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PRODUCT DATA SHEET

Series LC Sealant

1. PRODUCT DESCRIPTION

SpecSeal® Series LC 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.

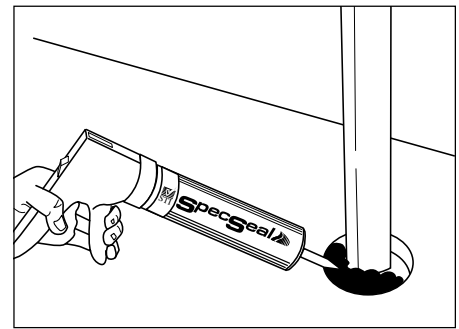
Series LC is engineered to adhere well to virtually all construction surfaces and may be applied using a standard caulk gun or by troweling with a standard mason's trowel or with a putty knife.

Series LC dries without shrinking 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® Series LC Sealant is non-halogenated, contains no asbestos, inorganic fibers or solvents.



2. APPLICATIONS

Series LC is designed primarily for sealing penetrations for noncombustible penetrants. Series LC has been tested and approved for single metallic pipe penetrations up to 24" as well as multiple penetrants through both masonry and gypsum wallboard constructions. Additional systems have been tested for steel sleeved penetrations as well as some common electrical and communications cable penetrations. See STI's Product & Application Guide as well as the UL Fire Resistance Directory for complete listings.



3. PHYSICAL PROPERTIES

See Table A

4. PERFORMANCE

SpecSeal® Series LC Sealant is the basis for systems that meet the exacting criteria of ASTM E814 (UL1479) as well as the time-temperature requirements of ASTM E119. Tested systems will provide up to a 3 hour rating utilizing as little as 1/4" of sealant depth (1/2" for 4 hours).

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

SEE UL FIRE RESISTANCE DIRECTORY

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

FEATURES

- **Water-Based** for easy installation, cleanup, and disposal.
- **Endothermic Fillers** absorb heat & release water.
- **High Solids Formula** means no shrinkage!
- **Sandable & Paintable** (when dry)
- **Safe ... No Solvents!** Non-Halogenated! Low VOC's
- **Blue Color** for easy identification and inspection.
- **Multiviscosity Grade** means excellent caulking properties along with high build capabilities.
- **Excellent Smoke Seal**
- **Flexible!**
- **Water-Resistant!**

5. SPECIFICATIONS

The firestopping sealant shall be a one-part, latex-based compound. The sealant shall dry to form a flexible non-shrinking penetration seal and shall be capable of allowing pipe movement and shall contain no solvents, water soluble fillers, or inorganic fibers. The sealant shall be thixotropic and shall be capable of caulking or troweling on to 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

Table A: PHYSICAL PROPERTIES

Product Name	Series LC Sealant
Color	Blue
Odor	Mild Latex
Density	9.4 Lb./Gal.
Solids	80% ± 2%
pH	8.3
In-Service Temp.	≤130° F.
Flame Spread*	0
Smoke Developed*	5

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

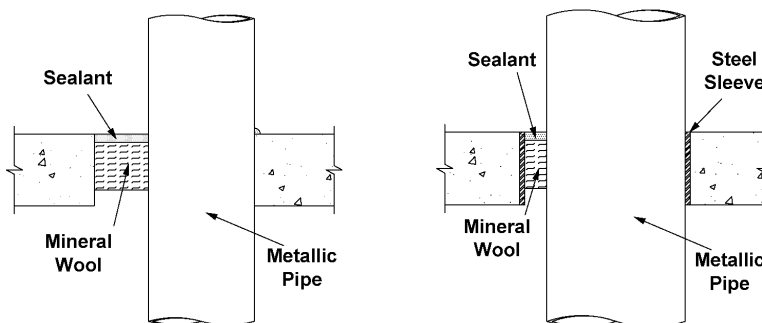
6. INSTALLATION INSTRUCTIONS

GENERAL: Areas to be protected must be clean and free of oil, loose dirt, rust or scale. Installation temperatures must be between 35°F (2°C) and 100°F (38°C). Allow product to dry a minimum of 24 hours before exposure to moisture.

