3B).
 - B. **Fill, Void or Cavity Material* Sealant** Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of the wall. At the point contact location between the steel duct and the wall, a min 1/4 in. diam bead of sealant shall be applied at the wall/duct interface on both surfaces of the wall assembly.
 - SPECIFIED TECHNOLOGIES INC SpecSeal Series 100 Sealant

 C. Retaining Angles Min 16 gauge galv steel angles sized to lap duct a min of 2 in. and lap wall surfaces a min 1 in. Angles attached to top and bottom of steel duct on both sides of wall. Angles attached to duct with min 1/2 in. long, No. 10 (or larger) sheet metal screws spaced a max 1 in. from each end of long side of duct and spaced a max 4 in. OC.



System No. W-L-7025 F Ratings — 1 and 2 Hr (See Item 1) T Rating — 1/2 Hr

- Wall Assembly The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs Wall framing shall consist of min 3-5/8 in. wide steel channel studs spaced max 24 in. OC. Additional 3-5/8 in. wide steel studs shall be used to completely frame the opening.
 - **Gypsum Board*** 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U400 Series Design in the UL Fire Resistance Directory. Max area of opening is 73.67 sq ft with a max dimension of 104 in.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

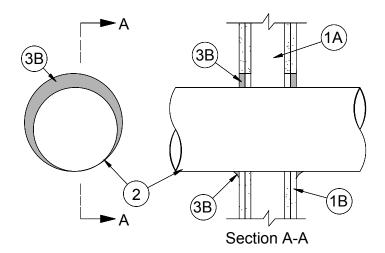
Steel Duct — Nom 100 in. by 100 in. (or smaller) No. 24 gauge (or heavier) galv steel duct to be installed either concentrically or eccentrically within the firestop system. The space between the steel duct and periphery of opening shall be min 0 in. (point contact) to max 2 in. Steel duct to be rigidly supported on both sides of the wall assembly.

- Firestop System The firestop system shall consist of the following:

 A. Packing Material (Optional, Not Shown) Polyethylene backer rod, mineral wool batt insulation or fiberglass batt insulation friction fitted into annular space. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.
- Fill, Void or Cavity Material* Sealant Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Min 1/4 in. diam bead of fill material shall be applied at the point contact location between the steel duct and the gypsum board.

SPECIFIED TECHNOLOGIES INC — SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

C. Steel Retaining Angles — Min No. 16 gauge galv steel angles sized to lap steel duct a min of 2 in. and to lap wall surfaces a min 1 in. Angles attached to steel duct on both sides of wall with min No. 10 by 1/2 in. long steel sheet metal screws spaced a max of 1 in. from each end of steel duct and spaced a max 6 in. OC.



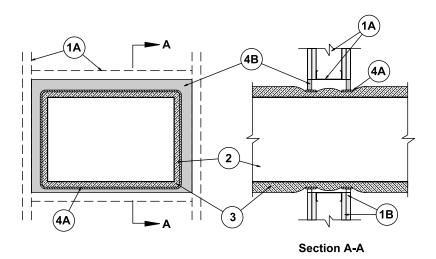
System No. W-L-7026 F Ratings — 1 and 2 Hr (See Item 1) T Rating — 0 Hr

- 1. **Wall Assembly** The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - A. **Studs** Wall framing shall consist of min 3-5/8 in. wide steel channel studs spaced max 24 in. OC. When diam of opening exceeds width of stud cavity, additional lengths of steel stud installed to frame out opening around steel duct (Item 2).
 - B. **Gypsum Board*** 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 25-1/2 in.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

- 2. **Steel Duct** Nom 24 in. diam (or smaller) No. 28 gauge (or heavier) galv steel vent duct or No. 24 gauge (or heavier) spiral wound galv steel duct. One steel duct to be installed either concentrically or eccentrically within the firestop system. An annular space of min 0 in. (point contact) to max 1-1/2 in. is required within the firestop system. Steel duct to be rigidly supported on both sides of the wall assembly.
- 3. **Firestop System** The firestop system shall consist of the following:
 - A. **Packing Material** (Optional, Not Shown) Polyethylene backer rod, mineral wool batt insulation or fiberglass batt insulation friction fit into annular space for 2 hr rated wall assemblies only. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material (Item 3B).
 - B. **Fill, Void or Cavity Material* Sealant** Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Min 1/4 in. diam bead of fill material shall be applied at the point contact location between the steel duct and the gypsum board.

