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Project: 10258.02 Charlotte Central School Phase II
408 Hinesburg Road
Charlotte, Vermont 05445

Submittal #078400-1.0 - Firestopping
078400 - Firestopping

Revision	0	**Submittal Manager**	Becky St. George (DEW Construction)
Status	Open	**Date Created**	Jun 6, 2023
Issue Date	Jun 6, 2023	**Spec Section**	078400 - Firestopping
Responsible Contractor	Steel Elements International	**Received From**	Peter Gauthier (Steel Elements International)
Received Date		**Submit By**	
Final Due Date	Jun 20, 2023	**Lead Time**	
		Cost Code	
Location		**Type**	
Approvers	Mike Wanderlich (Dore & Whittier Architects)		
Ball in Court	Luke Keenan (DEW Construction)		
Distribution	Chris Giard (Champlain Valley School District), Sue Ramsey (Steel Elements International), Peter Gauthier (Steel Elements International), Kevin Cormier (Steel Elements International), Scott Speyers (DEW Construction), Dakota Stender (DEW Construction), Becky St. George (DEW Construction), Heather Gratton (Dore & Whittier Architects), Mike Wanderlich (Dore & Whittier Architects), Thomas Hengelsberg (Dore & Whittier Architects)		
Description	Please see the attached submittal for your review and approval. Thank you.		

Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					
Luke Keenan		Jun 6, 2023		Pending	
Mike Wanderlich		Jun 20, 2023		Pending	

DEW CONSTRUCTION **SHOP DRAWING / SUBMITTAL REVIEW**

Checking is only for conformity to the design concept of the project and compliance with the information given in the contract documents and specifications. Subcontractor is responsible for dimensions, to be confirmed and correlated at the project site, for information that pertains solely to the fabrication, the techniques of construction and for the coordination of their work with all trades.

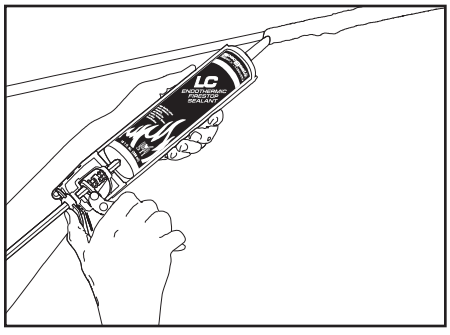
Project #: 10258.02 – Charlotte Central School Renovations Phase II

Reviewed By: Luke Keenan

SERIES LC ENDOTHERMIC SEALANT

APPLICATIONS

SpecSeal® Series LC Sealant is designed primarily for sealing construction joints and gaps as well as penetrations for noncombustible penetrants. SpecSeal Series LC has been tested and approved for single metallic pipe penetrations up to 24" (610 mm) 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 and joint penetrations. See STI's Product & Application Guide as well as the UL Fire Resistance Directory for complete listings.



PRODUCT DESCRIPTION

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

SpecSeal® Series LC Sealant 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.

SpecSeal® Series LC Sealant 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.

FEATURE	BENEFIT
• **Water-Based**	Easy installation, cleanup, and disposal.
• **Endothermic Fillers**	Absorb heat & release water.
• **High Solids Formula**	No shrinkage!
• **Paintable**	Paintable (when dry)
• **Safe ... No Solvents!**	Non-Halogenated! Low VOC's
• **Red Color**	Easy identification and inspection.
• **Installer Friendly**	Excellent caulking properties along with high build capabilities.
• **Excellent Smoke Seal**	
• **Flexible**	

PERFORMANCE

SpecSeal® Series LC Sealant is the basis for systems that meet the exacting criteria of ASTM E1966 (UL2079) 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" (6 mm) of sealant depth (1/2" (13 mm) for 4 hours).

CLASSIFIED C UL US 3L73

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

PHYSICAL PROPERTIES

Properties	Series LC
Color	Red
Odor	Mild Latex
Density	11.4 lb./gal.
Solids Content	80% ± 2%
pH	7.4-8.4
In Service Temperature	≤185˚ F (≤85˚ C)
Storage Temperature	40˚F (4˚C) - 95˚F (35˚C)
Flame Spread	0*
Smoke Developed	10*
STC Rating (ASTM E90/ASTM C919)	61
VOC Content (EPA Method 24/ASTM D3960)	0.33 lb/gal.(40 g/L)
Shelf Life	2 Years

**ASTM E84 (UL723) @ 14% Surface coverage. (Modified test for sealants and caulks.)*

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 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

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" (76 mm) nom. thickness, min. 4 lb./cu. ft. 64 kg/m^3 density) is recommended. 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: SpecSeal® Series LC 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 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" (6 mm) from penetrant to wallboard surface at a point approx. 1/2" (13 mm) or more from opening.