SYSTEM SELECTION: Consult UL® Fire Resistance Directory, STI Product & Application Guide, or drawings provided by the manufacturer for specific details concerning installation design and requirements.

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 (3" nom. thickness, min. 4 lb./cu. ft. density) is recommended.

Fig. 1: METALLIC PIPE PENETRATIONS - CONCRETE/MASONRY FLOOR & WALL



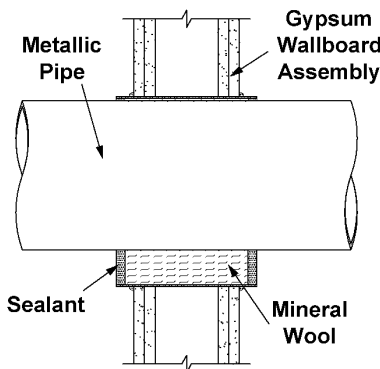
UL SYSTEM C-AJ-1213

F Rating: 3 hr • T Rating: 0 hr
 Steel or Iron Pipe: ≤ 24", Copper Pipe: ≤ 4"
 Annulus: Point Contact To 1-1/2"
 Sealant Depth: 1/2"
 Forming Material: 3" Tightly Packed
 Min. Wool (nom 4 pcf)

UL SYSTEM C-AJ-1215

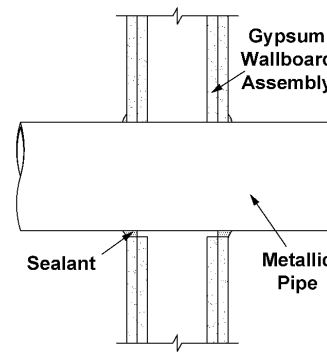
F Rating: 3, 4* hr • T Rating: 0 hr
 Steel or Iron Pipe: ≤ 8", Copper Pipe: ≤ 4"
 Annulus: Point Contact To 1-1/4"
 Sealant Depth: 1/2"
 Forming Material: 3" Tightly Packed
 Min. Wool (nom 4 pcf)

Fig. 2: METALLIC PIPE PENETRATIONS - WALLS



UL SYSTEM W-L-1078

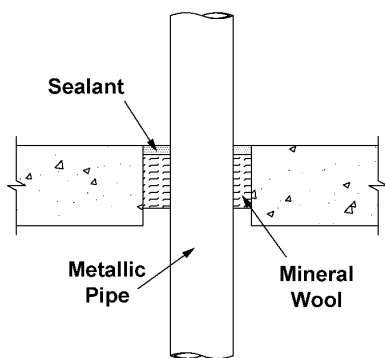
F Rating: 1, 2 hr • T Rating: 0 hr
 28 Gauge Steel Sleeve, Steel Pipe: ≤ 8"
 Annulus 1/4" to 2-1/4"
 Sealant Depth: 1/2"
 Forming Material: Min. Wool (nom 4 pcf)



UL SYSTEM W-L-1088-90

F Rating: 1, 2 hr • T Rating: 0 hr
 Steel Pipe: ≤ 24", Copper Pipe or Tubing: 6"
 Annulus Point Contact to 1/2"
 Sealant Depth: 1/2" (within annulus) + 3/8" Crown
 Forming Material: Not Required

