FireDam™ Spray 200

Listed
Reference our Directory at www.opl.com 15654-2

FILL, VOID OR CAVITY MATERIALS. FOR USE IN JOINT SYSTEMS AND THROUGH-PENETRATION FIRESTOP SYSTEMS SEE UL DIRECTORY OF PRODUCTS CERTIFIED FOR CANADA SEE UL FIRE RESISTANCE DIRECTORY 90G9

SUBJECT TO THE CONDITIONS OF APPROVAL AS A WALL & FLOOR PENETRATION FIRE STOP WHEN INSTALLED AS DESCRIBED IN THE CURRENT EDITION OF THE FMRC APPROVAL GUIDE

Product Data

1. Product Description

3M™ FireDam™ Spray 200 is sprayable water-based material, that dries to form a tough, elastomeric coating. This material when used as part of an assembly will firestop building joints, perimeter joints (curtain wall), and through penetration seals. 3M™ FireDam™ Spray 200, when installed properly, will control the transmission of fire, heat, and smoke before, during, and after exposure to fire.

3M™ FireDam™ Spray 200 Features

- Superior adhesion to most construction materials
- Highly elastic--maintains performance with +/- 25% joint movement
- Broad range of applications--extensive portfolio of tested and listed building and perimeter joint systems
- Applied with conventional airless spray equipment
- Robust job site formula
  - Freeze/thaw resistant
  - Uniform seal formation in hot and cold drying conditions
- Low sag, thick coating build properties--stays where it's sprayed
- Paintable
- Easy water clean-up

2. Applications

Ideal for sealing building joints, through penetration seals, and perimeter joints. Helps limit the spread of noxious gas, smoke, and water. Maintains the integrity of the fire-rated construction.

3. Physical Properties

Product	Unit	Volume	Units/ Ctn.
FireDam Spray 200	5 gallon (18.9 litre)	1155.0 cu. in. (18926.9 cu. cm)	1

4. Specifications

Product

The coating is tested and listed by independent test agencies including UL and ITS Omega Point Laboratories. The coating complies with the requirements of IBC, BOCA, ICBO, SBCCI, and NFPA Code #101.

Building Joints: Have been fire tested and evaluated under the pass/fail criteria of ASTM E 1966 and UL 2079 at maximum extended joint width.

Perimeter Joints: Have been fire tested and evaulated under the pass/fail criteria of ASTM E2307 at maximum extended joint width.

Penetration Seals: Are capable of passing ASTM E 814/UL 1479 Standard Method for Through-Penetration Firestops up to 2 hours fire resistance rating.

Typically Specified Divisions

Division 7	Thermal and Moisture Protection
07840	Firestopping
07842	Fire Resistive Joint Systems

5. Performance

A. Typical Physical Properties

Color:	Gray
Non-Volatile Content:	50%
Viscosity:	40,000 cps
Coverage*:	12.8 sq. ft./gallon (0.31 sq. m/litre)
Flash Point:	None
ASTM E 84:	Flame Spread: < 25
	Smoke Development: < 50
Dry Time:	< 4 hrs tack-free
@70°F (21°C)/50% R.H.	24 hrs fully dry

*The coverage rate listed is calculated coverage based on 1/8 in. (3 mm) thick wet coating.

B. Firestopping Properties

Building Joints: Underwriters Laboratories Systems: HWD0020, HWD0021, HWD0022, HWD0023, HWD0029, HWD0030, HWD0031, HWD0038, HWD0040, HWD0101, HWD0122, HWD0123, HWD0192, HWD0248, HWD0265, HWD0376, HWD0379, HWD0384, HWD0385, HWD1010, HWD1059, FFD0002, FFD1042, FFD0014, FWD0004, FWD0011, FWD1040

Penetration Seals: Underwriters Laboratories System: CAJ1275, CAJ1275, CAJ8106, WL8033, WL8034

