

FIRESTOP SUBMITTAL PACKAGE

PROJECT:

SUBMITTED BY:



Joint Systems

Concrete Floors

SYSTEM	DESCRIPTION	PRODUCT(S)
FF-D-0001	Max. 1 in. wide joint. Caulk and backer rod. 1, 2, 3 Hrs.	PEN300 Sealant
FF-D-0005	Max. 1 in. wide joint. Caulk and backer rod. 1, 2, 3 Hrs.	ES Sealant
FF-D-0035	Max. 1/2 in. wide joint. Caulk and backer rod (top only). 1 and 2 Hrs.	ES Sealant
FF-D-0036	Max. 1/2 in. wide joint. Caulk and backer rod (top only). 1 and 2 Hrs.	PEN300 Sealant
FW-D-0005	Max. 1 in. wide joint. Caulk and backer rod. 1, 2, 3 Hrs.	ES Sealant
FW-D-0030	Max. 1 in. wide joint. Caulk and backer rod. 1, 2, 3 Hrs.	ES Sealant
FW-D-0031	Max. 1/2 in. wide joint. Caulk and backer rod (top only). 1 and 2 Hrs.	PEN300 Sealant
FW-D-0032	Max. 1/2 in. wide joint. Caulk and backer rod (top only). 1 and 2 Hrs.	PEN300 Sealant

Concrete Walls

SYSTEM	DESCRIPTION	PRODUCT(S)
HW-D-0041	Max. 1 in. wide joint. Caulk and backer rod. 1, 2, 3 Hrs.	ES Sealant
HW-D-0312	Max. 1 in. wide joint. Caulk and backer rod. 1, 2, 3 Hrs.	PEN300 Sealant
WW-D-0001	Max. 1 in. wide joint. Caulk and backer rod. 1, 2, 3 Hrs.	PEN300 Sealant
WW-D-0004	Max. 1 in. wide joint. Caulk and backer rod. 1, 2, 3 Hrs.	ES Sealant

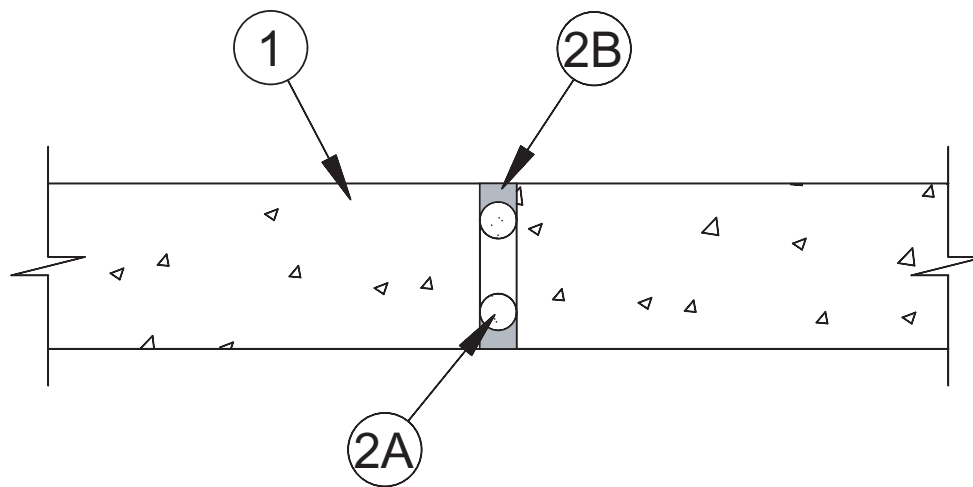
General Certificate of Conformance

Product Data Sheets

Series ES Elastomeric Sealant
Series PEN300 Silicone Sealant

Material Safety Data Sheets

Series ES Elastomeric Sealant
Series PEN300 Silicone Sealant



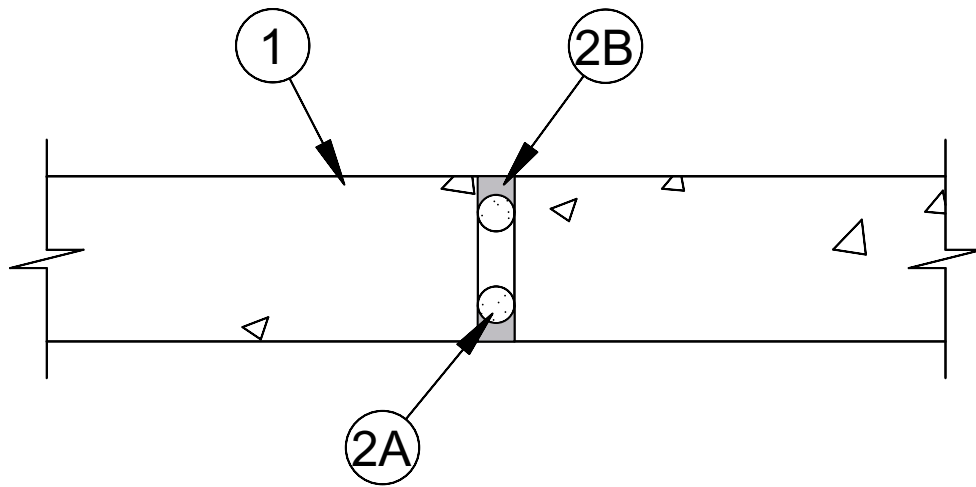
System No. FF-D-0001

Assembly Ratings — 2 and 3 Hr (See Item 2B)
 L Rating At Ambient — Less Than 1 CFM/LIN. Ft
 L Rating At 400 F — Less Than 1 CFM/LIN. Ft
 Nominal Joint Width — 1 In.

Class II Movement Capabilities — 12.5 % Compression Or Extension

1. **Floor Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete.
2. **Joint System** — **Max width of joint (at time of installation of joint system) is 1 in. The joint system is designed to accommodate a max 12.5 percent compression or extension from its installed width.** The joint system shall consist of the following:
 - A. **Packing Material** — Open or closed cell polyethylene or polyurethane foam backer rod installed within joint opening as a permanent form. Packing material to be recessed from both surfaces of floor as required to accommodate the required thickness of fill material.
 - B. **Fill, Void or Cavity Material*** — **Sealant** — Fill material applied within the joint, flush with both surfaces of floor. **Min 1/2 in. thickness required for 2 hr assembly rating. Min 1-1/2 in. thickness required for 3 hr assembly rating.**
SPECIFIED TECHNOLOGIES INC — Pensil 300 Sealant. Pensil 300 S/L Sealant may be used on top surface of floor only.

*Bearing the UL Classification Mark



System No. FF-D-0005

Assembly Rating — 3 Hr

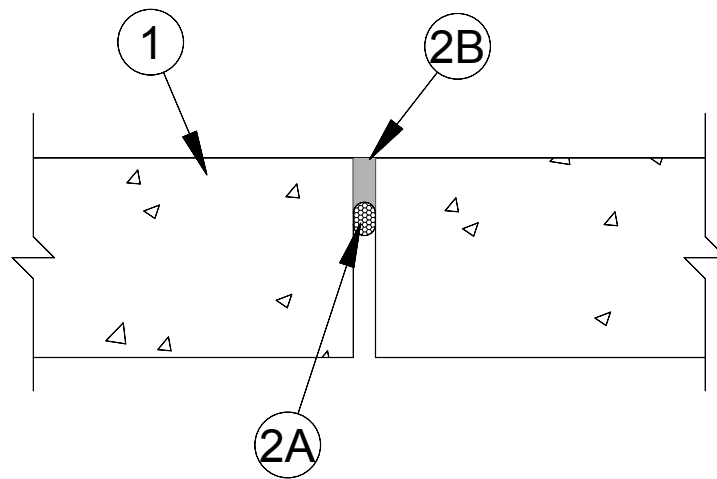
Nominal Joint Width — 1 In.

Class II Movement Capabilities — 12.5% Compression Or Extension

1. **Floor Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete.
2. **Joint System** — **Max width of joint (at time of installation of joint system) is 1 in. The joint system is designed to accommodate a max 12.5 percent compression or extension from its installed width.** The joint system shall consist of the following:
 - A. **Packing Material** — Open or closed cell polyethylene or polyurethane foam backer rod used as a form to prevent the leakage of fill material. Packing material to be recessed from both surfaces of the floor 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 joint, flush with both surfaces of floor.

SPECIFIED TECHNOLOGIES INC — SpecSeal ES Sealant

*Bearing the UL Classification Mark



System No. FF-D-0035

Assembly Rating — 2 Hr

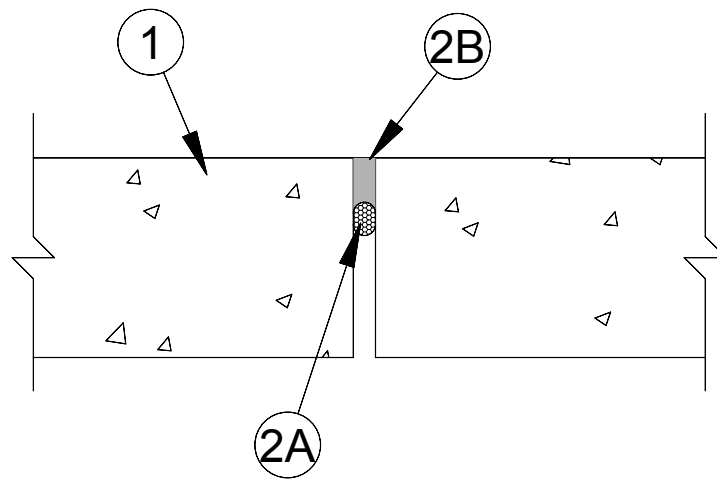
Nominal Joint Width — 1/2 in.