COVER PLATE: In some designs a galvanized steel cover plate (28 gauge) may be used to upgrade the fire resistance rating to 4 hours. Consult STI Product and Application Guide for dimensional and fastening requirements.

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.

MAINTENANCE

Inspection: Installations should be inspected periodically for subsequent damage. Any damage should be repaired using SpecSeal® Series LC Sealant as per the original approved design. Retrofit: When adding or removing penetrants, care should be taken to minimize damage to the seal. Reseal using SpecSeal® Series LC Sealant 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.

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.

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. The use of an OSHA or NIOSH approved mask for dust and mist environment is recommended. Apply in areas with adequate ventilation.

CAUTION: COATING IS CONDUCTIVE UNTIL DRY. DO NOT APPLY TO OR IN THE PRESENCE OF ENERGIZED ELECTRICAL CONDUCTORS.

AVAILABILITY

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

Cat. No.	Description	Packaging	Size
LC150	Endothermic Firestop Sealant	10.1 oz. Tube	18.2 cu in. (300 ml)
LC120	Endothermic Firestop Sealant	20 oz. Sausage	36 cu. in. (592 ml)
LC129	Endothermic Firestop Sealant	29 oz. Tube	52 cu. in. (858 ml)
LC155	Endothermic Firestop Sealant	5 gal. Pail	1,155 cu. in. (19 liters)

CITY OF NEW YORK MEA 129-96-M

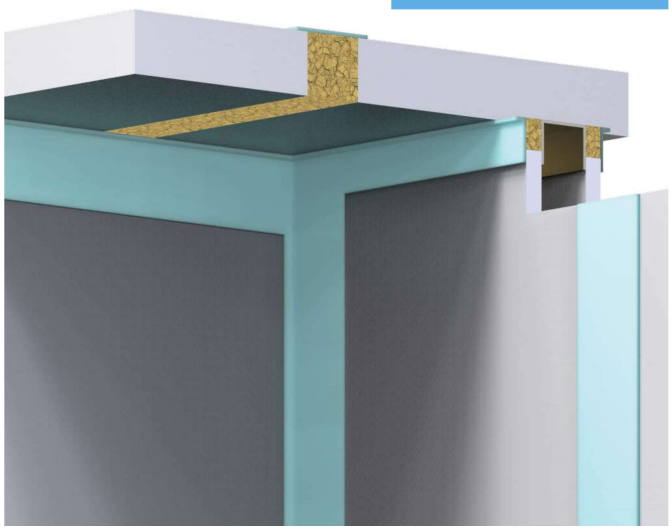
Specified Technologies Inc.
210 Evans Way • Somerville, NJ 08876 | Toll Free: 800-992-1180 • F: 908.526.9623

SpecSeal® AS200 Elastomeric Spray

SpecSeal AS200

Applications

SpecSeal® AS200 Elastomeric Spray is designed primarily for the protection of construction joints, curtain wall safing gaps, and certain through-penetrations.



Specifications

The fire protective joint coating shall be a water-based, non-halogenated elastomeric coating and shall contain no solvents, inorganic fibers, nor asbestos. The coating shall dry to form a flexible, moisture resistant film and shall adhere to all common construction surfaces. The coating shall provide up to 50 percent movement. The coating shall be thixotropic and shall be capable of being applied by airless spray, brush or trowel. The approved coating shall be SpecSeal® AS200 Elastomeric Spray.

Specified Divisions

Division 7	07 84 43	Joint Firestopping
Division 7	07 84 53	Building Perimeter Firestopping
Division 8	08 44 00	Curtain Wall and Glazed Assemblies

Performance

SpecSeal® AS200 Elastomeric Spray in conjunction with appropriate backing materials has been tested in one, two, three and four hour joints tested in accordance with ASTM E1966 (ANSI/UL2079), ASTM E814 (ANSI/UL1479) and CAN/ULC S115. This product has also been tested for use in Perimeter Fire Barrier Systems in accordance with ASTM E2307. Consult factory for individual system designs and application requirements.

Features & Benefits

- Water-based for easy installation and cleanup
- Non-halogenated
- Thixotropic for high-build application
- Auto bonding
- Safe, no solvents, no asbestos, no PCB's, no inorganic fibers
- Flexible
- Water resistant
- Low abrasion for longer pump life and less maintenance
- UL Certified
- Tested with spray applied fire resistive materials (SFRM)
- Paintable when dry
- Meets LEED™ v3, v4, & v4.1 requirements. Low emitting materials credit. See general LEED letter for additional applicable credits.