SPECIFIED TECHNOLOGIES INC — SpecSeal 100, 101, 102, 105, 120 or 129 Sealant



January 05, 1999 F Ratings — 1 and 2 Hr (See Item 1) T Rating — 3/4 Hr

- Wall Assembly The 1 or 2 hr fire-rated gypsum wallboard/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs Wall framing shall consist of min 3-5/8 in. wide steel channel studs spaced max 24 in. OC. Additional 3-5/8 in wide steel studs shall be used to completely frame the opening.
 - **Gypsum Board*** 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U400 Series Designs in the UL Fire Resistance Directory. Opening cut in gypsum wallboard layers to be max 4-3/4 in. higher and wider than steel duct (Item 2). Max area of opening is 364 sq.in with a max dimension of 22-3/4 in.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

- Steel Duct Nom 18 by 12 in. (or smaller) No. 24 gauge (or heavier) steel duct to be installed within the framed opening. Min clearance between duct and edge of framed opening in wall is 1-1/2 in. Steel duct to be rigidly supported on both sides of the wall assembly.
- Batts and Blankets* - Max 1-1/2 in. thick light density (min 3/4 pcf) glass fiber blanket insulation jacketed on the outside with a foil-scrim-kraft facing. Longitudinal and transverse joints sealed with foil-scrim-kraft tape. During installation of the blanket insulation, blanket to be compressed approx 50 percent in thickness such that the annular space within the firestop system shall be min

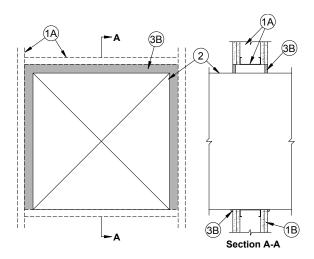
See Batts and Blankets (BKNV) category in the Building Materials Directory for names of manufacturers. Any batt or blanket meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

- Firestop System The firestop system shall consist of the following:
 - Fill, Void or Cavity Material* Wrap Strip Nom 1/4 in. thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. wide strips. Single layer of wrap strip wrapped around to compress the duct insulation (Item 3) with the ends butted and held in place by means of two layers of foil tape. Wrap strip installed such that 1-1/4 in. of the wrap strip extends into the wall. One set of wrap strips to be installed on each side of the wall.

SPECIFIED TECHNOLOGIES INC — SpecSeal RED Wrap Strip

Fill, Void or Cavity Material* — Sealant — Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of the wall. A min 1/4 in. bead of fill material shall be applied at the wrap strip/insulated through-penetrant interface on both sides of the wall.

SPECIFIED TECHNOLOGIES INC — SpecSeal 100, 101, 102 or 105 Sealant



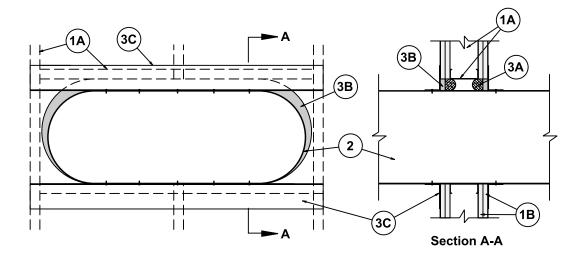
System No. W-L-7029 F Ratings — 1 and 2 Hr (See Item 1) T Rating — 1/4 Hr

- Wall Assembly The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

 - A. **Studs** Wall framing shall consist of min 3-5/8 in. wide steel channel studs spaced max 24 in. OC.

 B. **Gypsum Board*** 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U400 Series Designs in the UL Fire Resistance Directory. Max area of opening is 690 sq in. with max dimension of 27 in.
- Steel Duct Nom 24 by 24 in. (or smaller) No. 24 gauge (or heavier) steel duct to be installed within the opening. The annular space within the firestop system shall be min 0 in. (point contact) to max 2 in. Steel duct to be rigidly supported on both sides of the wall assembly.
- **Firestop System** The firestop system shall consist of the following:
 - Packing Material (Optional, Not Shown) Mineral wool batt insulation, foam backer rod or glass fiber insulation installed as a permanent form to facilitate installation of fill material (Item 3B).
 - Fill, Void or Cavity Material* Sealant Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. Min 1/4 in. diam bead of fill material to be applied at point contact location between the steel duct and the gypsum board.

SPECIFIED TECHNOLOGIES INC — SpecSeal 100, 101, 102, 105, 120 or 129 Sealant *Bearing the UL Classification Mark



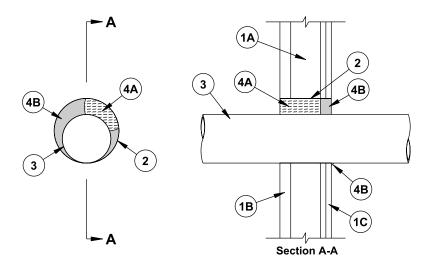
January 18, 1999
F Ratings — 1 and 2 Hr (See Item 1)
T Rating — 0 Hr

- Wall Assembly The 1 or 2 hr fire-rated gypsum wallboard/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - A. **Studs**—Wall framing shall consist of min 3-5/8 in. wide steel channel studs spaced max 24 in. OC. Additional 3-5/8 in. wide steel studs shall be used to completely frame the opening.
 - B. **Gypsum Board*** 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U400 Series Designs in the UL Fire Resistance Directory. Max opening shall be 1-1/2 in. larger than the outside dimension of the steel duct.