Class II Movement Capabilities — 12.5% Compression or Extension

1. **Floor Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete.
2. **Joint System** — **Max width of joint (at time of installation of joint system) is 1/2 in. The joint system is designed to accommodate a max 12.5 percent compression or extension from its installed width.** The joint system consists of the following:
 - A. **Packing Material** — Open or closed cell polyethylene foam backer rod used as form to prevent leakage of fill material. Packing material recessed from top surface of floor as required to accommodate required thickness of fill material (Item 2B).
 - B. **Fill, Void or Cavity Material* — Sealant** — Min 1 in. thickness of fill material applied within joint opening flush with top surface of floor assembly.

SPECIFIED TECHNOLOGIES INC — SpecSeal ES Elastomeric Sealant

*Bearing the UL Classification Mark



System No. FF-D-0036

Assembly Rating — 2 Hr

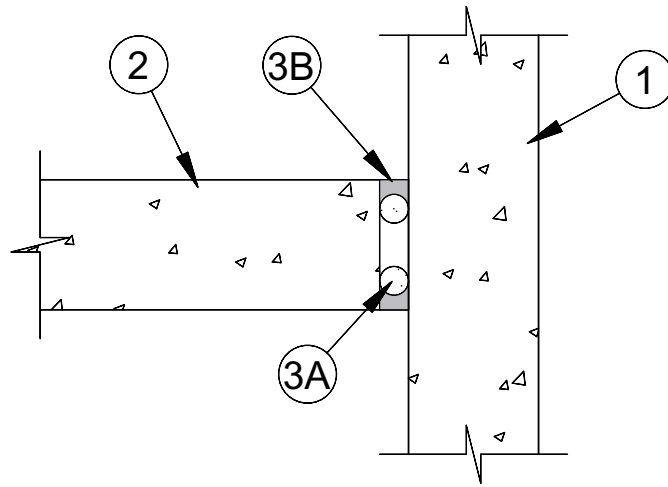
Nominal Joint Width — 1/2 in.

Class II Movement Capabilities — 12.5% Compression or Extension

1. **Floor Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete.
2. **Joint System** — **Max width of joint (at time of installation of joint system) is 1/2 in. The joint system is designed to accommodate a max 12.5 percent compression or extension from its installed width.** The joint system consists of the following:
 - A. **Packing Material** — Open or closed cell polyethylene foam backer rod used as form to prevent leakage of fill material. Packing material recessed from top surface of floor as required to accommodate required thickness of fill material (Item 2B).
 - B. **Fill, Void or Cavity Material* — Sealant** — Min 1 in. thickness of fill material applied within joint opening flush with top surface of floor assembly.

SPECIFIED TECHNOLOGIES INC — Pensil 300 Silicone Sealant, Pensil 300 SL Silicone Sealant

*Bearing the UL Classification Mark



System No. FW-D-0005

Assembly Rating — 3 Hr

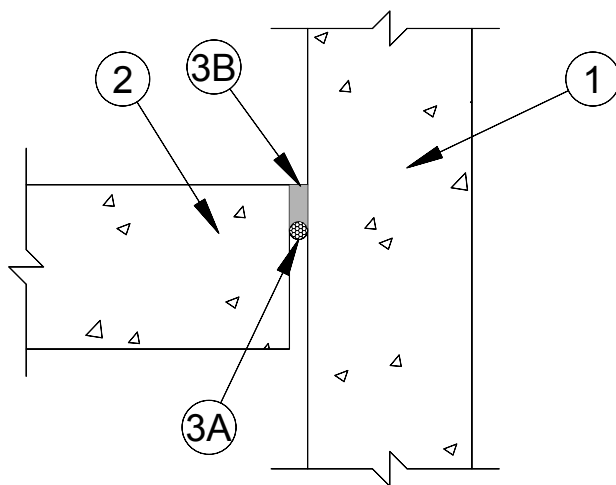
Nominal Joint Width — 1 In.

Class II Movement Capabilities — 12.5% Compression Or Extension

1. **Wall Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***.
See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. **Floor Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete.
3. **Joint System** — **Max separation between edge of floor and face of wall (at time of installation of joint system) is 1 in. The joint system is designed to accommodate a max 12.5 percent compression or extension from its installed width.** The joint system shall consist of the following:
 - A. **Packing Material** — Open or closed cell polyethylene or polyurethane foam backer rod used as a form to prevent the leakage of fill material. Packing material to be recessed from both surfaces of the floor 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 joint, flush with both surfaces of floor.

SPECIFIED TECHNOLOGIES INC — SpecSeal ES Sealant

*Bearing the UL Classification Mark



System No. FW-D-0030

Assembly Rating — 2 Hr

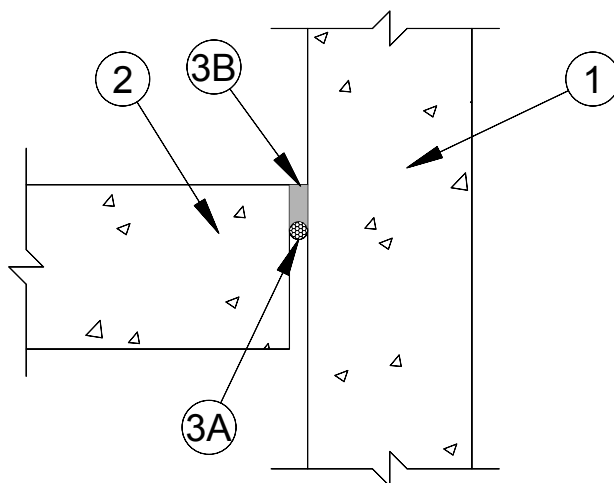
Nominal Joint Width — 1/2 in.

Class II Movement Capabilities — 12.5% Compression or Extension

1. **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***
See **Concrete Blocks (CAZT)** category in the Fire Resistance Directory for names of manufacturers.
2. **Floor Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete.
3. **Joint System** — **Max width of joint (at time of installation of joint system) is 1/2 in. The joint system is designed to accommodate a max 12.5 percent compression or extension from its installed width.** The joint system consists of the following:
 - A. **Packing Material** — Open or closed cell polyethylene foam backer rod used as form to prevent leakage of fill material. Packing material recessed from top surface of floor as required to accommodate required thickness of fill material (Item 3B).
 - B. **Fill, Void or Cavity Material*** — **Sealant** — Min 1 in. thickness of fill material applied within joint opening flush with top surface of floor assembly.

SPECIFIED TECHNOLOGIES INC — SpecSeal ES Elastomeric Sealant

*Bearing the UL Classification Mark



System No. FW-D-0031

Assembly Rating — 2 Hr

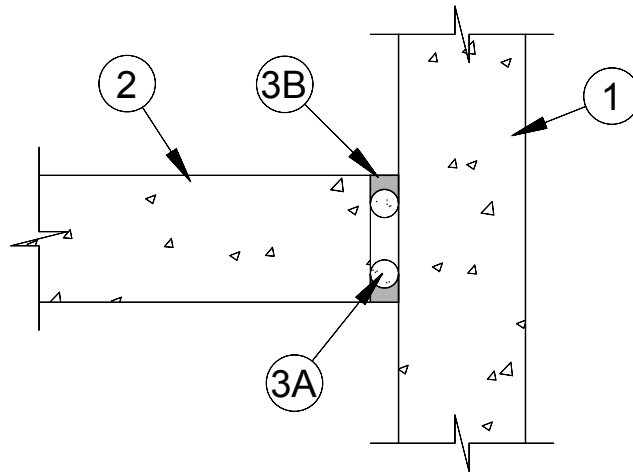
Nominal Joint Width — 1/2 in.

Class II Movement Capabilities — 12.5% Compression or Extension

1. **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***
See **Concrete Blocks (CAZT)** category in the Fire Resistance Directory for names of manufacturers.
2. **Floor Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete.
3. **Joint System** — **Max width of joint (at time of installation of joint system) is 1/2 in. The joint system is designed to accommodate a max 12.5 percent compression or extension from its installed width.** The joint system consists of the following:
 - A. **Packing Material** — Open or closed cell polyethylene foam backer rod used as form to prevent leakage of fill material. Packing material recessed from top surface of floor as required to accommodate required thickness of fill material (Item 3B).
 - B. **Fill, Void or Cavity Material* — Sealant** — Min 1 in. thickness of fill material applied within joint opening flush with top surface of floor assembly.

SPECIFIED TECHNOLOGIES INC — Pensil 300 Silicone Sealant, Pensil 300 SL Silicone Sealant

*Bearing the UL Classification Mark



System No. FW-D-0032

Assembly Ratings — 2 and 3 Hr (See Item 3B)

Nominal Joint Width — 1 in.

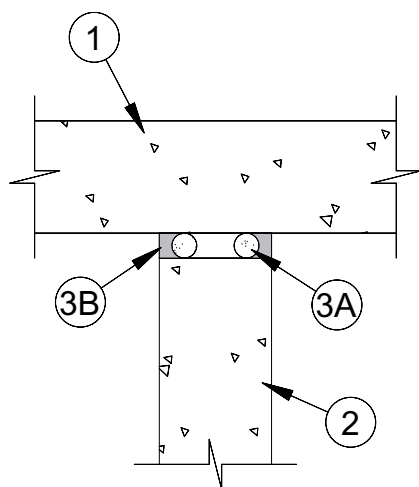
Class II Movement Capabilities — 12.5 % Compression or Extension

Leakage Rating At Ambient — Less Than 1 CFM/Lin Ft

L Rating At 400 F — Less Than 1 CFM/Lin Ft

1. **Wall Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. **Floor Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete.
3. **Joint System** — Max separation between edge of floor and face of wall (at time of installation of joint system) is 1 in. The joint system is designed to accommodate a max 12.5 percent compression or extension from its installed width. The joint system shall consist of the following:
 - A. **Packing Material** — Open or closed cell polyethylene or polyurethane foam backer rod used as a form to prevent the leakage of fill material. Packing material to be recessed from both surfaces of the floor as required to accommodate the required thickness of fill material.
 - B. **Fill, Void or Cavity Material* — Sealant** — Fill material applied within the joint, flush with both surfaces of floor. Min 1/2 in. thickness required for 2 hr assembly rating. Min 1-1/2 in. thickness required for 3 hr assembly rating. **SPECIFIED TECHNOLOGIES INC** — Pensil 300 Silicone Sealant. Pensil 300 S/L Sealant may be used on top surface of floor only.

