

# FIRESTOP SUBMITTAL PACKAGE

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**PROJECT:**

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**SUBMITTED BY:**



## Sprinkler Pipe Submittal

### Concrete Floors

SYSTEM	DESCRIPTION	PRODUCT(S)
C-AJ-1217	Metal sprinkler pipe. Optional steel sleeve. 3 and 4 hr rating.	SSS Sealant
C-AJ-1080	Metal sprinkler pipe. Caulk only design.	SSS Sealant

### Masonry Walls

SYSTEM	DESCRIPTION	PRODUCT(S)
C-AJ-1080	Metal sprinkler pipe. Caulk only design.	SSS Sealant
W-J-2018	Nonmetallic sprinkler pipe up to 2" diam. Caulk only design.	SSS Sealant

### Gypsum Board Walls

SYSTEM	DESCRIPTION	PRODUCT(S)
W-L-1049	Metal sprinkler pipe. Caulk only design.	SSS Sealant
W-L-2100	Nonmetallic sprinkler pipe up to 2" diam. Caulk only design.	SSS Sealant

### General Certificate of Conformance

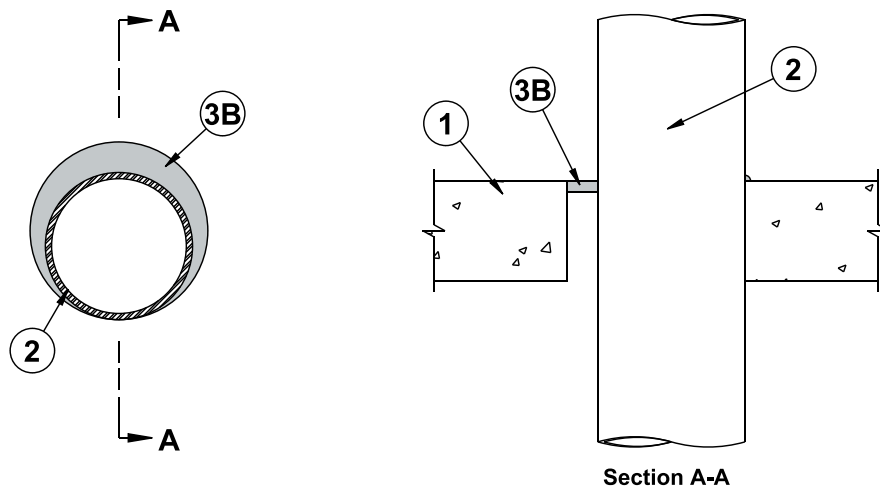
#### Product Data Sheets

Series SSS Intumescent Sealant

#### Material Safety Data Sheets

Series SSS Intumescent Sealant





**System No. C-AJ-1080**

F Rating — 3 Hr

T Rating — 0 Hr

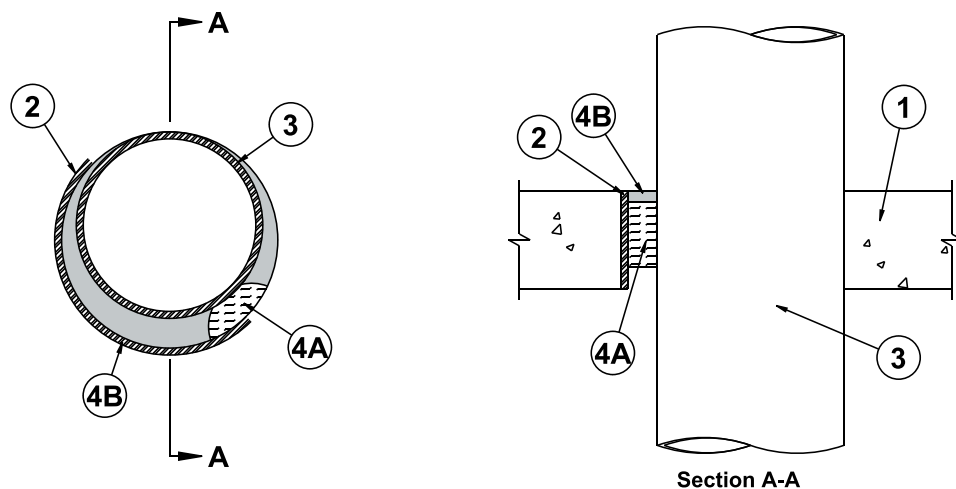
L Rating At Ambient — Less Than 1 CFM/sq ft