The hourly F Rating's of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed.

- 2. **Steel Duct** Nom 36 by 18 in. (or smaller) No. 24 gauge (or heavier) steel flat oval duct to be installed within the framed opening. The annular space within the firestop system shall be min 0 in. (point contact) to max 1-1/2 in. Steel duct to be rigidly supported on both sides of the wall assembly.
- 3. **Firestop System** The firestop system shall consist of the following:
 - A. Packing Material Polyethylene backer rod, mineral wool batt insulation or fiberglass batt insulation friction fit into annular space. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material (Item 3B).
 - B. Fill, Void or Cavity Material* Sealant Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of the wall. At the point contact location between the steel duct and the wallboard, a min 1/4 in. diam bead of sealant shall be applied at the wall/duct interface on both surfaces of the wall assembly.
 - SPECIFIED TECHNOLOGIES INC SpecSeal Series 100 Sealant

 C. Retaining Angles Min 16 gauge galv steel angles sized to lap duct a min of 2 in. and lap wall surfaces a min 1 in. Angles attached to top and bottom of steel duct on both sides of wall. Angles attached to duct with min 1/2 in. long, No. 10 (or larger) sheet metal screws spaced a max 1 in. from each end of long side of duct and spaced a max 4 in. OC.



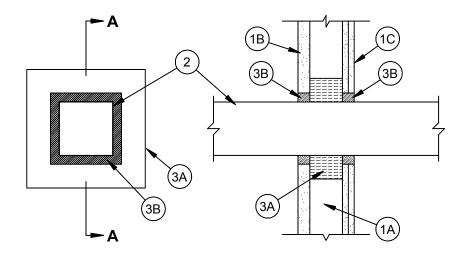
July 24, 2001 F Ratings — 1 and 2 Hr (See Item 1) T Rating — 0 Hr

- 1. **Wall Assembly** The 1 or 2 hr fire-rated gypsum board/stud shaft wall assembly shall be constructed of the materials and in the manner specified in the individual U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:
 - A. **Steel Študs** "C-H" or "C-T" shaped studs, min 2-1/2 in. wide by 1-1/2 in. deep, fabricated from min No. 25 gauge galv steel, spaced max 24 in. OC.
 - B. **Gypsum Board*** 1 in. thick, 24 in. wide gypsum liner panels installed vertically. Max diam of circular cutout in gypsum liner panel is 8 in.
 - C. **Gypsum Board*** 1/2 in. or 5/8 in. thick, 48 in. wide gypsum boards. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of circular cutout in gypsum board is 8 in.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

- 2. **Metallic Seeve** Cylindrical sleeve fabricated from min No. 30 gauge galv sheet steel and having a min 2 in. lap along the longitudinal seam. Length of the sleeve to be equal to the thickness of the wall. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the opening and releasing the coil to let it uncoil against the circular cutouts in the gypsum board layers. The ends of the steel sleeve shall be flush with each surface of the wall.
- 3. **Steel Duct** One nom 6 in. diam (or smaller) min No. 30 gauge galv steel vent duct to be installed either concentrically or eccentrically within the firestop system. The annular space between the vent duct and the periphery of the opening shall be min 0 in. (point contact) to max 2 in. Steel vent duct to be rigidly supported on both sides of the wall assembly.
- 4. **Firestop System** The firestop system consists of the following items:
 - A. Packing Material Min 4 pcf mineral wool batt insulation firmly packed into sleeved opening as a permanent form. Packing material to extend throughout thickness of wall except for a 1 in. deep recess on the finished side of wall to accommodate the fill material.
 - B. **Fill, Void or Cavity Material* Sealant** Min 1 in. thickness of fill material applied within sleeve, flush with finished surface of wall. At the point contact location, a min 3/8 in. diam bead of fill material shall be applied at the penetrant/gypsum board interface.

SPECIFIED TECHNOLOGIES INC — SpecSeal 100, 101, 102, 105, 120 or 129 Sealant



F Ratings — 1 and 2 Hr (See Item 1)
T Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft
L Rating At 400 F — Less Than 1 CFM/sq ft

- 1. **Wall Assembly** The 1 or 2 hr fire-rated gypsum board/stud shaft wall assembly shall be constructed of the materials and in the manner specified in the individual U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:
 - A. **Steel Študs** "C-H" or "C-T" shaped studs, min 2-1/2 in. wide by 1-1/2 in. deep, fabricated from min No. 25 gauge galv steel, spaced max 24 in. OC.
 - B. **Ġypsum Board*** 1 in. thick, 24 in. wide gypsum liner panels installed vertically. Max area of opening is 90 sq in. with max dimension of 9-1/2 in.
 - C. **Gypsum Board*** 1/2 in. or 5/8 in. thick, 48 in. wide gypsum boards. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max area of opening is 90 sq in. with max dimension of 9-1/2 in.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