*Bearing the UL Classification Mark



System No. HW-D-0041

Assembly Rating — 3 Hr

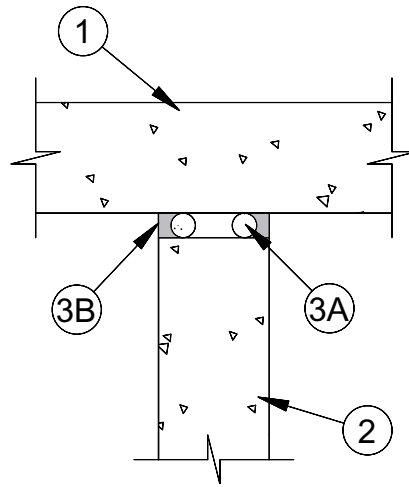
Nominal Joint Width — 1 In.

Class II Movement Capabilities — 12.5% Compression Or Extension

1. **Floor Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete.
2. **Wall Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***.
See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
3. **Joint System** — **Max separation between bottom of floor and top of wall (at time of installation of joint system) is 1 in. The joint system is designed to accommodate a max 12.5 percent compression or extension, or max 25 percent in compression only, from its installed width.** The joint system shall consist of the following:
 - A. **Packing Material** — Open or closed cell polyethylene or polyurethane foam backer rod used as a form to prevent the leakage of fill material. Packing material to be recessed from both surfaces of the 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 joint, flush with both surfaces of wall.

SPECIFIED TECHNOLOGIES INC — SpecSeal ES Sealant

*Bearing the UL Classification Mark



System No. HW-D-0312

Assembly Ratings — 2 and 3 Hr (See Item 3B)

Nominal Joint Width — 1 in.

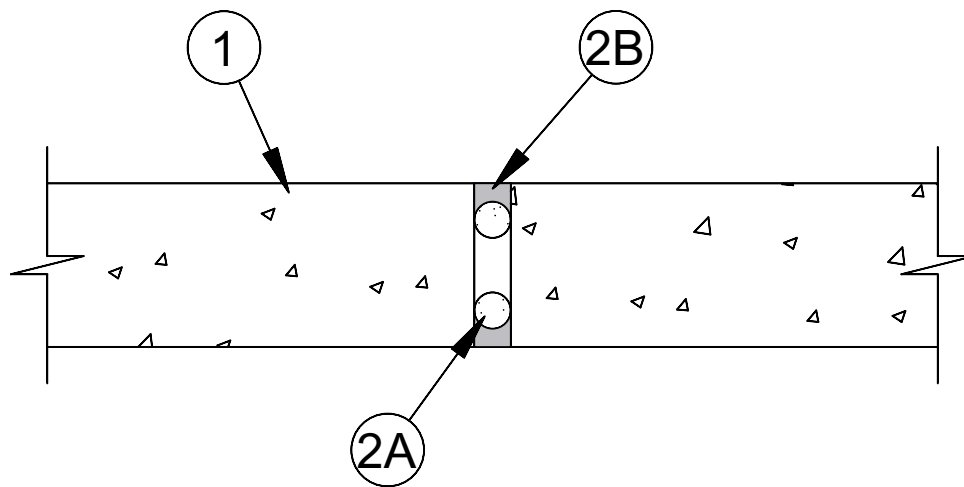
Class II Movement Capabilities — 12.5 % Compression or Extension

L Rating At Ambient — Less Than 1 CFM/Lin Ft

L Rating At 400 F — Less Than 1 CFM/Lin Ft

1. **Floor Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete.
2. **Wall Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***
See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
3. **Joint System** — Max separation between bottom of floor and top of wall (at time of installation of joint system) is 1 in. The joint system is designed to accommodate a max 12.5 percent compression or extension from its installed width. The joint system shall consist of the following:
 - A. **Packing Material** — Open or closed cell polyethylene or polyurethane foam backer rod used as a form to prevent the leakage of fill material. Packing material to be recessed from both surfaces of the wall as required to accommodate the required thickness of fill material.
 - B. **Fill, Void or Cavity Material* — Sealant** — Fill material applied within the joint, flush with both surfaces of wall. Min 1/2 in. thickness required for 2 hr assembly rating. Min 1-1/2 in. thickness required for 3 hr assembly rating.
SPECIFIED TECHNOLOGIES INC — Pensil 300 Sealant

*Bearing the UL Classification Mark



System No. WW-D-0001

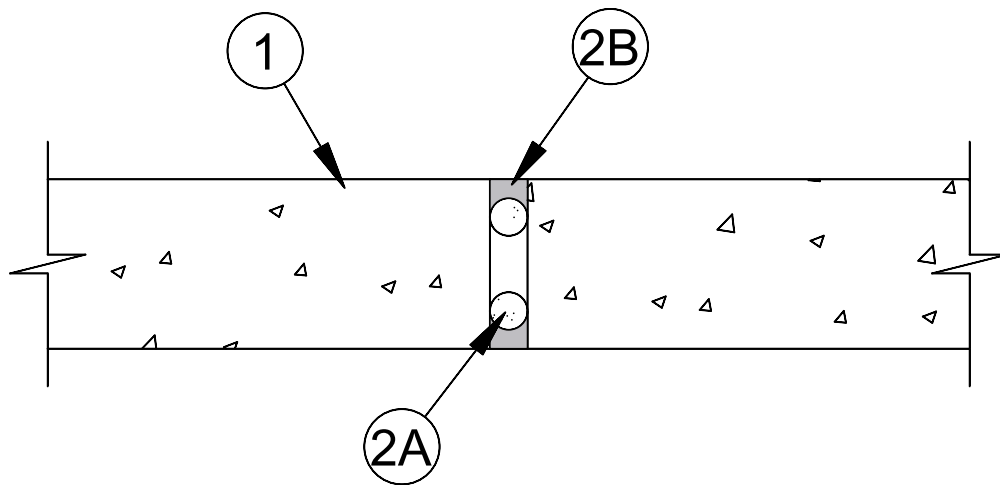
Assembly Ratings — 2 and 3 Hr (See Item 2B)
 L Rating At Ambient — Less Than 1 CFM/LIN. Ft
 L Rating At 400 F — Less Than 1 CFM/LIN. Ft
 Nominal Joint Width — 1 In.

Class II Movement Capabilities — 12.5% Compression Or Extension

1. **Wall Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***.
 See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers
2. **Joint System** — **Max width of joint (at time of installation of joint system) is 1 in. The joint system is designed to accommodate a max 12.5 percent compression or extension for its installed width.** The joint system shall consist of the following:
 - A. **Packing Material** — Open or closed cell polyethylene or polyurethane foam backer rod installed in joint opening as a permanent form. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material.
 - B. **Fill, Void or Cavity Material* — Sealant** — Fill material applied within the joint, flush with each surface of wall. **Min 1/2 in. thickness required for 2 hr assembly rating. Min 1-1/2 in. thickness required for 3 hr assembly rating.**

SPECIFIED TECHNOLOGIES INC — Pensil 300 Sealant

*Bearing the UL Classification Mark



System No. WW-D-0004

Assembly Rating — 3 Hr

Nominal Joint Width — 1 In.

Class II Movement Capabilities — 12.5% Compression Or Extension

1. **Wall Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) structural concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***.
See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. **Joint System** — **Max width of joint (at time of installation of joint system) is 1 in. The joint system is designed to accommodate a max 12.5 percent compression or extension from its installed width.** The joint system shall consist of the following:
 - A. **Packing Material** — Open or closed cell polyethylene or polyurethane foam backer rod used as a form to prevent the leakage of fill material. Packing material to be recessed from both surfaces of the 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 joint, flush with both surfaces of wall.

SPECIFIED TECHNOLOGIES INC — SpecSeal ES Sealant

*Bearing the UL Classification Mark



Specified
Technologies
Inc.

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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:

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.

James P. Stahl, Jr.
Technical Manager

February 1, 2002

Date

1. PRODUCT DESCRIPTION

SpecSeal[®] Elastomeric Sealant is a non-halogenated latex-based, highly elastomeric caulk designed to provide passive smoke and fire protection in construction joints. This material is also designed to restore sound attenuation properties to sound-rated ceilings and partitions.

SpecSeal[®] Elastomeric Sealant is engineered to adhere to virtually all construction surfaces and may be applied using standard caulking equipment or by troweling. SpecSeal[®] Elastomeric Sealant dries to form a flexible shield against the propagation of fire. Its premium latex binder system is totally resistant to water and will not re-emulsify after drying. SpecSeal[®] Elastomeric Sealant contains no inorganic fibers, asbestos, solvents.

2. APPLICATIONS

SpecSeal[®] Elastomeric Sealant is designed primarily for the protection of construction joints.

3. PHYSICAL PROPERTIES

See Table A.