Perimeter Joints: Omega Point Laboratories Systems: CEJ113P, CEJ114P, CEJ115P, CEJ116P, CEJ119P, CEP120, CEJ121P, CEJ122P, CEJ123P, CEJ124P, CEJ125P, CEJ126P, CEJ158P, CEJ159P, CEJ160P, CEJ161P, CEJ162P, CEJ163P, CEJ164P, CEJ165P, CEJ166P, CEJ167P, CEJ168P, CEJ169P, CEJ234P, CEJ238P, CEJ266P, CEJ267P, CEJ288P, CEJ289P, CEJ311P, CEJ312P, CEJ313P, CEJ350P, CEJ370P

C. Firestopping Code Requirements

ICBO Uniform Building Code (2003 Edition)

702
DEFINITIONS

706
CONSTRUCTION JOINTS

708
WOOD FRAME CONSTRUCTION FIREBLOCKING

709
WALL & PARTITION PENETRATION PROTECTION

709.3.2.2
CURTAIN WALL GAP

710
FLOOR/CEILING OR ROOF/CEILING PENETRATION PROTECTION

711.3
SHAFT ALTERNATIVE

714
THROUGH-PENETRATION FIRESTOPS F&T REQUIREMENTS

UBC STANDARD 7-1
EQUIVALENT TO ASTM E 119

UBC STANDARD 7-5
EQUIVALENT TO ASTM E 814

NFPA 5000 (2006 Edition)

8.8
PENETRATIONS

8.9
JOINTS

8.9.3
EXTERIOR CURTAIN WALLS AND THE PERIMETER JOINT

SBCCI Standard Building Code (1997 Edition)

104.2.4
PLANS MUST SHOW HOW INTEGRITY IS MAINTAINED FOR ASSEMBLIES PENETRATED

202
DEFINITIONS

705.3
WOOD FRAME CONSTRUCTION FIREBLOCKING

705.3.1.5
CURTAIN WALL GAP

705.4 (GENERAL)
PENETRATIONS OF FIRE RATED ASSEMBLIES

705.5 (WALLS)

705.6 (FLOORS)

705.7
FIRE RESISTANT JOINT SYSTEMS

International Building Code (2003 Edition)

702
DEFINITIONS

712
PENETRATIONS

713
FIRE RESISTANT JOINT SYSTEMS

713.3
EXTERIOR CURTAIN WALL/FLOOR INTERSECTION

BOCA Basic/National Building Code (1996 Edition)

702.0
REVISED AND EXPANDED DEFINITIONS FOR PENETRATIONS AND JOINTS

703.1
CONSTRUCTION DOCUMENTS SHALL INDICATE DETAILS AND MATERIALS FOR PROVIDING RATINGS AT JOINTS AND PENETRATIONS

703.1.1
PENETRATIONS AND JOINTS SHALL NOT BE CONCEALED FROM VIEW BEFORE INSPECTION

703.2
BUILDINGS FOR MORE THAN TWO STORIES SHALL INDICATE ALL PENETRATIONS

704.1.1
SUFFICIENT DATA SHALL BE AVAILABLE TO JUSTIFY UNTESTED MATERIALS USED FOR RESTORATION OF FIRE RATINGS

707.0
FIRE WALLS AND PARTY WALLS

707.10
PENETRATIONS - REFERS TO 714

707.8
JOINTS - REFERS TO 709.7

709.0
FIRE SEPARATION ASSEMBLIES

709.6
PENETRATIONS - REFER TO 714

709.7
JOINTS

711.0
FIRE PARTITIONS

711.6
PENETRATIONS - REFERS TO 714

711.7
JOINTS - REFER TO 709.7

713.0
FLOOR/CEILING AND ROOF/CEILING ASSEMBLIES

713.2
CURTAIN WALL GAP

713.4
PENETRATIONS - REFERS TO 714

713.5
JOINTS - REFERS TO 709.7

714.0
PENETRATIONS - ALL REQUIREMENTS (GENERAL)

714.1 THROUGH 714.1.6.2
WALL ASSEMBLIES

714.2 THROUGH 714.2.6.5
FLOOR/CEILING AND ROOF/CEILING ASSEMBLIES

714.3 THROUGH 714.3.2
NONRATED ASSEMBLIES

721.0
FIREBLOCKING AND DRAFTSTOPPING

NFPA Life Safety Code 101 (2006 Edition)