L Rating At 400 F — Less Than 1 CFM/sq ft

1. **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 32 in.  
See **Concrete Block** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. **Through Penetrants** — One metallic pipe, conduit or tubing to be centered within the firestop system. The annular space shall range from min 0 in. (point contact) to max 2 in. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
  - A. **Steel Pipe** — Nom 30 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
  - B. **Iron Pipe** — Nom 30 in. diam (or smaller) cast or ductile iron pipe.
  - C. **Conduit** — Nom 4 in. diam (or smaller) electrical metallic tubing or nom 6 in. diam (or smaller) rigid galv steel conduit.
  - D. **Copper Tubing** — Nom 6 in. diam (or smaller) Type M (or heavier) copper tubing.
  - E. **Copper Pipe** — Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
3. **Firestop System** — The firestop system shall consist of the following:
  - A. **Packing Material** — (Optional, Not Shown) — Mineral wool batt insulation, polyethylene backer rod or glass fiber batt insulation friction fitted into annular space. Packing material to be recessed from top surface of floor or both surfaces of wall as required to accommodate the required thickness of fill material.
  - B. **Fill, Void or Cavity Material\*** — **Caulk** — Min 1/2 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall. At point contact location, apply min 1/4 in. diam bead of sealant at the pipe/concrete interface on the top surface of the floor or both surfaces of wall.

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

\*Bearing the UL Classification Mark



#### System No. C-AJ-1217

F Ratings — 3 and 4 Hr (See Items 4C)

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. **Floor or Wall Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Max diam of opening is 32 in.
2. **Metallic Sleeve** — (Optional) — Nom 32 in. diam (or smaller) Schedule 10 (or heavier) steel sleeve cast or grouted into floor or wall assembly. Steel sleeve may be installed flush or may project a max of 3 in. beyond the floor or wall surfaces.
3. **Through Penetrant** — One metallic pipe or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe or conduit and periphery of opening shall be min 0 in. (point contact) to max 2 in. Pipe or conduit to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or conduits may be used:
  - A. **Steel Pipe** — Nom 30 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
  - B. **Iron Pipe** — Nom 30 in. diam (or smaller) cast or ductile iron pipe.
  - C. **Conduit** — Nom 4 in. diam (or smaller) steel electrical metallic tubing, nom 6 in. diam (or smaller) steel conduit or nom 1 in. (or smaller) flexible steel conduit.
  - D. **Copper Pipe or Tubing** — Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe or nom 6 in. diam (or smaller) Type M (or heavier) copper tubing.
- 3A. **Through Penetrating Product\* — Flexible Metal Piping** — As an alternate to Item 3, one nom 2 in. diam (or smaller) flexible steel pipe 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 2 in. Pipe to be rigidly supported on both sides of floor or wall assembly.