4. PERFORMANCE

When applied to a wet film thickness of 1/4" (6.3 mm) to 1/2" (12.5 mm) over appropriate backing materials, SpecSeal[®] Elastomeric Sealant has been successfully tested in one, two, and three hour joints when tested in accordance with UL2079 (ASTM E1966). All tested systems have been cycled 500 times at total movement up to 50%. Consult factory for individual system designs and application requirements.

LIMITATIONS: Use product as per manufacturer's instructions. Use only in applications per the manufacturer's tested and published designs or per specific recommendations. End user must ultimately determine the suitability of the product and designs to his specific requirement and assumes responsibility for its use.

FEATURES

- **Water-Based** for easy installation and cleanup.
- **Non-halogenated.**
- **Thixotropic** for high-build application.
- **Auto bonding.**
- **Safe...** No solvents!
No asbestos!
- **Elastomeric!**
- **Water-Resistant!**
- **UL Classified.**
- **Acoustical** sealant!



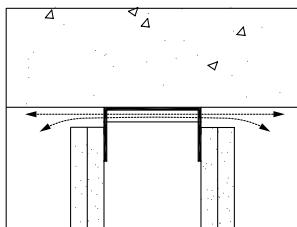
FILL, VOID OR CAVITY MATERIALS
CLASSIFIED BY UNDERWRITERS
LABORATORIES INC. ®
FOR USE IN JOINT SYSTEMS.

SEE UL FIRE RESISTANCE DIRECTORY

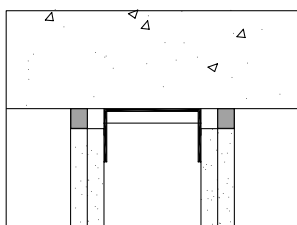


FILL, VOID, OR CAVITY MATERIALS
CLASSIFIED BY UNDERWRITERS
LABORATORIES INC.
FOR USE IN JOINT SYSTEMS.
SEE UL DIRECTORY OF PRODUCTS
CERTIFIED FOR CANADA AND
UL FIRE RESISTANCE DIRECTORY

Fig. 1: EXAMPLE OF MAINTAINING STC VALUES OF WALL AND CREATING AN EFFECTIVE SOUND BARRIER

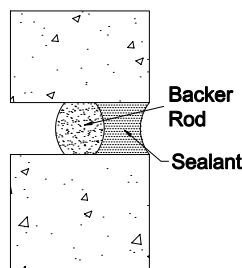


Arrows show path of sound travel.

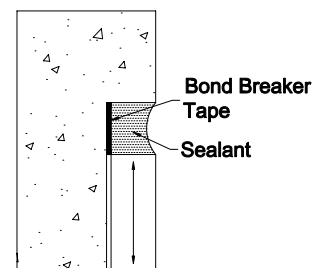


Sealant reduces sound transmission by blocking path of sound travel.

Fig 2: RECOMMENDED JOINT DESIGNS - AVOIDING THREE-POINT ADHESION



In the example shown above, sealant is applied (over foam backer rod) flush with wall surface. Backer rod provides a release surface allowing sealant to contract after drying to the recommended hour glass cross-sectional profile.



This example illustrates sealant applied to three planes. Bond breaker tape is applied to one surface to prevent three-point adhesion, eliminating stress on joint as sealant dries and enhancing movement capabilities.

**For the latest Product and System Information, Call
STI'S FACTS-ON-DEMAND automated information attendant
system by dialing toll-free (888)526-6800!**

Table A: PHYSICAL PROPERTIES

Product Name	Series ES Elastomeric Sealant
Color	Pale Blue
Odor	Mild Latex
Density	10 Lb/Gal
Solids	66%
pH	7.5
In-Service Temp.	≤ 120°F (49°C)
Flame Spread	5*
Smoke Development	5*
Movement	±15%**
Solvent Content	None
Drying Time	
Tack Free	2 Hours ^A
Dry Through	5 to 7 Days ^A
Acoustical	ASTM C919

* Tested to ASTM E84 (UL723) at 14% surface

** 500 Cycles per UL2079, AC30 (ICBO) and ASTM E1399

^A Dependent on temperature and humidity

5. SPECIFICATIONS

Consult factory for recommended specification.

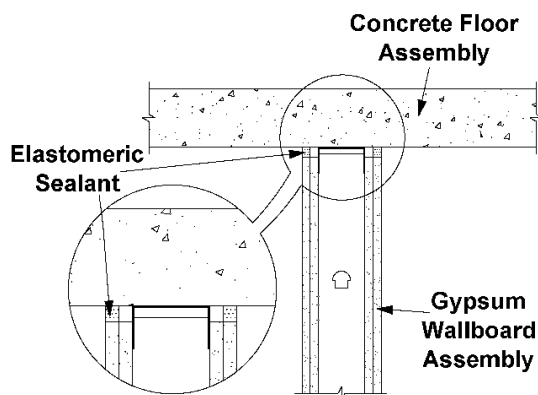
6. INSTALLATION INSTRUCTIONS

GENERAL: Areas to be protected must be clean and free of oil, loose dirt, rust or scale. Recommended storage and application temperatures range between 40°F (4°C) and 95°F (35°C). When applying product at the lower end of the temperature range, warming the material to 70°F (21°C) will enhance drying characteristics. Drying time will vary according to prevailing temperature and humidity. Allow to thoroughly dry before exposure to moisture.

Consult appropriate manufacturer's drawing for system design requirements. Forming or packing materials may be required as an integral part of various system designs. See Table B on Page 4 for estimation information.

Sealant is auto-bonding and may be applied in stages. **DO NOT ATTEMPT TO THIN PRODUCT BY ADDING WATER.**

THIS PRODUCT IS DESIGNED FOR PROFESSIONAL INSTALLATION ONLY. This sealant is designed to contract while drying. Proper joint design is critical to sealant performance. Avoid three point adhesion through the use of appropriate backing or bond-breaking materials.

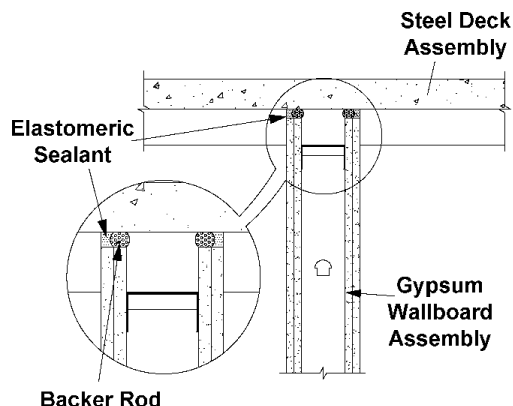
Fig. 3: HEAD-OF-WALL JOINT - GYPSUM WALLBOARD WALL TO CONCRETE FLOOR

UL System No. HW-D-0079

Assembly Rating – 1 & 2 Hr • Movement Capabilities: 25% Compress.

Nominal Joint Width: 3/4" • Forming Material: In 1 hr walls, apply bond breaker tape to ceiling track.

Sealant Depth: 1/2" depth on both sides.

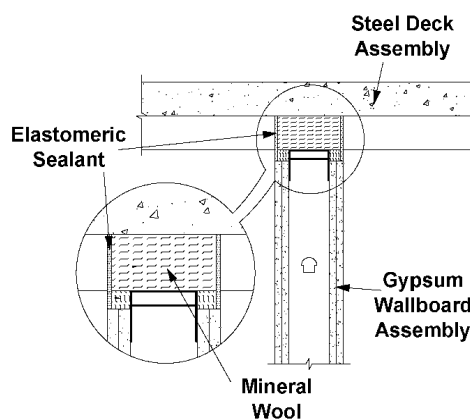
Fig. 4: HEAD-OF-WALL JOINT - GYPSUM WALLBOARD WALL CUT TO FIT CONTOURS OF STEEL DECK

UL System No. HW-D-0103

Assembly Rating – 1 & 2 Hr • Movement Capabilities: 25% Compress.

Nominal Joint Width: 3/4" • Forming Material: In 1 hr walls, apply bond breaker tape to ceiling track.

Sealant Depth: 1/2" depth on both sides.

Fig. 5: HEAD-OF-WALL JOINT - GYPSUM WALLBOARD WALL TO CONCRETE OVER STEEL DECK

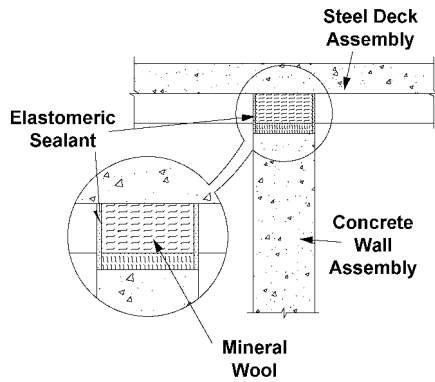
UL System No. HW-D-0034

Assembly Rating – 1 & 2 Hr • Movement Capabilities: ±25% Compress/Extend.

Nominal Joint Width: 1" • Forming Material: Nom 4 pcf mineral wool to full depth.

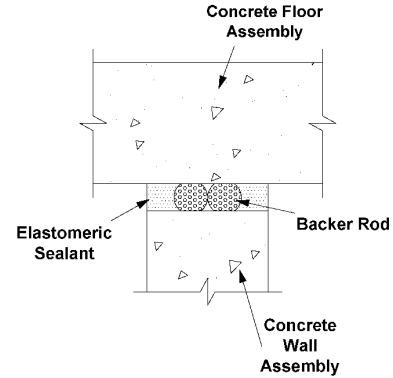
Sealant Depth: 1/2" depth on both sides.

