



Fire Barrier 2000+ Silicone Sealants

Product Data



FILL, VOID OR CAVITY MATERIALS
CLASSIFIED BY
UNDERWRITERS LABORATORIES, INC. ©
FOR USE IN THROUGH-PENETRATION FIRESTOP
SYSTEMS.
SEE CURRENT UL FIRE RESISTANCE DIRECTORY,
7M32
Made in U.S.A.

1. Product Description

3M™ Fire Barrier 2000+ Silicone Sealant is a ready-to-use, gun-grade, one-component silicone elastomer that cures upon exposure to atmospheric humidity to form a flexible seal.

3M Fire Barrier 2000+ Silicone Sealant firestops openings and penetrations through floor slabs, walls and other fire-rated building partitions and assemblies. 3M Fire Barrier 2000+ Silicone Sealant, when installed properly, will control the spread of fire before, during and after exposure to open flames.

3M Fire Barrier 2000+ Silicone Sealant Features

Sealant remains elastomeric and is weather resistant. It will bond to most common construction materials.

- Superior adhesion
- Class 25 sealant, per ASTM 920
- Re-enterable/repairable
- Excellent weatherability
- Provides up to a 4-hour fire-rating
- Maximum pipe size of 24" (609,6 mm)
- Cures upon exposure to atmospheric humidity
- Applied with conventional caulking gun

2. Applications

Ideal for sealing simple penetrations such as around metallic or glass pipes and conduits to control the spread of fire. Helps limit the spread of noxious gas, smoke, and water. Maintains the integrity of fire-rated construction. The sealant is designed for use in fire-rated control and isolation joints.

Primary sealing applications:

- Telephone and electric wires
- Cables
- Electrical conduit (metal)
- Pipes (steel, copper and glass)

Nonpenetrated opening applications:

- Control joints
- Isolation joints
- Blank openings

Limitations

- 3M Fire Barrier 2000+ Silicone Sealant should not be applied to:
- Building materials that bleed oils, plasticizers or solvents (e.g., impregnated wood, oil-based caulks, green or partially vulcanized rubber)
 - Unvented spaces where sealant is not exposed to atmospheric moisture
 - Wet or frost-coated surfaces
 - Areas that are continuously damp or immersed in water
 - Painted surfaces
 - When surface temperatures exceed 60°C (140°F), this may cause sealant to bubble during cure.
 - Where painting of the sealant is required as the paint may crack and peel.
 - When in direct contact with food. This sealant has not been tested to determine its status with the Food and Drug Administration regulations. For applications involving food contact consult with 3M Technical Service.
 - Continuous Immersion in Water.
 - In areas where abrasion and physical abuse are likely.

3. Physical Properties

Product	Unit	Volume	Units/Ctn.	Wt./ctn.
				Lbs.
Fire Barrier	10.3 fl. oz. cartridge	18.6 cu.in.	12	12.7
2000+ Silicone	2 gallon pail	462.0 cu. in.	1	23.2
Sealant	4.5 gallon pail	1040.0cu. in.	1	52.8

4. Specifications

Product

The firestopping sealant is a one-component, ready-to-use, gun-grade, silicone elastomer. The sealant shall be listed by independent test agencies such as UL and be tested to, and pass the criteria of, ASTM E 814, E 119, UL 2079 Fire Test, tested under positive pressure. It shall comply with the requirements of the NEC (NFPA-70), BOCA, ICBO, SBCCI and NFPA Code #101.

The sealant meets joint movement performance ratings of ASTM Specification 920, Type S, Grade NS, Class 25, Use NT, G, and A. (Also tested against concrete).

Typically Specified Divisions

Division 7 07270	Thermal and Moisture Protection Firestopping
Division 13 13900	Special Construction Fire Suppression and Supervisory Systems
Division 15 15250	Mechanical Mechanical Insulation Fire Protection
Division 16 16050	Electrical

5. Performance

A. Typical Physical Properties

<u>As Supplied</u>	<u>2000+</u>
MIL-S-8802 Flow, Sag or Slump (inch)	<0.1
MIL-S-8802 Working Time, (minutes)	10-20
MIL-S-8802 Color	Light Gray
MIL-S-8802 Full Cure and Adhesion at 77°F (25°C) 50% R.H., (days)	14-21
<u>As Cured—After 21 Days at 77°F (25°C) 50% R.H.</u>	
ASTM D 2240 Durometer, Shore A	40
ASTM D 412 Elongation at Break, percent	500

*Contact 3M for current sales specifications

B. Firestopping Properties

Meets the criteria of ASTM E 814 Fire Test, tested under positive pressure. Consult current UL Fire Resistance Directory for systems listed under 3M Product 2000+ Silicone Sealant.