**OMEGA FLEX INC**

**TITEFLEX CORP**

**A BUNDY CO**

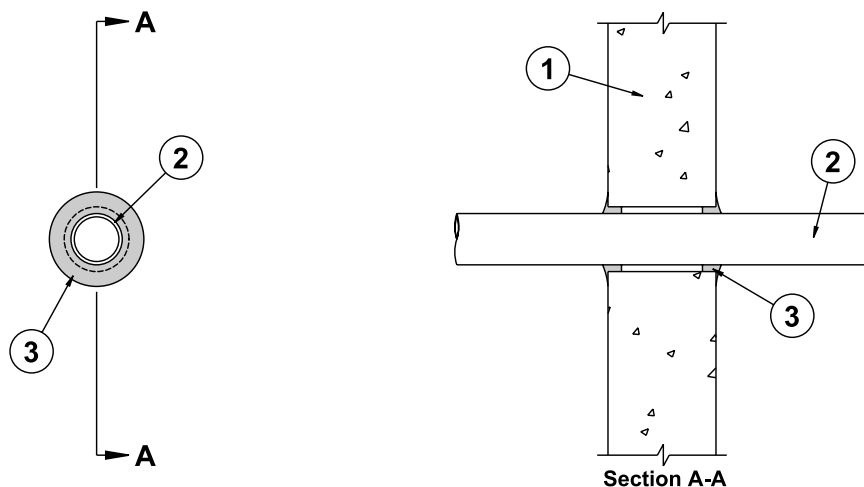
**WARD MFG INC**

4. **Firestop System** — The Firestop system shall consist of the following:
  - A. **Packing Material** — Min 3 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. In floors, packing material to be recessed from top surface of floor or from top edge of steel sleeve as required to accommodate the required thickness of fill material. In walls, packing material to be recessed from both surfaces of wall or from both ends of steel sleeve 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. In floors, fill material to be applied flush with top surface of floor or top edge of steel sleeve. In walls, fill material to be applied flush with both surfaces of wall or both ends of steel sleeve. At the point contact location between pipe and concrete, a min 3/8 in. diam bead of fill material shall be applied at the concrete/pipe interface on the top surface of floor and on both surfaces of wall.
 

**SPECIFIED TECHNOLOGIES INC** — SpecSeal 100, 101, 102, 105, 120 or 129 Sealant
  - C. **Steel Cover Plate** — (Not Shown) — Min 0.014 in. (No. 28 gauge) galv steel cut to fit the contour of the through-penetrant (Item 3) with a min 2 in. lap on the top surface of floor and both surfaces of wall assembly around the perimeter of the through-opening. Seams of steel cover plate shall overlap a min 1/2 in. Steel cover plate secured to top surface of floor and both surfaces of wall assembly by means of 1/4 in. diam by 1-3/4 in. long steel concrete anchors in conjunction with 1/4 in. by 1-1/4 in diam steel fender washers spaced a max 6 in. OC.

**The hourly F Rating of the firestop system is dependent upon the use of the steel cover plate. If the steel cover plate is used, the F Rating of the firestop system is 4 hr. If the steel cover plate is omitted, the F Rating of the firestop system is 3 hr.**

\*Bearing the UL Classification Mark



**System No. W-J-2018**

January 10, 1997

F Rating — 2 Hr

T Ratings — 1 and 1-1/2 Hr (See Item 2)

1. **Wall Assembly** — Min 5 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 3 in.  
See **Concrete Blocks (CAZT)** category in the Fire Resistance Directory for names of manufacturers.
2. **Through Penetrants** — One nonmetallic pipe, conduit or raceway to be centered within the firestop system. A nom annular space of 5/16 in. is required within the firestop system. Pipe, conduit or raceway to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of nonmetallic pipes, conduits or raceway may be used:
  - A. **Polyvinyl Chloride (PVC) Pipe** — Nom 2 in. diam (or smaller) Schedule 40 cellular or solid core PVC pipe for use in closed (process or supply) piping systems.
  - B. **Rigid Nonmetallic Conduit+** — Nom 2 in. diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70). See **Rigid Nonmetallic Conduit (DZYR)** category in the **Electrical Construction Materials Directory** for names of manufacturers.
  - C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** — Nom 2 in. diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) piping systems.
  - D. **Optical Fiber Raceway+** — Nom 2 in. diam (or smaller) optical fiber raceway formed from polyvinyl chloride (PVC) or nom 1-1/4 in. diam (or smaller) optical fiber raceway formed from polyvinylidene fluoride (PVDF). Raceway to be installed in accordance with Article No. 770 of the National Electrical Code.  
See **Optical Fiber Raceway (QAZM)** category in the Electrical Construction Materials Directory for names of manufacturers.
  - E. **Electrical Nonmetallic Tubing+** — Nom 2 in. diam (or smaller) PVC tubing installed in accordance with Article 331 of the National Electrical Code (NFPA No. 70). See **Electrical Nonmetallic Tubing (FKHU)** category in the Electrical Construction Materials Directory for names of manufacturers.