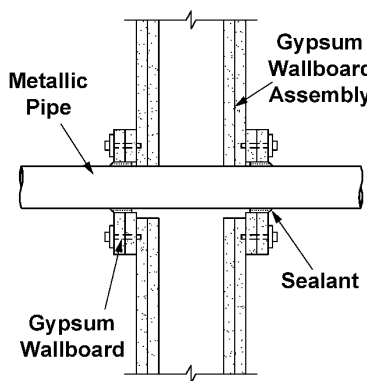
Fig. 4: MULTIPLE PIPES - MASONRY FLOORS



UL SYSTEM NO. C-AJ-1208-09

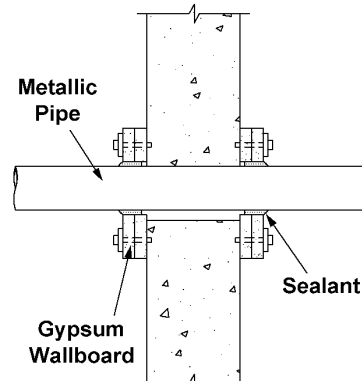
F Rating: 3 hr • T Rating: 0 hr
 Max. 3" Steel or Iron Pipe, Copper Pipe or Tubing
 Annulus: 1" To 1-1/2" • Sealant Depth: 1/2"
 Forming Material: 3" Tightly Packed
 Min. Wool (nom 4 pcf)

Fig. 3: MULTIPLE PIPE PENETRATIONS - GYPSUM BOARD OR CONCRETE/MASONRY WALLS



UL SYSTEM W-L-1093 (FOR GYPSUM BOARD WALLS)

UL SYSTEM W-J-1033 (FOR CMU WALLS)
 F Rating: 1, 2 hr • T Rating: 1, 1-1/2 hr
 Steel Pipe or Conduit up to 2" Trade Size
 Annulus (between patch & pipe): Point Contact to 5/16"
 Sealant Depth: 1/2" (1/4" crown at point contact)



Mineral wool is to be highly compressed and friction fitted into the opening. Position forming or packing material to allow for the proper depth of fill material.

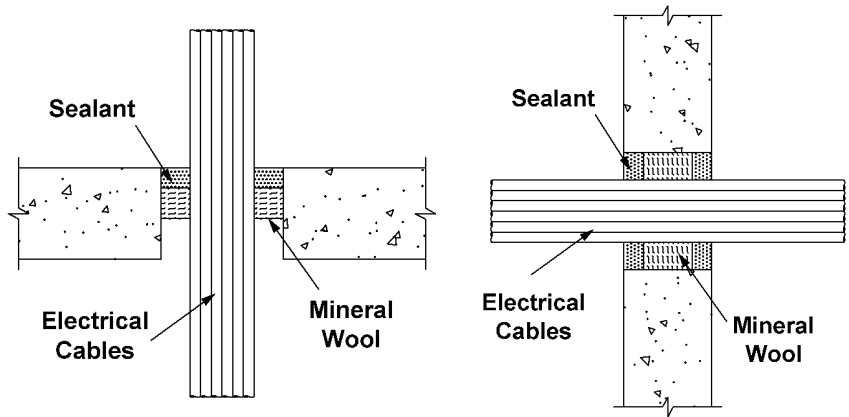
INSTALLATION OF FILL MATERIAL: Series LC may be installed by caulking using a standard caulking gun or from bulk containers using a bulk loading caulk gun, or by manually troweling using a mason's trowel or putty knife. If the sealant tends to pull back from a surface, clean the surface with a damp rag or sponge and reapply. Install sealant to required depth. 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 a minimum of 1/4" from penetrant to wallboard surface at a point approx. 1/2" or more from opening.

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

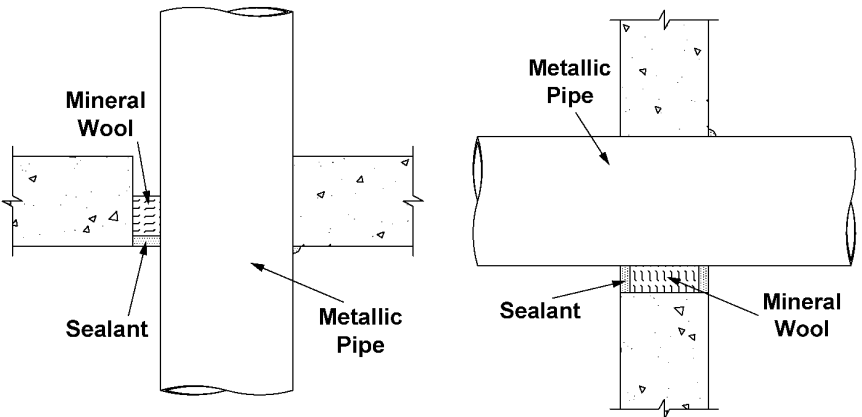
INSPECTION: Installations should be inspected periodically for subsequent damage. Any damage should be repaired using Series LC as per the original approved design.