Fig. 6: HEAD-OF-WALL JOINT - MASONRY WALL TO CONCRETE OVER STEEL DECK



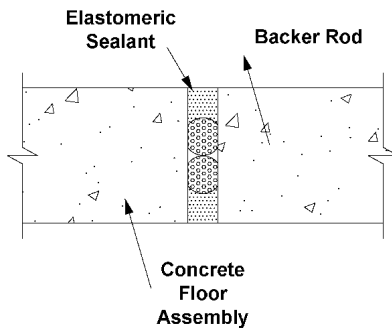
UL System No. HW-D-0039
 Assembly Rating – 2 Hr
 Movement Capabilities: $\pm 25\%$ Compress/Extend.
 Nominal Joint Width: 1"
 Forming Material: Nom 4 pcf mineral wool to full depth.
 Sealant Depth: 1/4" depth on both sides.

Fig. 7: HEAD-OF-WALL JOINT - MASONRY WALL TO CONCRETE FLOOR



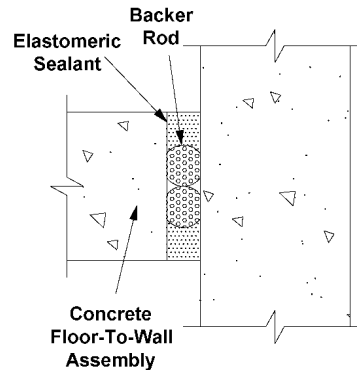
UL System No. HW-D-0041
 Assembly Rating – 2 Hr
 Movement Capabilities: $\pm 12.5\%$ Compress/Extend or 25% Compress.
 Nominal Joint Width: 1" or 3/4" (See System).
 Forming Material: Optional foam backer rod.
 Sealant Depth: 1" or 1/2" (See System) on both sides.

Fig. 8: FLOOR TO FLOOR JOINT - CONCRETE FLOOR TO CONCRETE FLOOR



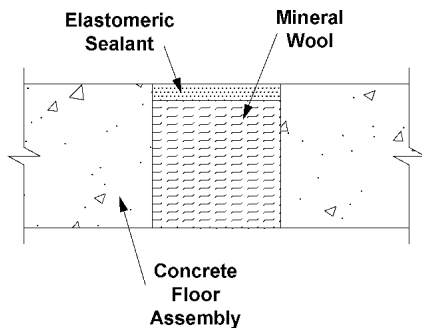
UL System No. FF-D-0005
 Assembly Rating – 2 Hr
 Movement Capabilities: $\pm 12.5\%$ Compress/Extend
 Nominal Joint Width: 1"
 Forming Material: Optional foam backer rod.
 Sealant Depth: 1" top and bottom.

Fig. 9: FLOOR TO WALL JOINT - CONCRETE FLOOR TO CONCRETE WALL



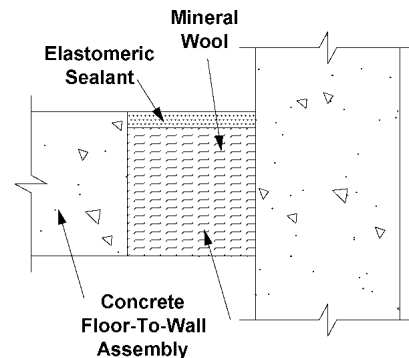
UL System No. FW-D-0005
 Assembly Rating – 2 Hr
 Movement Capabilities: $\pm 12.5\%$ Compress/Extend
 Nominal Joint Width: 1"
 Forming Material: Optional foam backer rod.
 Sealant Depth: 1" top and bottom.

Fig. 10: FLOOR TO FLOOR JOINT - CONCRETE FLOOR TO CONCRETE FLOOR



UL System No. FF-D-1008
 Assembly Rating – 3 Hr
 Movement Capabilities: $\pm 15\%$ Compress/Extend
 Nominal Joint Width: 4"
 Forming Material: Nom 4 pcf mineral wool to 4" depth.
 Sealant Depth: 1/2" depth of sealant.

Fig. 11: FLOOR TO WALL JOINT - CONCRETE FLOOR TO CONCRETE WALL



UL System No. FW-D-1007
 Assembly Rating – 3 Hr
 Movement Capabilities: $\pm 15\%$ Compress/Extend
 Nominal Joint Width: 4"
 Forming Material: Nom 4 pcf mineral wool to 4" depth.
 Sealant Depth: 1/2" depth of sealant.

See Figure 2 for recommended joint designs. Consult ASTM C1193 Standard Guide for Use of Joint Sealants for additional guidelines concerning the proper application of sealant materials.

7. MAINTENANCE

Inspection: Installations should be inspected periodically for subsequent damage. Following safety precautions listed below (See 9. Precautionary Information) and pertinent installation guidelines, remove coating in damaged areas down to undamaged material. Reapply fresh coating material to original coating thickness.

8. TECHNICAL SERVICE

Specified Technologies Inc. provides toll free technical support to assist in product selection and installation information.

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. Apply in areas with adequate ventilation.

10. AVAILABILITY

SpecSeal® Elastomeric Sealant is available from authorized distributors. Consult factory for the names and locations of the nearest sales representatives or distributors. Packaging information and catalog numbers are listed in Table C.

**Table B: PRODUCT ESTIMATION INFORMATION
(Construction Joints)**

JOINT WIDTH	PER 1/4" INSTALLED DEPTH			PER 1/2" INSTALLED DEPTH			PER 1" INSTALLED DEPTH		
	CU IN/FT	FT/GAL	GAL/100 FT	CU IN/FT	FT/GAL	GAL/100 FT	CU IN/FT	FT/GAL	GAL/100 FT
0.5	1.5	154	.65	3	77.0	1.3	6	38.5	2.6
0.75	2.3	102	.95	4.5	51.3	1.9	9	25.7	3.9
1.0	3.0	77	1.3	6.0	38.5	2.6	12	19.3	5.2
1.5	4.5	51	2	9.0	25.7	3.9	18	12.8	7.8
2.0	6.0	38	2.6	12	19.3	5.2	24	9.6	10.4
2.5	8.0	31	3.3	15	15.4	6.5	30	7.7	13.0
3.0	9.0	25	3.9	18	12.8	7.8	36	6.4	15.6
3.5	11	22	4.6	21	11.0	9.1	42	5.5	18.2
4.0	12	19	5.2	24	9.6	10.4	48	4.8	20.8
5.0	15	15	6.5	30	7.7	13.0	60	3.9	26.0
6.0	18	12	7.8	36	6.4	15.6	72	3.2	31.2

Table C: ORDERING INFORMATION

SpecSeal® Elastomeric Sealant is available in caulk tubes, sausages and pails.

Cat. No.	Description
ES100	10.3 oz. Tube (304 ml) 18 cu.in.
ES129	29.0 oz. Tube (858 ml) 52 cu.in.
ES120	20 oz. Sausage (592 ml) 36 cu. in.
ES105	5 Gal. Pail (19.0 liters) 1,155 cu.in.



Additional SpecSeal Products...

Series AS200 Spray	Inexpensive water-based Elastomeric Spray Coating for construction joint applications. Designed to provide up to $\pm 18.75\%$ movement.
Series SSS Sealant	The industry's most versatile sealant provides the firestopping solutions for a wide range of combustible and noncombustible applications. Water-based intumescent sealant expands up to 8x!
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!
Firestop Mortar	Lightweight, versatile and economical! The best choice for large or complex installations.
Pensil® Silicones	Sealants and foam for through-penetrations and construction joints. Unexcelled aging characteristics and flexibility.
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.

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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.

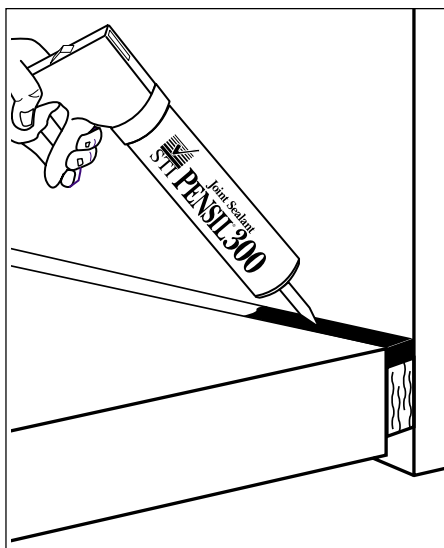
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3L73
31X5

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

SEE UL FIRE RESISTANCE DIRECTORY



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LABORATORIES INC.®
FOR USE IN JOINT SYSTEMS &
THROUGH-PENETRATION
FIRESTOP SYSTEMS.
SEE UL DIRECTORY OF PRODUCTS

FEATURES

- **Low Modulus** allows up to $\pm 50\%$ movement in joints.
- **Auto Bonding** allows fresh sealant to adhere to cured sealant.
- **Excellent Water Resistance** for water-tight sealing.
- **Ozone and UV Resistant** for excellent weather ability and long service life.
- **Excellent Chemical Resistance** protects in polluted or corrosive atmospheres.
- **Excellent Adhesion** to most building substrates.
- **Excellent Smoke Seal**
- **Neutral Cure**

1. PRODUCT DESCRIPTION

Pensil[®] Silicone Sealants are one-part neutral curing silicone sealants exhibiting superior performance in applications where sealing apertures in walls and floors are needed to control the spread of fire, smoke, toxic gasses, and water during fire conditions.

Pensil Silicone Sealants react with atmospheric moisture to form a tough durable seal that will adhere to most building substrates without the use of primers. Pensil products do not contain asbestos or PCBs.

BASIC USES:

Pensil 300 Firestop Sealant is designed for use in Underwriters Laboratories (UL) classified firestop systems. This material can also insulate openings to prevent damage from occasional water spillage and dust penetration in sensitive areas.