**The hourly T Rating of the firestop system is dependent upon the diam of the raceway as shown below:**

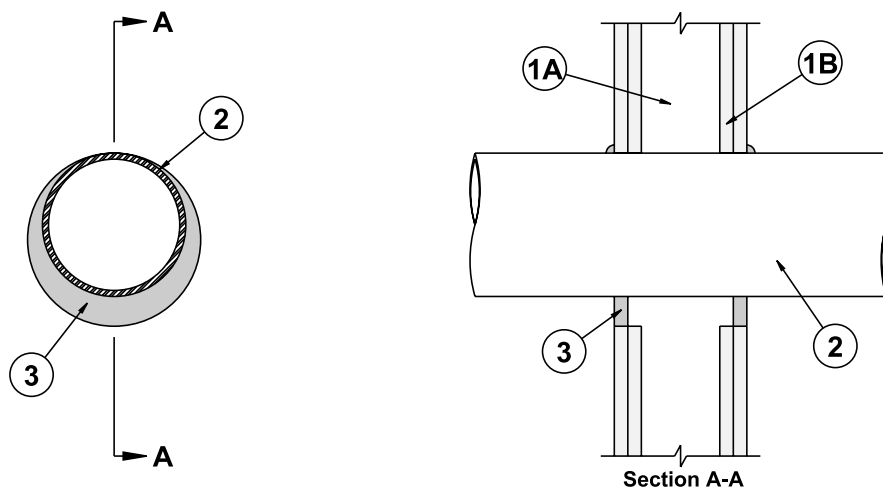
Max Diam of Through Penetrant, In.	T Rating, Hr
2	1
1-1/4	1-1/2

3. **Fill, Void or Cavity Material\*** — **Sealant** — Min 5/8 in. thickness of fill material within annulus, flush with both surfaces of wall. Additional fill material installed such that a min 1/4 in. thick crown is formed around the penetrating item lapping 1 in. beyond the periphery of the opening.

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

+Bearing the UL Listing Mark

\*Bearing the UL Classification Marking



**System No. W-L-1049**

December 02, 1997

(Formerly System No. 635)

F Ratings — 1 and 2 Hr (See Item 1B)

T Rating — 0 Hr

L Rating At Ambient — Less Than 1 CFM/sq ft

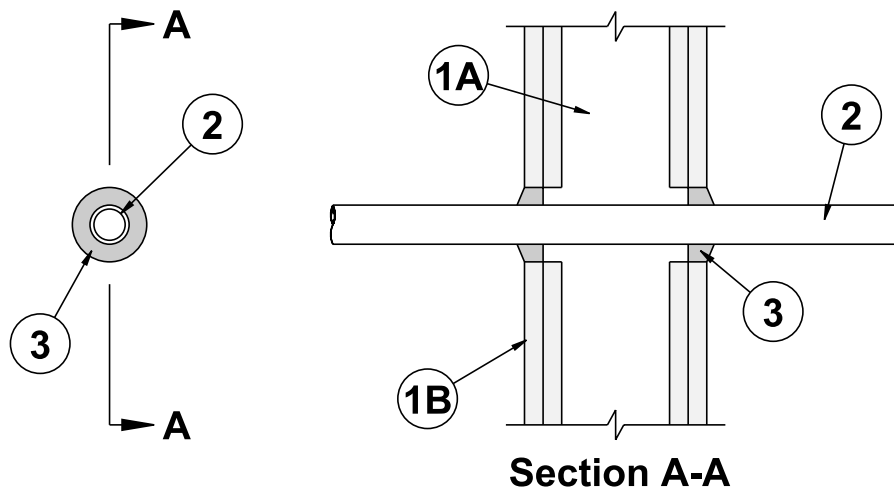
L Rating At 400 F — Less Than 1 CFM/sq ft