C. Firestopping Code Requirements

ICBO Uniform Building Code (1991 edition)	SBCCI Standard Building Code (1991 edition)	BOCA Basic/National Building Code (1991 edition)	NFPA Life Safety Code #101 (1991 edition)	NEC National Electric Code
302 (d) Application for Permit	103.2.4 Structural and Fire Resistance Integrity	901.2 Penetrations	6-2.3.6 Penetrations and Misc. Openings and Fire Barriers	300-21. Fire Stopping
1704 Vertical Fire Spread at Exterior walls (Curtain Walls)	705.1.6 Fire Stopping (Curtain Wall)	902.1 Structural Building Assemblies (Curtain Wall)		
1706 Shaft Exposure	1001.3 Penetrations of Fire Resistant Assemblies	913.4.1 Through-Penetration System (Floor/Ceiling, Roof/Ceiling Assemblies)		
1701 Construction Jobs	1001.3.6 Method E: Through-Penetration Protection Systems	915.6 Vertical Shafts		
4304(e) Walls and Partitions				
4304(f) Membranes				
4305 Floor/Ceilings, Floors				

6. Installation Techniques

Shown are examples of UL classified applications of 3M 2000+ Silicone Sealant. Additional drawings and details are available through your 3M Authorized Fire Protection Products Distributor.

Do not use alcohol to clean surfaces in the penetration. Alcohol can keep sealant from curing properly.

Recommended cleaning solvents are mineral spirits, xylene, toluene or methyl ethyl ketone (MEK). Follow manufacturer's precautions when handling solvents.

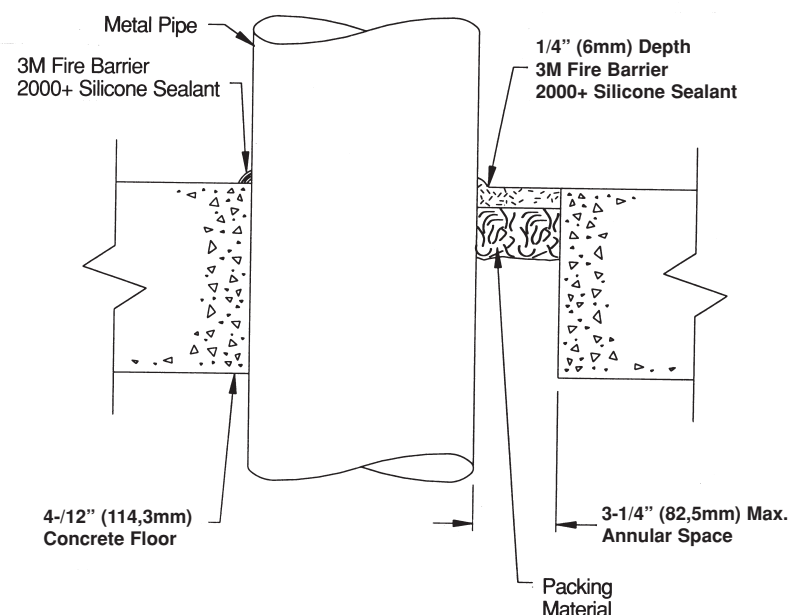
Installation Notes:

- Clean surfaces of the opening and all penetrating items to allow proper adhesion of firestop materials.

- Install damming materials as necessary to contain firestop materials while they cure.
- Install required amount of fire-rated fill materials such as mineral wool or ceramic board.
- Install the proper amount of 3M Fire Barrier 2000+ to obtain the specified 1-, 2-, 3-, or 4-hour fire rating.