Pensil 300 Firestop Sealant is available in non slump (PEN300) and self-leveling (PEN300 SL) grades and may also be used to seal vertical and horizontal joints between metals, masonry, concrete and other common construction materials. Pensil 300 is especially designed for use in static or dynamic joints. The low modulus characteristic minimizes strain on the substrate surface and the elastomeric quality allows excellent recovery from extension and compression cycling.

2. APPLICATIONS

Pensil 300 is used to seal through-penetrations involving non-combustible penetrants, electrical, data, or telephone cables, construction gaps, expansion joints, curtain wall safing applications, and top-of-wall joints.

3. PHYSICAL PROPERTIES

See Table A.

4. PERFORMANCE

Pensil Silicone Sealants are the basis for systems that meet the exacting criteria of ASTM E814, UL 1479, ASTM E1966 (UL 2079), ASTM 1399, as well as to the time-temperature requirements of ASTM E119 (UL 263). Pensil 300 Sealant is ASTM C920 compliant. Systems have been tested with ratings up to 4 hours.

5. SPECIFICATIONS

The firestopping sealant shall be a one-part, neutral curing silicone sealant. The sealant shall be completely water resistant and shall contain neither solvents nor inorganic fibers of any kind. The through-penetration firestop sealant shall allow movement of $\pm 25\%$ and shall be UL Classified and/or FM Systems Approved and tested to the requirements of ASTM E814 (UL1479). The firestop joint sealant shall allow movement up to $\pm 50\%$ and shall be UL Classified and tested to the requirements of UL2079.

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

**For the latest Product and System Information, Call
STI'S FACTS-ON-DEMAND automated information attendant
system by dialing toll-free (888)526-6800!**

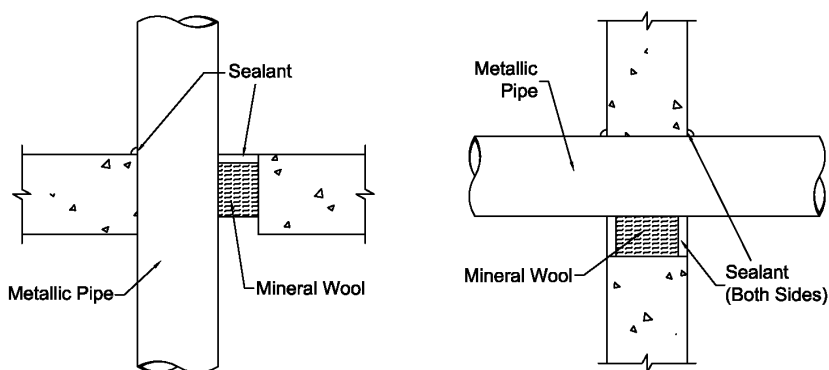
Table A: PHYSICAL PROPERTIES

Color	Concrete
Flame Spread ^A	5
Smoke Development ^A	45
In Service Temp	≤350°F
Hardness Shore ^A ASTM D2240	25
Tensile Strength ASTM D412	270
Peel Strength ASTM C794-80	55 ppi
Movement Capability	
ASTM C719	± 50%
AC308 [†]	± 35%
Stress @ 50% Extension	
1/2" x 1/2" Bead	35 lbs/in
Tooling Time (Minutes)	30
Tack Free Time (Hours), ASTM C619	5 - 9
Sag; Slump (NS Grade) ASTM C639	0.1"
Ozone & UV Resistance	
(Weatherometer Twin Arc)	Excellent
Storage Warranty Period **	12 months

^A ASTM E84 (UL723) @14% coverage

** From date of shipment if stored in original unopened container at 80°F (27°C).

[†] 500 Cycles as per UL2079, AC308 (ICBO), and ASTM E1399

Fig. 1: METALLIC PIPE PENETRATIONS**UL SYSTEM C-AJ-1198**

F Rating: 3 hr • T Rating: 0 hr

Steel or Iron Pipe: ≤24", Copper Pipe: ≤4"

Annulus: Point Contact to 2 1/4" • Sealant Depth: 1/2"

Forming Material: Nom 4 pcf Mineral Wool

Tightly Packed to a 3" Depth.

6. INSTALLATION INSTRUCTIONS**THROUGH-PENETRATION FIRESTOPPING**

Pensil 300 Sealant is approved for a variety of through-penetration firestop applications. Some typical installations have been illustrated here to assist in the selection of the proper installation method. Space limitations preclude highly detailed information pertaining to individual application systems. Please consult the STI referenced drawing, the STI Product and Application Guide, as well as the UL Fire Resistance Directory for additional information.

PREPARATION: All surfaces to receive Pensil sealant must be sound, dry, frost-free, and free of bond-breaking contaminants and loose material. Wire brush contact surfaces or wipe with a suitable solvent as necessary to remove any contaminants. Mask all areas where adhesion is undesirable. Do not apply to

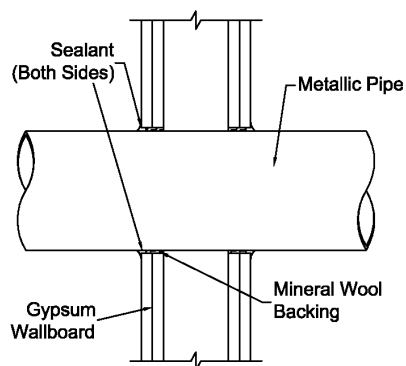
wet or frost covered surfaces. **Forming:** Some installations may require forming as either an integral part of the system or as an option to facilitate installation. In systems where forming is required, mineral wool batting (4 lb./cu. ft. density) is recommended for use in through-penetrations. Where forming materials are required, cut oversized to allow for tight packing. Position forming material as required for the proper depth of fill material.

FILL MATERIAL: Pensil Sealants 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 to pull back from a surface, clean the surface using the methods described above and

reapply. Install sealant to required depth. Work sealant into all areas exercising care to eliminate voids or seams. In gypsum wall board penetrations, crown sealant a minimum of 1/4" from penetrant to wallboard surface at a point approx. 1/2" or more from opening.

For applications involving cable bundles, spread cables sufficiently to ensure that sealant completely envelops all cables and totally fills all voids to the required depth.

SMOKE SEALING: Pensil Silicone Sealants make an excellent smoke seal. Apply at gaps and seams to prevent the passage of smoke. Some SpecSeal Firestop Collar designs utilize Pensil Silicone Sealant as the smoke seal. Consult the STI Product and Application Guide for further information.

Fig. 2: MISCELLANEOUS METALLIC PIPE & CABLE PENETRATIONS**UL SYSTEM W-L-1033**

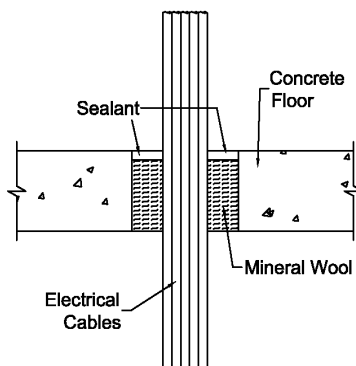
F Rating: 2 hr • T Rating: 0

Steel Pipe: ≤ 6", Copper Pipe or Tubing: 4"

Sealant Depth: 1/4" (within annulus) + 3/8" Crown

Forming Material: Nom 4 pcf Mineral Wool

Tightly Packed to a 1" Depth.

**UL SYSTEM C-AJ-3023**

F Rating: 3 hr • T Rating: 1/2 hr

Electrical, Telephone, or Data Cables

Annulus: 1/2" to 1" • Sealant Depth: 1/2"

Forming Material: Nom 4 pcf Mineral Wool

Tightly Packed to a 4" Depth.

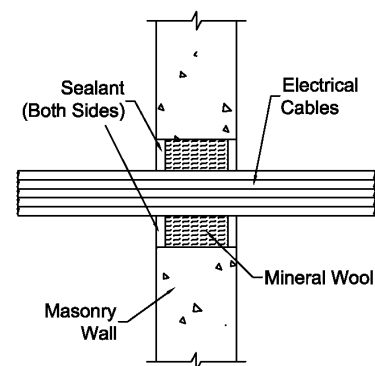


Table B: SEALANT REQUIREMENTS IN CUBIC INCHES PER HALF INCH OF INSTALLED DEPTH

Pipe Size		Size of Hole (Inches)											
Trade Size	Pipe O.D.	1-1/2	2	3	4	5	6	7	8	10	12	14	26
1/2"	0.840	1.22	1.29	3.26	6.01								
1"	1.313	0.42	0.89	2.86	5.61	9.14							
1-1/2"	1.900			2.12	4.87	8.40							
2"	2.375			1.32	4.07	7.60	11.92						
2-1/2"	2.875				3.04	6.57	10.89						
3"	3.500				1.47	5.01	9.33	14.43	20.32				
3-1/2"	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"	5.563						1.98	7.09	12.98	22.03	39.31		
8"	8.653									10.06	27.34		
10"	10.750										11.75	63.20	
12"	12.750											26.30	
24"	24.000												76.60

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.

CONSTRUCTION JOINTS

Pensil 300 Sealants are approved for sealing a variety of construction joint applications. FIG. 3 illustrates some common joint designs in masonry construction. Space limitations preclude highly detailed information pertaining to individual application systems. Please consult the STI referenced drawing, the STI Product and Application Guide, as well as the UL® Fire Resistance Directory for additional information.

JOINT DESIGNS: Joints firestopped with Pensil 300 will accommodate $\pm 50\%$ movement providing the joint is 1/2" or wider. If the joint is less than 1/2" wide, the movement should be limited to $\pm 25\%$ of the actual joint width.

The dimensions of curtain wall expansion joints and similar applications change daily as a result of solar heat gain, positive and negative buffeting from wind forces, and throughout the year because of seasonal changes.