- 2. **Steel Duct** One nom 8 by 8 in. (or smaller) min No. 28 gauge galv steel vent duct to be installed either concentrically or eccentrically within the firestop system. The annular space between the vent duct and the periphery of the opening shall be min 1/2 in. to max 1 in. Steel vent duct to be rigidly supported on both sides of the wall assembly.
- 3. **Firestop System** The firestop system consists of the following items:
 - A. **Forming Material** Min 4 pcf mineral wool batt insulation compression fit between the gypsum liner panel and the gypsum board as a permanent form within the stud cavity. Height and width of mineral wool batt forming material to be nom 12 by 12 in. and centered around steel duct. Thickness of batt to be min 10 percent greater than the depth of the stud cavity to maintain compression between gypsum liner panel and gypsum board.
 - B. **Fill, Void or Cavity Material* Sealant** Fill material thickness installed to full depth of gypsum board layers on each side of wall assembly.

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200 Evans Way, Suite 2 Somerville, N. J. 08876 Phone: (908) 526-8000 Fax: (908) 526-9623

Fax: (908) 526-9623 Toll Free: (800) 992-1180

GENERAL CERTIFICATE of CONFORMANCE

Description: SpecSeal® Firestop Products

Included Products:

Series SSS Intumescent Sealant	Series SSB Intumescent Firestop Pillows
Series LCI Intumescent Sealant	Series AS100 Elastomeric Spray
Series LC Latex Endothermic Sealant	Series AS200 Elastomeric Spray
Series SSP Intumescent Putty	Series ES100 Elastomeric Sealant
Series EP Power Shield TM Box Insert	Series SSM Firestop Mortar
Series SSWRED Intumescent Wrap Strips	Pensil Series PEN200 Silicone Foam
Series SSWBLU Intumescent Wrap Strips	Pensil Series PEN300 Silicone Sealant
Series SSC Intumescent Firestop Collars	Pensil Series PEN300SL Silicone Sealant
Series LCC Intumescent Firestop Collars	

These products are tested to the following standards where applicable:

ASTM STANDARD:

E 814	Fire Tests of Through-Penetration Fire Stops
E 119	Fire Tests of Building Construction and Materials
E 1966	Fire-Resistive Joint Systems
E 84	Surface Burning Characteristics of Building Materials
E 1399	Cyclic Movement and Measuring the Minimum and Maximum Joint Widths
	of Architectural Joint Systems

UL STANDARD

1479	Fire Tests of Through-Penetration Firestops
263	Fire Tests of Building Construction and Materials
2079	Tests for Fire-Resistance of Building Joint Systems
723	Tests for Surface Burning Characteristics of Building Materials

Chemical Content Statements:

No asbestos, PCB's or water-soluble intumescent ingredients are used or contained in these products.

February 1, 2002

James P. Stahl, Jr. Date

Technical Manager



Specified Technologies, Inc.

PRODUCT DATA SHEET

Specseal Series SSS Intumescent Sealant







FILL, VOID OR CAVITY MATERIALS CLASSIFIED BY UNDERWRITERS LABORATORIES INC. ® FOR USE IN THROUGH-PENETRATION FIRESTOP SYSTEMS.

SEE UL FIRE RESISTANCE DIRECTORY



CLASSIFIED FILL, VOID, OR CAVITY MATERIALS FOR USE IN THROUGH-PENETRATION FIRESTOP SYSTEMS. SEE UL DIRECTORY OF PRODUCTS CERTIFIED FOR CANADA AND UL FIRE RESISTANCE DIRECTORY



FEATURES

- Water-Based for easy installation, cleanup, and disposal.
- Two-Stage Intumescence features extremely fast and directionalized expansion.
- Endothermic Fillers absorb heat & release water.
- High Solids Formula means no shrinkage!
- Sandable & Paintable (when dry)
- **Water-Resistant:** Will not re-emulsify when dry!
- Safe for contact with plastics.
- Red Color for easy identification and inspection.
- Multi Viscosity Grade means excellent caulking properties along with high build capabilities.
- Excellent Smoke Seal
- Low VOC: Safe, No Solvents,

1. PRODUCT DESCRIPTION

SpecSeal® Series SSS Sealant is a latex based, high solids firestop compound. This material, when properly installed, will effectively seal penetration openings against the spread of fire, smoke, toxic gasses and water.

SpecSeal® Series SSS Sealant features STI's patented and proprietary two-stage intumescent technology. When exposed to high temperatures or fire, this material expands aggressively in a highly directionalized fashion to quickly close off voids left by the burning or melting of combustible materials.