8.3.5
PENETRATIONS

8.3.6
JOINTS

8.4.4
PENETRATIONS

8.4.5
JOINTS

8.5.6
PENETRATIONS

8.5.7
JOINTS

NFPA Code 70 NEC National Electric Code

300-21 FIRESTOPPING

CABO One and Two Family Dwelling Code (1995 Edition)

602.7
FIRESTOPPING (FIREBLOCKING IN OTHER MODEL CODES)

6. Installation Techniques

Shown is an example of a UL tested and listed system for 3M™ FireDam™ Spray 200. The appropriate tested and listed system must be used for each application. Additional details are available through your 3M authorized Fire Protection Products Distributor or sales representative.

1. Surface Preparation: Surfaces must be frost free, clean, dry and dust free.

2. Insulation: Cut minimum 4 lb. density mineral wool to the contour of the joint adding 25% to each dimension so that the mineral wool can be tightly packed into the joint. The mineral wool should be flush with the face of the wall.

3. Coating: Apply the 3M™ FireDam™ Spray 200 using an airless sprayer to the joint overlapping onto the wall and floor a minimum 1/2 in. (13 mm). A minimum 1/8 in. (3 mm) wet coating should be applied over the mineral wool and substrates. 3M™ FireDam™ Spray 200 must be applied at a temperature between 40°F (4°C) and 90°F (32°C). 3M™ FireDam™ Spray 200 can be applied when the ambient air temperature is 10°F (-12°C) or higher. Note: It is recommended that the pails of product remain in heated storage at 70°F (21°C) prior to spraying material in conditions below 40°F (4°C).

3M™ FireDam™ Spray 200 can be applied to surfaces that are 10°F (-12°C) providing that the surfaces are frost free, clean, dry and dust free.

The curing (evaporating of water) of the 3M™ FireDam™ 200 is affected by the ambient temperature and humidity. The lower the temperatures and the higher the humidity the slower the product will dry. At 70°F (21°C) and 50% R.H. a 1/8 in. thick wet coating is fully dried in 24 hours. Note: At temperatures below 32°F (0°C) no drying of the products will occur until the temperature of the installed product is above 32°F (0°C).

7. Spray Equipment

These procedures are intended to inform end users of the equipment requirements for properly dispensing 3M™ FireDam™ Spray 200 and achieving the thickness and coverage necessary to comply with the tested systems for the product. The equipment mentioned is not an entire list of the pumps capable of delivering 3M™ FireDam™ Spray 200 but a sample of those known to be capable of accomplishing the desired results.

General Equipment Parameters

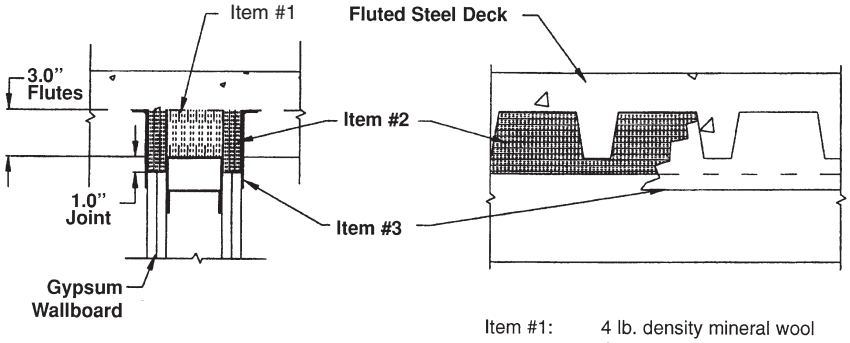
Flow Output: 0.6 gpm minimum
Liquid Pressure: 2000 psi minimum
Recommended Tip Size: No. 419 (8 in. fan with 0.019 orifice) can be changed based on application conditions
Motor Size: Greater than or equal to 0.75 horsepower