Limitations

Use product as per manufacturer's instructions. Use only in applications per the manufacturer's published designs or specific recommendations. End user must ultimately determine the suitability of the product and/or design to his or her specific requirements and assumes responsibility for its use. PRODUCT CONTAINS WATER AND IS CONDUCTIVE UNTIL DRY. DO NOT APPLY IN THE PRESENCE OF EXPOSED OR ENERGIZED ELECTRICAL CONDUCTORS.

This product has been designed to be safe with plastics. It has been used extensively and successfully with various types of plastic pipes, tubes, and plastic cable insulations. Variations in these materials, however, make it impossible to guarantee compatibility. STI strongly recommends that the user consults with the pipe, tubing, or cable manufacturer in question regarding any known sensitivities or potential restrictions before applying this product.

Maintenance

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

System Selection

To find your firestop system or create a submittal, visit https://systems.stifirestop.com/ to use System Search & Submittal Builder. You may also visit the UL Online Certifications Directory/UL Product iQ™ for complete listings. (Firestop Systems).

SpecSeal® Series AS200 Elastomeric Spray

SpecSeal® AS200

PHYSICAL PROPERTIES			
Color	Pale Blue or Red	Viscocity	130,000 cps
Density/Weight per Gallon	10.7 lb/gal (1.28 kg/L)	pH	7.5
Solids Content by Weight	74.0%	Plasticizer free	None
Solids Content by Volume	66.5%	In Service Temperature	Less than 185°F (85°C)
Flame Spread*	10	Storage Temperature	40°F (4°C) to 95°F (35°C)
Smoke Development*	0	Applicaton Temperature	40°F (4°C) to 95°F (35°C)
Mold & Fungus Growth Rating (ASTM G21)	0	Drying Time[A] (ASTM D1640)	Tack Free 2 Hours Dry Through 24-48 Hours
Movement Capabilities***	+/- 50%	STC Rating (ASTM E90-04/ASTM C919)	60 (Relates to Specific Construction)
		VOC Content**	23 g/L
Coverage	12.8 sq ft/gal @ 1/8 in Wet Thickness (0.31 sq m/L @ 3.2 mm Wet Thickness)	Shelf Life From Date of Manufacture	24 months

*Tested to ASTM E84 (UL723) at 14% surface coverage (modified test for sealants and caulks)
***500 Cycles per UL2079, AC30 (ICBO) and ASTM E1399
**Per SCAQMD Rule 1168 (EPA Method 24)
[A]Dependent on temperature and humidity

Technical Service

Specified Technologies Inc. provides toll free technical support to assist in product selection and appropriate installation design. UL System designs suitable for submittal or specification purposes are available on request. A complete library of technical information is provided at the company's website www.stifirestop.com including Safety Data Sheets (SDS's).

Precautionary Information

Consult Safety Data Sheet (SDS) 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. The use of an OSHA or NIOSH approved mask for dust and mist environment is recommended. Apply in areas with adequate ventilation.

Application Equipment

NOTICE: Spray application of SpecSeal® AS200 Spray requires airless spray equipment meeting the following specifications:

Working Pressure: Min. 2500 PSI (172 Bar)
Delivery: Min. 0.72 U.S. gpm (2.7 l/min.) recommended
Spray Tip Orifice: 0.023 in (0.58 mm) to 0.026 in (0.66 mm) recommended
Wetted Parts All seals and contact surfaces suitable for contact with latex emulsions.

A minimum 3/8 in (9.5 mm) fluid line is required, a 1/2 in (13 mm) line is preferred. Consult pump manufacturer for long hose runs or lifts to higher elevations. A reversible spray tip is recommended. A 6 in (152 mm) fan pattern is suggested to minimize overspray.

The following airless spray equipment has demonstrated suitability for application of this product. STI makes no warranties concerning the suitability or use of this equipment and has no affiliation of any kind with its manufacturer.

Manufacturer	Model Number & Description
Titan Tool Inc.	740ix Electric Airless Sprayer
Graco Inc.	Ultra Max II 695 Electric Airless Sprayer

SpecSeal® Series AS200 Elastomeric Spray

SpecSeal AS200

Availability

SpecSeal® AS200 Elastomeric Spray is available from Specified Technologies Inc. (STI) authorized distributors. For additional purchasing and technical information or for the names and locations of the nearest representative and/or distributor, regarding this and other Specified Technology products, please call 1-800-992-1180 or visit www.stifirestop.com.

ORDERING INFORMATION

Catalog Number	UPC Number	Size	(UOM) Qty.	Case Qty.	Weight (Each)
AS205	730573071076	5 Gallon Pail - 1,155 cu in (19 liters)	1	1	53.60 lbs (24.31 kg)
AS205R	730573071083	5 Gallon Pail - 1,155 cu in (19 liters)	1	1	53.60 lbs (24.31 kg)