1. **Wall Assembly** — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
  - A. **Studs** — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. wider and 4 to 6 in. higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. clearance is present between the penetrating item and the framing on all four sides.
  - 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 U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 25-3/4 in. for steel stud walls. Max diam of opening is 14-1/2 in. for wood stud walls.

**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. **Through Penetrant** — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-3/4 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
  - A. **Steel Pipe** — Nom 24 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
  - B. **Iron Pipe** — Nom 24 in. diam (or smaller) cast or ductile iron pipe.
  - C. **Conduit** — Nom 4 in. diam (or smaller) steel electrical metallic tubing, nom 6 in. diam (or smaller) steel conduit or nom 1 in. diam (or smaller) flexible steel conduit.
  - D. **Copper Tubing** — Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
  - E. **Copper Pipe** — Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
3. **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 gypsum wallboard, a min 3/8 in. diam bead of fill material shall be applied at the gypsum wallboard/through penetrant interface on both surfaces of wall.

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

\*Bearing the UL Classification Marking



**System No. W-L-2100**

November 28, 2000

F Ratings — 1 and 2 Hr (See Item 1)

T Ratings — 0, 1/4, 1 and 1-1/2 Hr (See Item 2)

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 U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
  - A. **Studs** — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.
  - 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 U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 3-1/2 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. **Nonmetallic Pipe** — One nonmetallic pipe or tubing to be centered within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types of nonmetallic pipes or tubing may be used:
  - A. **Polybutylene Pipe** — Nom 1 in diam (or smaller) SDR 11 (or heavier) polybutylene (PB) pipe for use in closed (process or supply) piping systems. A nom annular space of 1/4 in. is required within the firestop system.
  - B. **Cross Linked Polyethylene (PEX) Tubing** — Nom 1 in. diam (or smaller) SDR 9 PEX tubing for use in closed (process or supply) piping systems. A nom annular space of 1/4 in. is required within the firestop system.
  - C. **Acrylonitrile Butadiene Styrene (ABS) Pipe** — Nom 1-1/2 in. diam (or smaller) Schedule 40 cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. The annular space shall be min 1/4 in. to max 1 in.
  - D. **Polyvinyl Chloride (PVC) Pipe** — Nom 2 in. 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. The annular space shall be min 0 in. (point contact) to max 1 in.
  - E. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** — Nom 2 in. diam (or smaller) SDR 17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. The annular space shall be min 0 in. (point contact) to max 1 in.

The hourly T Rating of the firestop system is dependent on the hourly fire rating of the wall assembly in which it is installed and the type of through penetrant, as shown in the table below:

Rating of Wall	Type of Through Penetrant	T Rating, Hr
2	PB pipe	1-1/2
2	PEX tubing	1-1/2
2	PVC or CPVC pipe	1/4
2	ABS pipe	0
1	PB pipe	1
1	PEX tubing	1
1	PVC or CPVC pipe	1/4
1	ABS pipe	0

3. **Fill, Void or Cavity Material\* — Sealant** — Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. thick crown is formed around the penetrating item.

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

\*Bearing the UL Classification Mark



Specified  
Technologies  
Inc.