If the firestop cannot be installed when the joint is at its midpoint of dimensional extremes, the joint width should be designed at twice the anticipated movement, plus the dimensional amount the joint deviates from the

midpoint at the time of sealant installation. For example, if Pensil 300 is to be installed in an expansion joint and movement is expected to be $\pm 3/8"$ and the joint is not at its midpoint, the joint width should be $3/4"$ plus any deviation from the joint midpoint.

Lap shear joints should have a bead width that is equal to, or greater than, the total anticipated movement.

IMPORTANT NOTE: Joint designs incorporating Pensil® Silicone Sealants are not designed to be load bearing or exposed to traffic. Joint seals must be protected by suitable metallic cover plates in exposed floor areas.

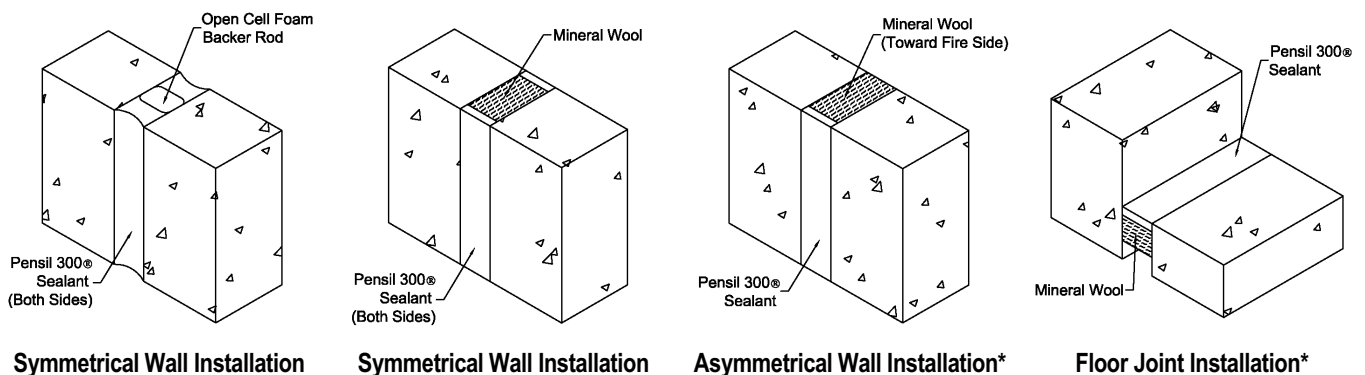
PREPARATORY WORK: Clean all concrete, masonry and stone joints of all contaminants and impurities. Concrete laitance, all old sealants and other surface treatments and protective coatings are examples of materials that must be removed from the joint surfaces to obtain proper sealant adhesion. Porous substrates should be cleaned where necessary by grinding, saw cutting, blast cleaning (sand or water), mechanical abrading or a combination of these methods are required to provide

a sound, clean surface for sealant application. Dust, loose particles, etc. should be blown out of the joint with oil-free compressed air or vacuum cleaned.

PRIMING: Pensil Silicone Sealants have primer less adhesion to many construction materials including untreated or uncoated concrete. Jobsite trial applications are recommended if contact surfaces are in any way questionable. Application of SCP3154 primer may remedy adhesion difficulties for questionable concrete surfaces.

MASKING: The use of masking tape is recommended where appropriate to insure a neat job and to protect adjoining surfaces. Do not allow masking tape to touch clean surfaces to which the silicone sealant is to adhere. Masking tape should be removed immediately after the finish tooling of the Pensil Firestop Sealant.

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 batting (4 lb./cu. ft. density), or other approved backer materials are recommended.

Fig. 3: TYPICAL JOINT INSTALLATION METHODS

*Rated one side only.

To calculate the volume of packing material required for the joint, add 20 - 25% to the volume required for the joint at its greatest extension (for dynamic joints) or widest width (for static joints). Where required, cut forming material oversize to allow for tight packing. Recess forming materials as required for application of the proper depth of fill material.

FILL MATERIAL: Apply Pensil 300 Firestop Sealant in a continuous operation, horizontally in one direction and vertically from the bottom to the top of the joint opening. A positive pressure adequate to properly fill and seal the joint width should be employed. Tool or strike Pensil Firestop Sealant with light pressure to spread the material against the backup material and the joint surface. The lightweight consistency of Pensil 300 Firestop Sealant responds easily to light tooling pressure and facilitates void free placement. On porous surfaces the excess sealant should be allowed to progress through the initial cure or setup. It should then be removed by abrasion or other mechanical means.

7. MAINTENANCE

Inspection: Installations should be inspected periodically for subsequent damage. Any damage should be repaired using SpecSeal® products per the original approved design. Cut away damaged material and reapply sealant as required.

8. TECHNICAL SERVICE

Specified Technologies Inc. provides toll free technical support to assist in product selection and appropriate installation design. Design System Drawings suitable for submittal or specification purposes are available on request.

9. PRECAUTIONARY INFORMATION

Avoid contact with eyes. Uncured product may irritate eyes on contact. Use only in well ventilated areas. To clean areas of skin contact, wipe off uncured material with a dry cloth or paper towel prior to washing. Waterless hand cleaners are particularly effective while sealant is uncured. Consult Material Safety Data Sheet for additional information on the safe handling and disposal of this material.

10. AVAILABILITY

Pensil® Silicone Sealants are 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 in Table D.

Table C: PRODUCT ESTIMATION INFORMATION (Construction Joints)

JOINT WIDTH	PER 1/2" INSTALLED DEPTH			PER 1" INSTALLED DEPTH			PER 1-1/2" INSTALLED DEPTH		
	CU IN/FT	FT/GAL	GAL/100 FT	CU IN/FT	FT/GAL	GAL/100 FT	CU IN/FT	FT/GAL	GAL/100 FT
0.5	3.0	77.0	1.3	6	38.5	2.6	9	25.7	3.9
.75	4.5	51.3	1.9	9	25.7	3.9	13	17.1	5.8
1.0	6.0	38.5	2.6	12	19.3	5.2	18	12.8	7.8
1.5	9.0	25.7	3.9	18	12.8	7.8	27	8.6	11.7
2.0	12	19.3	5.2	24	9.6	10.4	36	6.4	15.6
2.5	15	15.4	6.5	30	7.7	13.0	45	5.1	19.5
3.0	18	12.8	7.8	36	6.4	15.6	54	4.3	23.4
3.5	21	11.0	9.1	42	5.5	18.2	63	3.7	27.3
4.0	24	9.6	10.4	48	4.8	20.8	72	3.2	31.2
5.0	30	7.7	13.0	60	3.9	26.0	90	2.6	39.0
6.0	36	6.4	15.6	72	3.2	31.2	108.0	2.1	46.8

Table D: ORDERING INFORMATION

Cat. No.	Description
PEN300	10.5 oz Tube (304 ml) 18.3 cu. in.
PEN305	5 Gal. Pail (19.0 liters) 1,155 cu. in.
PEN305SL	Self-Leveling 5 Gal. Pail (19.0 liters) 1,155 cu. in.



Additional SpecSeal Products...

SSS Series Sealant	The industry's most versatile sealant provides the firestopping solutions for a wide range of combustible and noncombustible applications. Water-based intumescent sealant expands up to 8x!
LC Series Sealant	An economical latex firestop sealant for noncombustible applications. Non-halogenated, easy clean up, flexible, water-resistant!
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!
Firestop Mortar	Lightweight, versatile and economical! The best choice for large or complex installations.
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!
Elastomeric Joint Seals	New economical products for sealing construction joints. Choose caulk or spray applied products tested to UL2079.
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.

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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.

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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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 STI on the WEB: www.stifirestop.com



Material Safety Data Sheet

01-JAN-2003

SpecSeal® TYPE ES SEALANT

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

PRODUCT NAME.....SpecSeal® ES 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	PERCENT
CALCIUM CARBONATE	1317-65-3	30-40
TITANIUM DIOXIDE	13463-67-7	2-6
PHthalate ESTERS	85-68-7	4-6

HAZARDS IDENTIFICATION

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

* Possible skin and eye irritant. Paste. *

Potential Health Effects:

EYE: Contact may cause irritation.

SKIN: Contact may cause irritation.

INGESTION: Should be relatively non-toxic.

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

CHRONIC (CANCER) INFORMATION: Phthalate esters classified by EPA as possible human carcinogen.

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

Flash point >93 deg. C.

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. Avoid excessive heat and freezing.

EXPOSURE CONTROLS/PERSONAL PROTECTION

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

SKIN PROTECTION REQUIREMENTS:Gloves. Barrier skin cream.

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/m³, 8 Hr. TWA, total dust 5 mg/m³, 8 Hr. TWA, respirable dust

TLV(ACGIH): None Established

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM Smooth paste, slight ammonia odor

SPECIFIC GRAVITY..... 1.2-1.5

PERCENT VOLATILES..... 17-20

EVAPORATION RATE (ether = 1)..... Slower

BOILING POINT 100-105 deg. C

SOLUBILITY IN WATER..... Dissolves wet, insoluble when cured

PH.....8.0-8.5

STABILITY AND REACTIVITY

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

CONDITIONS TO AVOID.....Excessive heat and freezing

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

INCOMPATIBILITIES:.....None special.

TOXICOLOGICAL INFORMATION

Mixture not tested but based on components:

May be irritating to skin and eyes. As a precautionary measure, preclude from those individuals with a history of respiratory ailments.

EPA Integrated Risk Information System IRIS):

Butyl benzyl phthalate, CAS# 85-68-7, carcinogen assessment is: C (Possible human carcinogen)

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 : 2

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-ES100 (titanium dioxide, phthalate esters)

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER: None known.