Fig. 5: CABLE PENETRATIONS - CONCRETE/MASONRY FLOORS & WALLS



UL SYSTEM C-AJ-3085
 F Rating: 3 hr • T Rating: 1/2 hr
 Electrical, Telephone, or Data Cables
 Annulus: 1/2" To 1"
 Sealant Depth: 1"
 Forming Material: 3" Tightly Packed
 Min. Wool (nom 4 pcf)

Fig. 6: PIPE PENETRATIONS (BOTTOM-SIDE INSTALLATION) - CONCRETE/MASONRY FLOORS



UL SYSTEM C-AJ-1232
 F Rating: 2 hr • T Rating: 0 hr
 6" Steel or Iron Pipe or Rigid Steel Conduit, 4" EMT
 Annulus: Point Contact To 1-3/8" • Sealant Depth: 1/2"
 Forming Material: 3" Tightly Packed
 Min. Wool (nom 4 pcf)

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.

RETROFIT: When adding or removing penetrants, care should be taken to minimize damage to the seal. Reseal using Series LC as 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 openings as per the requirements of the modified design.

LIMITATIONS: SpecSeal Series LC sealant is water-based and cures through the evaporation of water. Low temperatures as well as high humidity may retard drying. Non-porous or impermeable backing materials, plates or coatings may retard the drying process. Do not paint or seal in any way that prevents contact with air until sealant has dried through completely.

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.

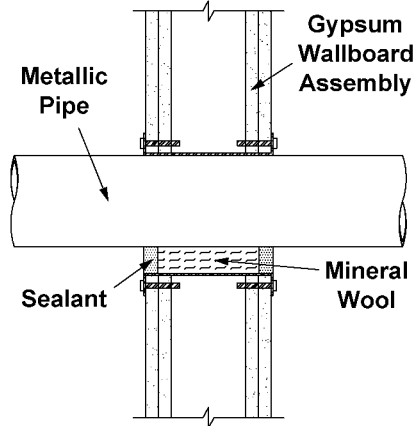
9. PRECAUTIONARY INFORMATION

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 LC Sealant is available from authorized distributors. Consult factory for the names and locations of the nearest sales representatives or distributors.

Fig. 7: MULTIPLE METALLIC PIPE/CONDUIT PENETRATIONS - GYPSUM BOARD WALLS



UL SYSTEM W-L-1127

F Rating: 1 or 2 hr • T Rating: 0 hr

Max. 4" Steel or Iron Pipe or Rigid Steel Conduit, 4" EMT

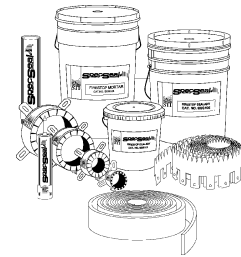
Max. Opening Size: 6" x 22 5/8" • Sealant Depth: 5/8" (installed both sides)

Forming Material: Min. Wool (nom 4 pcf)

Tightly Packed To Full Depth of Wall Recessed 5/8" on Both Sides For Installation of Fill Material.

Table C: ORDERING INFORMATION

Cat. No.	Container	Capacity
LC150	10.5 oz. Tube	19 cu. in. (311 ml.)
LC129	29 oz. Tube	52 cu. in. (858 ml.)
LC120	20 oz. Sausage	36 cu. in. (592 ml.)
LC152	2 gal. Pail	462 cu. in. (7.6 liters)
LC155	5 gal. Pail	1,155 cu. in. (19 liters)



Additional SpecSeal Products...

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.

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.

Elastomeric Joint Seals

New economical products for sealing construction joints. Choose caulk or spray applied products tested to UL2079.

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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.

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