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Somerville, N.J. 08876  
Phone: (908) 526-8000  
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Toll Free: (800) 992-1180

## GENERAL CERTIFICATE of CONFORMANCE

**Description:** SpecSeal® Firestop Products

**Included Products:**

*Series SSS Intumescent Sealant*  
*Series LCI Intumescent Sealant*  
*Series LC Latex Endothermic Sealant*  
*Series SSP Intumescent Putty*  
*Series EP Power Shield™ Box Insert*  
*Series SSWRED Intumescent Wrap Strips*  
*Series SSWBLU Intumescent Wrap Strips*  
*Series SSC Intumescent Firestop Collars*  
*Series LCC Intumescent Firestop Collars*

*Series SSB Intumescent Firestop Pillows*  
*Series AS100 Elastomeric Spray*  
*Series AS200 Elastomeric Spray*  
*Series ES100 Elastomeric Sealant*  
*Series SSM Firestop Mortar*  
*Pensil Series PEN200 Silicone Foam*  
*Pensil Series PEN300 Silicone Sealant*  
*Pensil Series PEN300SL Silicone Sealant*

**These products are tested to the following standards where applicable:**

**ASTM STANDARD:**

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

**UL STANDARD**

<b>1479</b>	Fire Tests of Through-Penetration Firestops
<b>263</b>	Fire Tests of Building Construction and Materials
<b>2079</b>	Tests for Fire-Resistance of Building Joint Systems
<b>723</b>	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.

James P. Stahl, Jr.  
Technical Manager

February 1, 2002

Date





Specified Technologies, Inc.

# PRODUCT DATA SHEET



## Series SSS Intumescent Sealant



### 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



Specified Technologies, Inc.

www.stifirestop.com • Toll Free 800-992-1180

Page 1 of 4

## 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

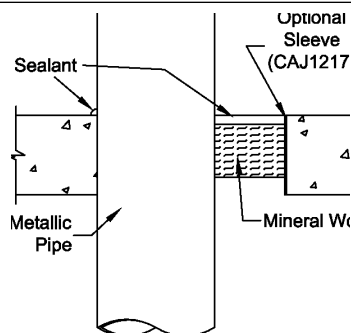
<b>Product Name</b>	Series SSS Sealant
<b>Color</b>	Red
<b>Odor</b>	Mild Latex
<b>Density</b>	9.4 Lb/Gal
<b>Solids</b>	80% ± 2%
<b>pH</b>	8.3
<b>Expansion Begins</b>	230°F (110°C) 1st Stage 350°F (177°C) 2nd Stage
<b>Expansion Range</b>	230°F to >1,000°F (110°C to > 538°C)
<b>Volume Expansion</b>	> 500% Free Expansion
<b>In-Service Temp.</b>	130°F
<b>Flame Spread</b>	0*
<b>Smoke Development</b>	10*
<b>STC Rating</b>	51
<b>VOC Content**</b>	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

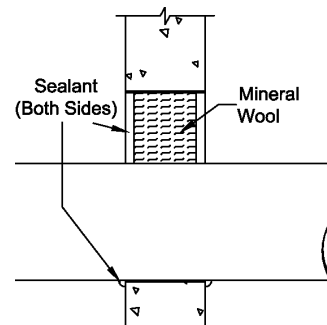
Shown below and on the following page are just a few of the most common applications for SpecSeal Series SSS Sealant. Consult the Technical Library at [www.stifirestop.com](http://www.stifirestop.com) for over 200 available designs utilizing this product.

**Fig. 1: METALLIC PIPE PENETRATIONS - CONCRETE/MASONRY FLOORS & WALLS**



### UL SYSTEM C-AJ-1079

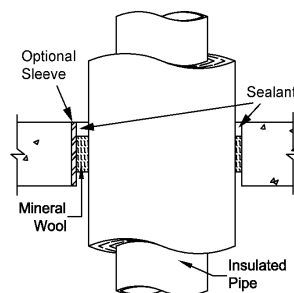
F Rating: 4 Hr • T Rating: 0  
Steel or Iron Pipe: 24", Copper Pipe: 6"  
Annulus: Point Contact to 4" • Sealant Depth: 1/2"  
Forming Material: Nom 4 pcf Mineral Wool  
Thickness: 1-1/2" for 6" Steel or Iron Pipe  
3" for 4" Copper or 6" Iron or Steel Pipe