SpecSeal® Series SSS Sealant's unique multi-viscosity formula yields a single grade that has excellent caulking properties as well as high build properties on vertical or overhead surfaces. This single grade may be pumped, caulked (standard cartridge or bulk loaded), knifed or troweled. In addition, SpecSeal® SSS does not contain PCB's or asbestos.

SpecSeal® Series SSS Sealant is storage stable (when stored according to the manufacturer's recommendations) and will not separate nor shrink when dried. SpecSeal® Series SSS Sealant will adhere to all common construction and penetrant materials and contains no solvents that might adversely effect plastic pipes or cable jackets.

2. APPLICATIONS

See Table A for a summary application list.

Series SSS Sealant is used to seal through-penetrations as well as construction gaps and blank openings. Series SSS has been tested for use with metallic penetrants up to 30" trade size. This product is also used with other SpecSeal® Products such as SpecSeal® Firestop Collars and Wrap Strips.

3. PHYSICAL PROPERTIES

See Table B.

4. PERFORMANCE

SpecSeal® Series SSS Sealant is the basis for systems that meet the exacting criteria of ASTM E814 (UL1479) as well as to the time-temperature requirements of ASTM E119 (UL263). Systems have been tested for all common forms of construction and most common penetrants with ratings up to 4 hours. STI firestop systems are designed to maximize the fire resistance of the seal by not only sealing off the spread of fire and hot gasses but also by minimizing the amount of heat conducted through the assembly.

5. SPECIFICATIONS

The firestopping sealant shall be a one-part, two-stage intumescent latex compound. The sealant when exposed to high heat or flame shall be capable of expanding a minimum of 8 times. Range of continuing expansion shall be from 230°F to >1,000°F. The sealant shall be thixotropic and shall be capable of caulking or troweling onto vertical surfaces or overhead. The sealant shall be UL Classified and/or FM Systems Approved and tested to the requirements of ASTM E814 (UL1479).

SPECIFIED DIVISIONS

DIV.	7	07840	Through-Penetration Firestopping
DIV.	13	13900	Special Construction Fire Suppression & Supervisory Systems
DIV.	15	15250	Mechanical Insulation – Fire Protection
DIV.	16	16050	Basic Electrical Materials & Methods



Call STI's automated faxing system for the latest Product and System Information toll-free at 888-526-6800!

STI Product Data Sheet • Series SSS Intumescent Sealant • FOD-5001 03/2003



Table A: **APPLICATIONS**

- Metallic Pipes including steel, iron, or copper pipe and tubing through all common constructions.
- **Nonmetallic Pipes, Conduits** &Tubing

including PVC, CPVC, PVDF, PEX, PEX-AL-PEX, ABS, PB through all common constructions.

- Cable, Cable Trays & Bus Duct
- **HVAC Ductwork**
- **Insulated Pipes**
- **Multi-Service Penetrations**

including AC line sets, electrical, telephone, or TV service entrance and interior penetrations.

Complete Wood Floor firestopping package for electrical, plumbing, HVAC, TV and telephone.

Table B:

PHYSICAL PROPERTIES

Product Name Series SSS Sealant

Color Red Odor Mild Latex 9.4 Lb/Gal Density Solids $80\% \pm 2\%$ 8.3

Expansion Begins 230°F (110°C) 1st Stage

350°F (177°C) 2nd Stage

Expansion Range 230°F to >1,000°F

 $(110^{\circ}\text{C to} > 538^{\circ}\text{C})$

Volume Expansion > 500% Free Expansion

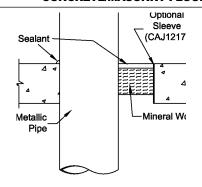
In-Service Temp. 130°F Flame Spread Smoke Development 10* STC Rating

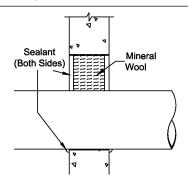
VOC Content** 0.18 lbs/gal (22.0 g/l) * Tested to ASTM E84 (UL723) at 14% surface coverage

(modified test for sealants and caulks)
**ASTM D3960 and EPA Federal Reference Method 24

Shown below and on the following page are just a few of the most common applications for SpecSeal Series SSS Sealant. Consult the Technical Library at www.stifirestop.com for over 200 available designs utilizing this product.

METALLIC PIPE PENETRATIONS -CONCRETE/MASONRY FLOORS & WALLS





UL SYSTEM C-AJ-1079

F Rating: 4 Hr • T Rating: 0 Steel or Iron Pipe: 24", Copper Pipe 6"

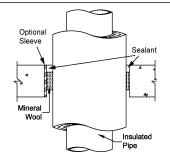
Annulus: Point Contact to 4" • S alant Depth: 1/2" Forming Material: Nom 4 pcf Mineral Wool Thickness: 1-1/2" for 6" Steel or Iron Pipe 3" for 4" Copper or 6" Iron or Steel Pipe

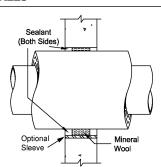
UL SYSTEM C-AJ-1217

F Rating: 4 Hr • T Rating: 0 Steel or Iron Pipe: 30", Copper Pipe 6"

Annulus: Point Contact to 2" • S alant Depth: 1/2" Forming Material: Nom 4 pcf Mineral Wool Tightly Packed to a 3" Depth.