1. Metal pipe/conduit applications through nominal 24" (609,6 mm) outside diameter.

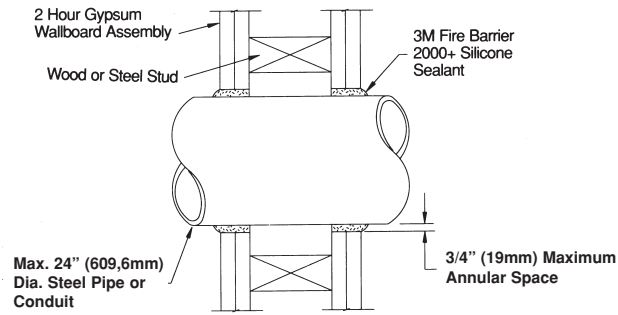
- Minimum 1/4" (6 mm) depth of 2000+ Silicone Sealant is required
- Maximum annular space allowable is 3-1/4" (82,5 mm).
- Packing material is a minimum 3" (76,2 mm) depth of 4 pcf mineral wool.
- Concrete floor thickness is a minimum 4-1/2" (114,3 mm).



Complete document includes system/application pages.

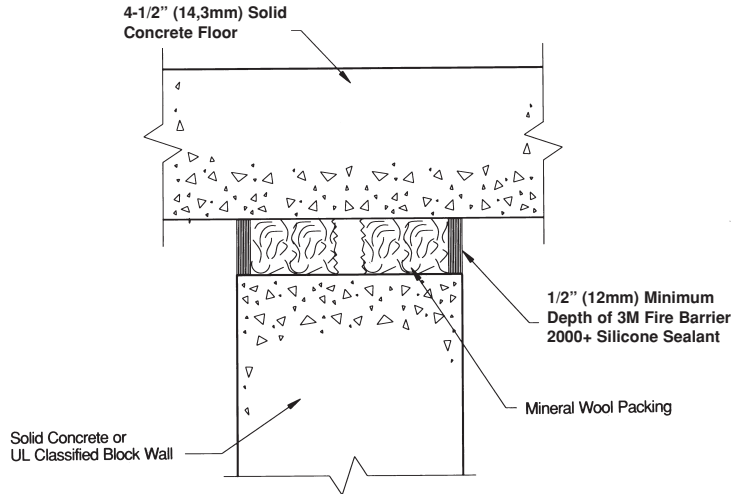
2. Metal pipe/conduit applications for 2 hour rated gypsum wallboard assemblies.

- Minimum 5/8" (15,8 mm) thickness of 2000+ Silicone Sealant is required.
- A nominal 3/4" (19 mm) annular space is required.
- Maximum pipe size is 24" (609,6 mm).



3. Joint treatment systems for up to three hour fire rated concrete floor to concrete wall applications.

- 3-1/2" (88,9 mm) minimum of 4 PCF mineral wool recessed 1/2" (12 mm) from each side of the wall surface.
- Minimum 1/2" (12 mm) thickness of 2000+ silicone sealant is required.
- 6" (152,4 mm) maximum joint width.
- 4-1/2" (114,3 mm) minimum thick concrete floor.
- 4-1/2" (114,3 mm) minimum thickness of concrete or UL classified concrete blocks for the wall construction.



7. Maintenance

3M Fire Barrier 2000+ Silicone Sealant is stable under normal storage conditions. Cartridges and pails have a one year shelf life. Normal stock and stock rotation are recommended. **Store below 90°F (32°C) for maximum shelf life.**

8. Availability

3M Fire Barrier 2000+ Silicone Sealant is available from 3M Authorized Fire Protection Distributors. 2000+ Silicone Sealant is available in standard 10.3 fl. oz. cartridges, 2 gallon, and 4.5 gallon pails.

9. Safe Handling Information

Consult Material Safety Data Sheet prior to handling and disposing of 3M Fire Barrier 2000+ Silicone Sealant.

Warranty and Limited Remedy. This product will be free from defects in material and manufacture for a period of ninety (90) days from date of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. If this 3M product is proved to be defective within the warranty period stated above, your exclusive remedy and 3M's sole obligation shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product.

Limitation of Liability. Except where prohibited by law, 3M will not be liable for any loss or damages arising from the use of this 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.



Specified Construction Products Department

3M Center, Building 225-4S-08
St. Paul, MN 55144-1000
800 328 1687



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