### UL SYSTEM C-AJ-1217

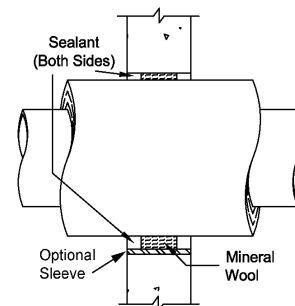
F Rating: 4 Hr • T Rating: 0  
Steel or Iron Pipe: 30", Copper Pipe: 6"  
Annulus: Point Contact to 2" • Sealant Depth: 1/2"  
Forming Material: Nom 4 pcf Mineral Wool  
Tightly Packed to a 3" Depth.

**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" • Sealant Depth: 1/2"  
Forming Material: Nom 4 pcf Mineral Wool Tightly Packed to a 4" Depth.



**Table C: SEALANT REQUIREMENTS IN CUBIC INCHES PER HALF INCH OF INSTALLED DEPTH\***

Pipe Size		Diameter 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							
1.5"	1.900			2.12	4.87	8.40							
2"	2.375			1.32	4.07	7.60	11.92						
2.5"	2.875				3.04	6.57	10.89						
3"	3.500				1.47	5.01	9.33	14.43	20.32				
3.5"	4.000					3.53	7.85	12.96	18.85				
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

#### \*Different Sealant Depth?

- 1/2" Multiply by 2
- 5/8" Multiply by 2.5
- 1" Multiply by 4
- 1-1/4" Multiply by 5

IMPORTANT NOTE: This table is for estimation purposes only. Consult UL Fire Resistance Directory or STI Product & Application Guide for specific installation requirements and limitations

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

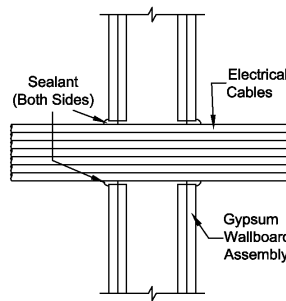
**General:** Areas to be protected must be clean and free of oil, loose dirt, rust or scale. Installation temperatures must be between 35°F and 100°F. Allow product to dry a minimum of 24 hours before exposure to moisture.

**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.

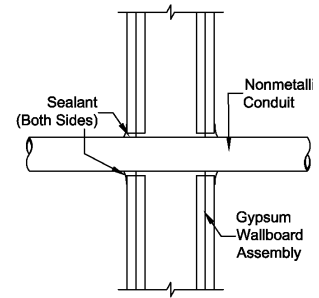
**Fill Material:** SpecSeal® Series SSS Sealant may be installed by caulking using a standard caulking gun or from bulk containers using a bulk loading caulk gun, or by manually troweling using a mason's trowel or putty knife. If the sealant tends

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



### UL SYSTEM W-L-3076

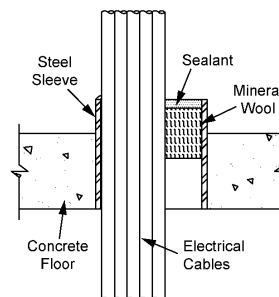
F Rating: 1 or 2 Hr • T Rating: 0 hr  
Up to 4" Cable Bundle  
Centered in 4 - 1/2" Opening  
Sealant Depth: 5/8" with 1/4" Crown



### UL SYSTEM W-L-2093

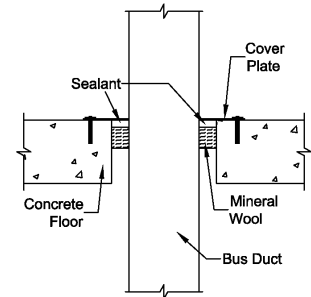
F Rating: 1 or 2 Hr • T Rating: 1, 1-1/2 Hr  
2" Rigid PVC, ENMT,  
or Optical Fiber Raceway.  
1-1/4" PVDF Optical Fiber Raceway.  
Sealant Depth: 5/8" with 1/4" Crown