Fig. 2: **INSULATED METALLIC PIPE PENETRATIONS -CONCRETE/MASONRY FLOORS & WALLS**





UL SYSTEM C-AJ-5087

F Rating: 2 Hr • T Rating: 1 Steel or Iron Pipe: 24 Insulated with 2" Thick Fiber Glass or Mineral Wool Pipe Insulation Annulus: 1/2" to 1-1/2" • S alant Depth: 1/2" Forming Material: Nom 4 pcf Mineral Wool Tightly Packed to a 4" Depth.

Pip	e Size					Dia	meter of	Opening ((in.)					
Trade Size	Pipe O.D.	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0	10	12	14	26	
0.5"	0.840	0.61	1.29	3.26	6.01									
1″	1.315	0.20	0.89	2.86	5.60	9.14							*Diff	erent Sealant Depth?
1.5"	1.900			2.12	4.87	8.40								•
2″	2.375			1.32	4.07	7.60	11.92						1/.	
2.5"	2.875				3.04	6.57	10.89						5/ 1"	
3″	3.500				1.47	5.01	9.33	14.43	20.32				_	Multiply by 4 114" Multiply by 5
3.5"	4.000					3.53	7.85	12.96	18.85				<i>''</i>	114 Iviuiupiy by 5
4″	4.500					1.87	6.19	11.29	17.18	31.32	48.60			
6″	6.625							2.01	7.90	22.03	39.31			
8″	8.625									10.04	27.34			
10"	10.750										11.17	31.59		
12"	12.750											13.13		
24"	24.000												39.27	

Thus all systems have been designed to provide T Ratings capable of matching the rating of the wall or floor assembly (where possible) when tested without penetrants.

5. SPECIFICATIONS

See page 1.

6. INSTALLATION INSTRUCTIONS

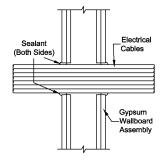
General: Areas to be protected must be clean and free of oil, loose dirt, rust or scale. Installation temperatures must be between 35°F and 100°F. Allow product to dry a minimum of 24 hours before exposure to moisture.

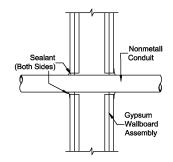
System Selection: Selection of an appropriate firestop system design is critical to the fire protection process. Space limitations preclude highly detailed information pertaining to individual application systems. Please consult the STI Product & Application Guide as well as the UL® Fire Resistance Directory for additional information.

Forming: Some installations may require forming as either an integral part of the system or as an option to facilitate installation. In systems where forming is required, mineral wool batts (1-1/2" to 3" nominal thickness, 4 lb./cu. ft. density) are recommended. Some gypsum wallboard systems utilize fiberglass. Cut forming material over-size to allow for tight packing. Position forming material to allow for the proper depth of fill material.

Fill Material: SpecSeal® Series SSS Sealant may be installed by caulking using a standard caulking gun or from bulk containers using a bulk loading caulk gun, or by manually troweling using a mason's trowel or putty knife. If the sealant tends

Fig. 3: ELECTRICAL, DATA OR COMMUNICATIONS PENETRATIONS - RATED GYPSUM WALLBOARD ASSEMBLIES





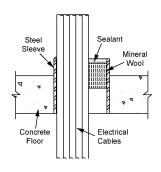
UL SYSTEM W-L-3076

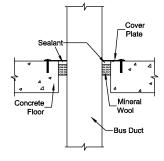
F Rating: 1 or 2 Hr • T Rating: 0 hr Up to 4" Cable Bundle Centered in 4 - 1/2" Opening Sealant Depth: 5/8" with 1/4" Crown

UL SYSTEM W-L-2093

F Rating: 1 or 2 Hr • T Rating: 1, 1-1/2 Hr 2" Rigid PVC, EMMT, or Optical Fiber Raceway. 1-1/4" PVDF Optical Fiber Raceway. Sealant Depth: 5/8" with 1/4" Crown

Fig. 4: ELECTRICAL PENETRATIONS CONCRETE/MASONRY FLOORS & WALLS





UL SYSTEM C-AJ-3154

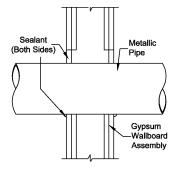
F Rating: 1, 2, 3 & 4 Hr • T Rating: 0, 1/2, & 2 3/4 Hr
Optional Sleeve-PVC or Steel
Electrical, Telephone or Data Cables
Annulus: 0" to 2"
Sealant Depth: 1/2"
Forming Materials: Nom 4 pcf Mineral Wool