Recommended Equipment
Wagner: SprayTECH® EP2355, EP2400 and EP2510
Graco: Ultra® Max 695, 795, 1095 and 1595
Titan: 840ix and 1140ix

Equipment Start-up
If the spray equipment has been used previously and has wash of a previous product, then purge the machine, hoses, and gun prior to spraying - do this as follows:

- Have a 5-gallon pail filled with five (5) gallons of clean water. This will be needed for clean-up at the end of the application.
- Turn on pump in prime (re-circulating mode). The pump should have a large and small tube. The large tube is a primary material pick-up tube, and small tube is the re-circulating tube.
- With pump in prime mode, place large pick-up tube in pail of clean water, leaving small re-circulating tube out of pail.
- As pump primes, water will be pushed out of system -- pump this water into another container. Continue to do this until a complete flow of clean water solution is attained.
- Drop re-circulating tube into pail of clean water solution.

3M™ FireDam™ Spray 200
2 hr. Gypsum Wallboard Fluted Steel Deck



Item #1:	4 lb. density mineral wool Cut the shape of the flutes
Item #2:	4 lb. density mineral wool cut to the contour of the flutes and the joint
Item #3:	Minimum 1/8" (0.125") wet coating of 3M FireDam Spray 200

- Change pump from prime to spray mode. Hit the trigger of gun and hold open until clean water solution only comes out.
- Next turn pump back to re-circulating mode and drop large pick-up tube in pail of 3M™ FireDam™ Spray 200, while holding the small re-circulating tube aside in another empty small pail or cup.
- As pump primes, you will pump clean water solution; then a combination of 3M™ FireDam™ Spray 200 and clean water solution and finally just 3M™ FireDam™ Spray 200.
- Change pump to spray mode and hit spray trigger. As before, hold gun open until you have just 3M™ FireDam™ Spray 200 coming out.
- Then equipment is ready to spray.

Equipment Clean-up/Shutdown
To clean-up the gun, hoses, and spray machine a couple of clean plastic 5-gallon pails, a tooth-brush or other similar brush will be needed.

- First, place pump in re-circulating mode and remove both tubes from pail of 3M™ FireDam™ Spray 200. Using paper towel, wipe any excess spray off the outside of the pick-up and re-circulating tube.
- Have a minimum five (5) gallons of clean water in a five (5) gallon pail. Place the clean water solution next to the pump and drop the large pick-up tube into the solution, while holding the small re-circulating tube away from the clean water solution.
- As machine comes to prime (out of small tube) 3M™ FireDam™ Spray 200 will come out first, then a combination of 3M™ FireDam™ Spray 200 and clean water solution, then finally just the cleaning solution and water.
- Now drop small tube in the pail of the water solution and allow machine to re-circulate for a couple of minutes.
- Now change pump from prime (re-circulating) mode to spray mode and immediately hit the trigger on spray gun.
- 3M™ FireDam™ Spray 200 will come out first then a combination of 3M™ FireDam™ Spray 200 and clean water solution and finally just clean water solution.
- Run the entire 5 gallons of water liquid through the machine.
- If the pump will not be used for a couple of days, an additional five (5) gallons of clean water solution needs to be circulated through the machine for ten (10) minutes.
- Use a toothbrush to clean-up the gun and spray tip.
- Follow pump manufacturer's recommendations for pump maintenance and storage.

"SprayTECH" is a trademark of Wagner
"Ultra" is a trademark of Graco

8. Maintenance

3M™ FireDam™ Spray 200 is stable under normal storage conditions. The product has a 12 month shelf life when stored at recommended temperature in the original, unopened container. Store at 40°F to 90°F (4°C to 32°C) for maximum shelf life. Normal stock and stock rotation are recommended. Higher temperatures can reduce shelf life.

9. Purchase Information

3M™ FireDam™ Spray 200 is available from 3M Authorized Fire Protection Distributors. For information on where to buy, go to www.3m.com/firestop or call (800) 328-1687.

10. Safe Handling Information

Consult Material Safety Data Sheet prior to handling and disposing of 3M™ FireDam™ Spray 200.

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