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



### UL SYSTEM C-AJ-3154

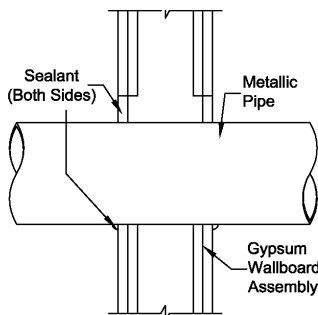
F Rating: 1, 2, 3 & 4 Hr • T Rating: 0, 1/2, & 2 3/4 Hr  
Optional Sleeve-PVC or Steel  
Electrical, Telephone or Data Cables  
Annulus: 0" to 2"  
Sealant Depth: 1/2"  
Forming Materials: Nom 4 pcf Mineral Wool  
Sealant Depth: 1/2" for 1, 2, 3 Hr; 1" for 4 Hr



### UL SYSTEM C-AJ-6008

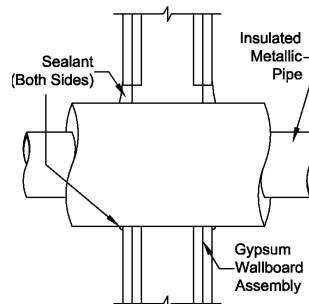
F Rating: 3 Hr • T Rating: 0 Hr  
Aluminum or Copper Bus Duct 5,000 Amp  
Steel Cover Plate  
Sealant Depth: 1/2"  
Forming Materials: Nom 4 pcf Mineral Wool  
Tightly Packed to a depth of 1-1/2"

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



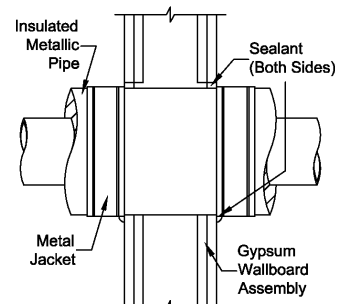
### UL SYSTEM W-L-1049

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](http://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

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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) AND UNDER NO CIRCUMSTANCES SHALL SPECIFIED TECHNOLOGIES INC. BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL PROPERTY DAMAGE OR LOSSES. PRIOR TO USE, THE USER SHALL DETERMINE THE SUITABILITY OF THE PRODUCT FOR ITS INTENDED USE, AND THE USER ASSUMES ALL RISKS AND LIABILITY FOR SUBSEQUENT USE. 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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Facts-On-Demand: (888) 526-6800  
STI on the WEB: [www.stifirestop.com](http://www.stifirestop.com)





# 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

Proprietary mixture

#### CAS NUMBER

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### 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.

EXTINGUISHING MEDIA..... Dry Chemical; Carbon Dioxide; Foam; Water spray for large fires.

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.

**SKIN PROTECTION REQUIREMENTS:** ..... Gloves.

**RESPIRATOR REQUIREMENTS:** ..... None.

**VENTILATION REQUIREMENTS:** ..... If needed, use local exhaust ventilation to keep airborne concentrations below the TLV.

### Exposure Guidelines

#### Exposure Limits

**PEL (OSHA) :** Particulates (Not Otherwise Classified) 15 mg/m<sup>3</sup>, 8 Hr. TWA, total dust 5 mg/m<sup>3</sup>, 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

BOILING POINT ..... 100 deg. C

SOLUBILITY IN WATER ..... Infinitely dilutable

## STABILITY AND REACTIVITY

STABILITY: ..... This is a stable material.

CONDITIONS TO AVOID ..... Storage >55 deg. C

HAZARDOUS POLYMERIZATION: ..... Will not occur.

INCOMPATIBILITIES: ..... None special.

## 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 from the use of this information.

### Responsibility for MSDS :

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