Sealant Depth: 1/2" for 1, 2, 3 Hr; 1" for 4 Hr

UL SYSTEM C-AJ-6008 F Rating: 3 Hr • T Rating: 0 Hr

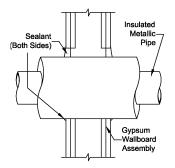
Aluminum or Copper Bus Duct 5,000 Amp
Steel Cover Plate
Sealant Depth: 1/2"
Forming Materials: Nom 4 pcf Mineral Wool
Tightly Packed to a depth of 1-1/2"

Fig. 5: BARE & INSULATED METALLIC PIPE PENETRATIONS - RATED GYPSUM WALLBOARD ASSEMBLIES



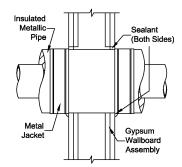
UL SYSTEM W-L-1049

F Rating: 2 hr • T Rating: 0 hr Steel or Iron Pipe: 24", Copper Pipe: 6" Annulus: Point Contact to 1-3/4" Sealant Depth: 5/8" with 3/8" Crown



UL SYSTEM W-L-5014

F Rating: 1 & 2 Hr • T Rating: 1 & 2 hr Steel or Iron Pipe: 12", Copper Pipe: 4" Insulated with 2" Thick Fiber Glass or Mineral Wool Pipe Insulation Annulus: 0" to 1-1/4" Sealant Depth: 5/8" with 3/8" Crown



UL SYSTEM W-L-5051

F Rating: 1 & 2 Hr • T Rating: 3/4, 1, 1-1/2 & 2 Hr Steel or Iron Pipe: 16", Copper Pipe: 6" Foam Glass Pipe Insulation: 1" to 3" Thick 12" Wide 0.010" Thick Metal Jacket Wrapped Around Insulation and Secured with Metal Banding as Shown Annulus: 0" to 1-1/2" Sealant Depth: 5/8"



to pull back from a surface, clean the surface with a damp rag or sponge and reapply. Work sealant into all areas exercising care to eliminate voids or seams. The surface of the sealant can be smoothed using a putty knife dipped in water. Adding water to the sealant itself is not recommended. Sealant (when dry) may be sanded and painted using most non-solvent based paints. In gypsum wallboard penetrations, crown sealant 1/4" from penetrant to wallboard surface at a point approximately 1/2" or more from opening.

Smoke Sealing: In some applications including firestop collars, SpecSeal® Series SSS Sealant is recommended as a smoke seal. It is suggested in these application that the sealant be applied to both sides of walls. In floor applications, a sealing bead is suggested top and bottom.

Cover Plate: In some designs a galvanized steel cover plate (26 gauge) may be used to upgrade the fire resistance rating to 4 hours. Consult STI Product and Application Guide for dimensional and fastening requirements.

7. MAINTENANCE

Inspection: Installations should be inspected periodically for subsequent damage. Any damage should be repaired using SpecSeal® products per the original approved design.

Retrofit: When adding or removing penetrants, care should be

taken to minimize damage to the seal. Reseal using SpecSeal® products per the approved design. NOTE: New penetrants of a different nature than the original design may require a totally new firestop design or extensive modifications to the existing design. Reseal all openings as per the requirements of the modified design.

8. TECHNICAL SERVICE

Specified Technologies Inc. provides toll free technical support to assist in product selection and appropriate installation design. UL Systems, Material Safety Data Sheets and other technical information is available at the Technical Library at www.stifirestop.com or through STI's automated attendant fax back system at 888-526-6800.

9. PRECAUTIONARY INFORMATION

Consult Material Safety Data Sheet for additional information on the safe handling and disposal of this material. Wash areas of skin contact with soap and water. Avoid contact with eyes. SEALANT IS CONDUCTIVE UNTIL DRY.

10. AVAILABILITY

SpecSeal® Series SSS Sealant is available from authorized STI distributors. Consult factory for the names and locations of the nearest sales representatives or distributors. Available packages and additional SpecSeal® Products are listed below.

TABLE D: ORDERING INFORMATION

CAT. NO.	DESCRIPTION
SSS100	10.5 oz. Tube (311 ml) 19 cu.in.
SSS129	29 oz. Tube (858 ml) 52 cu. in.
SSS120	20 oz. Sausage (592 ml) 36 cu. in.
SSS102	2 Gal. Pail (7.6 liters) 462 cu.in.
SSS105	5 Gal. Pail (19.0 liters) 1,155 cu.in.

Additional SpecSeal Products...

SSP Firestop Putty

Available both in bar form and in pads, putty provides easy retrofit for through-penetrations and economical protection for electrical boxes.

SSB Firestop Pillows

Durable, monolithic pillows for installations requiring quick and easy retrofitting. Systems designed for pipes, cables and cable tray in all types of construction!