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



GE Silicones

FORMAT: USA

MATERIAL SAFETY DATA SHEET

PRODUCT: PENSIL300

SILICONE RUBBER SEALANT

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURED BY:

SUPPLIED BY:

GE SILICONES

GE SILICONES

260 HUDSON RIVER ROAD

260 HUDSON RIVER ROAD

WATERFORD, NY 12188

WATERFORD, NY 12188

EMERGENCY PHONE (24 HRS)

EMERGENCY PHONE (24 HRS)

(518) 237-3330

(518) 237-3330

REVISED: 05/01/02

PREPARER: CE HANNIGAN

CHEMICAL FAMILY/USE: SILICONE RUBBER SEALANT

FORMULA: MIXTURE

2. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION/ APPROX. ACGIH TLV OSHA PEL

CAS REG NO. WGT. % TWA STEL TWA STEL UNITS

HAZARDOUS

METHYLTRIMETHOXSILANE

1185-55-3 1-5 200(R) NE 200(R) NE PPM

2. NON-HAZARDOUS

POLYDIMETHYLSILOXANE SILANOL/STPD

70131-67-8 30-60 NONE NE NONE NE NA

DIMETHYLPOLYSILOXANE

63148-62-9 10-30 NA NE NA NE NA

LIMESTONE

1317-65-3	30-60	10	NE	15	NE	MG/M3
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TETRAMER TREATED FUMED SILICA

68583-49-3	1-5	10	NE	15	NE	MG/M3
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See Section 15 for description of any WHMIS Trade Secret(s).

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

WARNING!

Irritating to skin, eyes, and respiratory tract.

May be harmful if swallowed.

Ammonia odor

Solids of various colors.

POTENTIAL HEALTH EFFECTS:

INGESTION:

May be harmful if swallowed.

SKIN CONTACT:

Uncured product contact will irritate lips, gums and tongue.

Uncured product contact may irritate the skin.

INHALATION:

Causes mild respiratory irritation.

Applies only in uncured state.

EYE CONTACT:

Uncured product contact irritates eyes.

MEDICAL CONDITIONS AGGRAVATED:

None known.

SUBCHRONIC (TARGET ORGAN) EFFECTS:

None known

CHRONIC EFFECTS/CARCINOGENICITY:

This product or one of its ingredients present 0.1% or more
is NOT listed as a carcinogen or suspected carcinogen by

NTP, IARC, or OSHA.

PRODUCTS/INGREDIENTS

This space reserved for special use.

PRINCIPLE ROUTES OF EXPOSURE:

Dermal - skin.

Eyes.

OTHER:

Methanol released during curing.

Ammonia released during curing.

This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150°C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. An MSDS for formaldehyde is available from GE Silicones.

4. FIRST AID MEASURES

INGESTION:

Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

SKIN:

To clean from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water.

Get medical attention if irritation persists.

1~ INHALATION:

If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

EYES:

In case of contact, immediately flush eyes with plenty of water

for at least 15 minutes and get medical attention if irritation persists.

NOTE TO PHYSICIAN:

None known.

5. FIRE FIGHTING MEASURES

FLASH POINT: NA (C) NA (F)
METHOD : NA
IGNITION TEMP : UNK (C) UNK (F)
FLAMMABLE LIMITS IN AIR - LOWER (%): NA
FLAMMABLE LIMITS IN AIR - UPPER (%): NA
SENSITIVITY TO MECHANICAL IMPACT (Y/N): NO
SENSITIVITY TO STATIC DISCHARGE:
Sensitivity to static discharge is not expected.
EXTINGUISHING MEDIA:
All standard firefighting media
SPECIAL FIREFIGHTING PROCEDURES:
Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Wipe, scrape or soak up in an inert material and put in a container for disposal.
Wash walking surfaces with detergent and water to reduce slipping hazard.

Wear proper protective equipment as specified in the protective equipment section.

Increase area ventilation.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Avoid contact with skin and eyes.

Use only in a well ventilated area.

Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the fingertips, nails and cuticles. Residual sealant may remain on fingers for several days and transfer to lenses and cause severe eye irritation.

Store away from heat, sources of ignition, and incompatibles.

Keep away from children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Showers and eyewash stations. See "Ventilation" below.

RESPIRATORY PROTECTION:

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29 CFR 1910.134).

PROTECTIVE GLOVES:

Cloth gloves.

EYE AND FACE PROTECTION:

Safety glasses.

OTHER PROTECTIVE EQUIPMENT:

wear eye protection and protective clothing.

VENTILATION:

Ventilation and other forms of engineering controls are preferred for controlling exposures. Respiratory protection may be needed for non-routine or emergency situations.

9. PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT INFORMATION:

BOILING POINT	:	NA	(C) NA	(F)
VAPOR PRESSURE(20 C)(MM HG):	:	NA		
VAPOR DENSITY (AIR=1)	:	NA		
FREEZING POINT	:	NA	(C) NA	(F)
MELTING POINT	:	NA	(C) NA	(F)
PHYSICAL STATE	:	SOLID		
ODOR	:	SWEET		
COLOR	:	NEUTRAL		
ODOR THRESHOLD (PPM)	:	UNK		
% VOLATILE BY VOLUME	:	<1.9		
EVAP. RATE(BUTYL ACETATE=1):	:	<1		
1~ SPECIFIC GRAVITY (WATER=1) :	:	1.40		
DENSITY (KG/M3)	:	1400		
ACID/ALKALINITY (MEQ/G)	:	UNK		
PH	:	UNK		
VOC EXCL.H2O & EXEMPTS(G/L):	:	<27		
SOLUBILITY IN WATER (20 C) :	:	INSOLUBLE		
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT):	:	TOLUENE		

10. STABILITY AND REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

HAZARDOUS THERMAL DECOMPOSITION/COMBUSTION PRODUCTS:

Carbon monoxide.

Carbon dioxide.

Silicon dioxide.

Methanol.

Formaldehyde.

INCOMPATIBILITY (MATERIALS TO AVOID):

None known.

CONDITIONS TO AVOID:

None known.

11. TOXICOLOGICAL INFORMATION

METHYLTRIMETHOXSILANE

ACUTE ORAL LD50 (MG/KG): 12,500 (RAT)

ACUTE DERMAL LD50 (MG/KG): >10,000 (RBT)

ACUTE INHALATION LC50 (MG/L): UNKNOWN

OTHER:

None.

AMES TEST:

POLYDIMETHYLSILOXANE SILANOL/STPD

ACUTE ORAL LD50 (MG/KG): >40000 MG/L RAT

ACUTE DERMAL LD50 (MG/KG): NON-IRRITATING RBT

ACUTE INHALATION LC50 (MG/L): >535 RAT

OTHER:

None.

AMES TEST:

DIMETHYLPOLYSILOXANE

1~ ACUTE ORAL LD50 (MG/KG): >40,000 (RAT)

ACUTE DERMAL LD50 (MG/KG): NA

ACUTE INHALATION LC50 (MG/L): >535 MG/L (RAT)

OTHER:

Non-irritating to skin (rbt).

AMES TEST:

LIMESTONE

ACUTE ORAL LD50 (MG/KG): NONE FOUND

ACUTE DERMAL LD50 (MG/KG): NONE FOUND

ACUTE INHALATION LC50 (MG/L): NONE FOUND

OTHER:

None.

AMES TEST:

TETRAMER TREATED FUMED SILICA

ACUTE ORAL LD50 (MG/KG): NA

ACUTE DERMAL LD50 (MG/KG): NA

ACUTE INHALATION LC50 (MG/L): NA

OTHER:

None.

AMES TEST:

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No data at this time

CHEMICAL FATE INFORMATION: No data at this time

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:

Disposal should be made in accordance with federal, state and local regulations.

Bury in a licensed landfill or burn in an approved incinerator according to federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT SHIPPING NAME: NONE

DOT HAZARD CLASS: NOT DOT REGULATED

DOT LABEL(S): NONE

UN/NA NUMBER: NONE

1⁴ PLACARDS: NONE

IATA:

NOT REGULATED BY IATA

IMO IMDG-code: NOT REGULATED FOR OCEAN TRANSPORTATION

EMS No: NA

EUROPEAN CLASS:

RID (OCTI): NONE

ADR (ECE) : NONE

RAR (IATA): NONE

15. REGULATORY INFORMATION

SARA SECTION 302:

None Found

SARA (311,312) HAZARD CLASS:

ACUTE HEALTH HAZARD

SARA (313) CHEMICALS:

NONE

CPSC CLASSIFICATION: NONE

WHMIS HAZARD CLASS:

D2A VERY TOXIC MATERIALS

D2B TOXIC MATERIALS

WHMIS TRADE SECRET:

None

EXPORT:

SCHDLE B/HTSUS: 3214.10 Mastic Based on Rubber

ECCN: EAR99

HAZARD RATING SYSTEMS

HMIS FLAMMABILITY 0 , REACTIVITY 0 , HEALTH 2

NFPA HEALTH = 2, FLAMMABILITY = 0 , REACTIVITY = 0

CALIFORNIA PROPOSITION 65:

NONE

16. OTHER INFORMATION

These data are offered in good faith as typical values and not

as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

.....
This product or its components are on the Australian inventory (ACOIN).....
.....

C = ceiling limit	NEGL = negligible
EST= estimated	NF = none found
NA = not applicable	UNKN = unknown
NE = none established	REC = recommended
ND = none determined	V = recomm. By vendor
By-product = reaction by-product, TSCA inventory	SKN = skin
status not required under 40 CFR part 720.30(h-2)	TS = trade secret
	R = recommended
STEL = short term exposure limit	MST = mist
	NT = not tested

.....
*