Intumescent Wrap Strips

Two grades of intumescent wrap strips provide an unmatched combination of flexibility, economy, and expansion (up to 30X). Systems for plastic pipes including FR Polypropylene up to 8" trade size!

Molded Firestop Collars

Easy to install, economical protection for ABS and PVC pipes (both solid and foam core) as well as CPVC, PVDF, and FRPP. Collars available up to 6" trade size.

CITY OF NEW YORK MEA 130-96M

Important Notice: All statements, technical information, and recommendations contained herein are based upon testing believed to be reliable, but the accuracy and completeness thereof is not guaranteed.

WARRANTY: Specified Technologies Inc. manufactures its goods in a manner to be free of defects. Should any defect occur in its goods (within one year), Specified Technologies Inc., upon prompt notification, will at its option, exchange or repair the goods or refund the purchase price. Limitations and Exclusions: THIS WARRANTY IS IN LIEU OF ALL OTHER REPRESENTATIONS EXPRESSED OR IMPLIED (INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR USE)

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No statement or recommendation not contained herein shall have any force or effect unless in an agreement signed by officers of seller and manufacturer.

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Material Safety Data Sheet

01-JAN-2003

SpecSeal® TYPE SSS SEALANT

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

PRODUCT NAME......SpecSeal® SSS Sealant CHEMICAL FAMILY.....Mixture

Company Identification

MANUFACTURER/DISTRIBUTOR

Specified Technologies, Inc. 200 Evans Way Somerville, NJ 08876

PHONE NUMBERS

Product Information : 1-908-526-8000 Emergency : 1-800-255-3924

COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME

CAS NUMBER

Proprietary mixture

HAZARDS IDENTIFICATION

*********EMERGENCY OVERVIEW*******

* Possible skin and eye irritant. Red paste. *

Potential Health Effects:

EYE: Contact may cause irritation.

SKIN: Contact may cause irritation.

INGESTION: Relatively non-toxic.

INHALATION: Irritation of the nose, throat, and lungs may result from over-exposure to vapors or mist.

CHRONIC (CANCER) INFORMATION: Not classified as carcinogenic.

LONG TERM TOXIC EFFECTS: None known.

FIRST AID MEASURES

First Aid

INHALATION: Remove to fresh air. **SKIN CONTACT:** Wash thoroughly.

EYE CONTACT: Irrigate eyes with running water for at least 15 minutes. Get medical attention if irritation develops.

INGESTION: None applicable.

FIRE FIGHTING MEASURES

Not a fire hazard.

SPECIAL FIRE FIGHTING PROCEDURES:As for surrounding fire.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

HANDLING AND STORAGE

Store under ambient conditions. No special handling required.

EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION REQUIREMENTS:......Safety glasses/goggles.

below the TLV.

Exposure Guidelines

Exposure Limits

PEL(OSHA): Particulates (Not Otherwise Classified) 15 mg/m3, 8 Hr. TWA, total dust 5 mg/m3, 8 Hr. TWA, respirable dust

TLV (ACGIH): None Established

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM Red paste with minimal odor

SPECIFIC GRAVITY 1.24
PERCENT VOLATILES 20
EVAPORATION RATE >1

STABILITY AND REACTIVITY

TOXICOLOGICAL INFORMATION

Mixture not tested but based on components:

May be irritating to skin and eyes and may aggravate existing skin and eye conditions.

None of the components are listed as carcinogens.

ECOLOGICAL INFORMATION

No data.

DISPOSAL CONSIDERATIONS

Waste Disposal:

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

TRANSPORTATION INFORMATION

DOT - not regulated.

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status: Reported/Included.

Section 313 Supplier Notifications.

This product contains no toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

OTHER INFORMATION

NPCA-HMIS Rating Health : 1 Flammability : 0 Reactivity : 0

Personal Protection rating to be supplied by user depending on use conditions.

STATE RIGHT-TO-KNOW LAWS

No substances on the state hazardous substances list, for the states indicated below, are used in the manufacture of products on this Material Safety Data Sheet, with the exceptions indicated. While we do not specifically analyze these products, or the raw materials used in their manufacture, for substances on various state hazardous substances lists, to the best of our knowledge the products on this Material Safety Data Sheet contain no such substances except for those specifically listed below:

SUBSTANCES ON THE NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST PRESENT AT A CONCENTRATION OF 1% OR MORE (0.1% FOR SUBSTANCES IDENTIFIED AS CARCINOGENS, MUTAGENS OR TERATOGENS): NJTSRN-SSS100

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER: Possible traces of formaldehyde, ethyl acrylate, acetaldehyde, acrylamide and acrylonitrile.

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM: None known.

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the data compiled. However, no representation, warranty, or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur form the use of this information.

Responsibility for MSDS:

Specified Technologies, Inc. 200 Evans Way Somerville, NJ 08876