Fire Protection Products

3M™ Fire Barrier Watertight Spray

Product Data Sheet	January / 2017

Product Description	3M™ Fire Barrier Watertight Spray is a sprayable, moisture-curing hybrid siliconized polymer that forms a tough, elastomeric coating. This material is used to firestop perimeter joints (curtain wall joints) and other construction joints that need to prevent fire and water from moving floor to floor. 3M™ Fire Barrier Watertight Spray, when installed properly, will act as a barrier to water leakage and airborne sound transmission, while helping to control the transmission of fire, heat and smoke before, during and after exposure to fire.
Product Features	• Superior washout resistance – Passes ASTM D 6904 24 hour exposure after 2 hour cure time • Up to 3-hour fire protection in construction joints per ASTM E 1966 (UL 2079) • Up to 3-hour fire protection in perimeter joints per ASTM E 2307 • Meets UL Water Leakage Test, W Rating – Class 1 requirements • Elastic material maintains performance with up to ± 10% movement capabilities • Helps minimize sound transfer – STC rating of 56 when tested in STC 56 rated wall assembly • Paintable with primer • Broad range of applications (extensive portfolio of tested and listed construction and perimeter joint systems) • Applied with conventional airless spray equipment • Robust jobsite formula (freeze/thaw resistant and uniform seal formation in hot or cold conditions)
Applications	3M™ Fire Barrier Watertight Spray is ideal for sealing perimeter joints (curtain wall joints) and floor-to-floor or floor-to-wall construction joints. Recommended for firestopping areas that require a watertight seal and where rapid washout resistance is needed.
Specifications	3M™ Fire Barrier Watertight Spray shall be tested and evaluated to the pass/fail criteria of ASTM E 1966 / UL 2079 Standard Test Method for Fire Tests of Construction Joint Firestop Systems and CAN/ULC-S115 at the maximum extended joint width, ASTM E 2307 Standard Test Method for Fire Tests of Perimeter Joint Firestop Systems and CAN/ULC-S115 at the maximum extended joint width, and ASTM E 814/UL 1479 Standard Test Method for Fire Tests of Penetration Firestop Systems. 3M™ Fire Barrier Watertight Spray shall also be tested to the criteria of ASTM E 84 / UL 723 Standard Test Method

for Surface Burning Characteristics of Building Materials, ASTM E 90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements, and ASTM E 413 Classification for Rating Sound Insulation. 3M™ Fire Barrier Watertight Spray shall meet the requirements of the IBC, IRC, IFC, IPC, IMC, NFPA 5000, NEC (NFPA 70), NFPA 101 and NBCC.

Performance and Typical Physical Properties

Colors Available	White or red
Unit/vol	5 Gallon (18.9 liter) pail / 1155.0 cu. in. (18926.9 cu. cm)
Density	12.25 lb./gallon (1470 g/L)
Solids Content by Weight	91%
VOC	131 g/L
Viscosity	45,000 - 55,000 cps, shear thinning
Coverage*	16 sq. ft./gallon (0.40 sq. m/liter)
Pail Weight	65 lbs (29.5 kg)
Surface Burning Characteristics (ASTM E 84)	Flame Spread: 20 Smoke Developed Index: 5
Rain Resistance (24 hour exposure; ASTM D 6904)	Pass (after 2 hour cure time)
Skin Time (ASTM C 679)	2 hours, at 72°F/50% RH
Tack-free Time (ASTM D 1640)	4.5 hours, at 72°F/50% RH
Bulk Cure Time (ASTM D 1640)	6.5 hours, at 72°F/50% RH
Permeability/MVTR (ASTM E 96)	5.7 perms
STC Rating	56 in a 56 rated wall
Tensile Strength at max load (ASTM D 882)	>170 psi
Modulus (ASTM D 882)	>110 psi
Elongation at break (ASTM D 882)	>200%
Mold and Mildew Resistance (ASTM G 21)	0% Growth
Service Temperature	-30°F to 300°F (-35°C to 150°C)
QUV (ASTM G 154 Cycle 4)	Up to 1000 hours with no product degradation

*calculated coverage based on 1/10 in. (2.5mm) thick wet coating

Installation Techniques

Consult a 3M Authorized Fire Protection Products Distributor or Sales Representative for applicable UL, ULC, Intertek or other third-party drawings and system details.

Equipment: In order to achieve the thickness and coverage necessary to comply with the tested systems, 3M™ Fire Barrier Watertight Spray is applied using an airless sprayer.

Pump Requirements (minimum specifications)	
Flow Output	0.7 gpm (2.65 liter) minimum
Liquid Pressure	2500 psi (17.2 MPa) minimum
Motor Size	0.75 horsepower (0.55kW) minimum
Recommended Orifice Size	0.019–0.031 in (0.48 - 0.78 mm)
Hose Diameter	1/4 in. (6 mm) diameter minimum

Recommended sprayers include the Titan® IMPACT™ 640 Airless Sprayer or Graco® Ultra® Max II 595 equivalent, along with a bypass gun.

Pump should be cleaned and flushed with mineral spirits before and after using 3M™ Fire Barrier Watertight Spray and should not have had previous exposure or use with a water-based product. 3M™ Fire Barrier Watertight Spray should not be left in pumping equipment and/or hoses for prolonged periods of time.

Preparatory Work: Surfaces must be clean, dry and frost free. Separation of product is normal. Product should be mixed with a paddle mixer for 3–5 minutes prior to use.

Installation Details: Tested and listed system details must be followed for each specific application. Install mineral fiber insulation in accordance with system details for density, depth, fiber orientation and compression requirements. Apply 3M™ Fire Barrier Watertight Spray using an airless sprayer. A nominal 1/10 in. (2.5 mm) wet coating should be applied over the insulation, adjacent substrates and penetrant (if applicable) maintaining all required overlaps.

Limitations: It is recommended that 3M™ Fire Barrier Watertight Spray is applied when the product is at a temperature between 40°F (4°C) and 110°F (43°C). 3M™ Fire Barrier Watertight Spray can be applied and expected to cure to surfaces that are 10°F (-12°C) or higher providing that the surfaces are frost free, clean, dry and dust free. It is recommended that 3M™ Fire Barrier Watertight Spray be applied when the ambient air temperature is 32°F (0°C) or higher. The curing of the 3M™ Fire Barrier Watertight Spray is affected by the ambient temperature and humidity. The lower the temperatures and the lower the humidity, the slower the 3M™ Fire Barrier Watertight Spray will cure. At 70°F (21°C) and 50% R.H. a 1/10 in. (2.5 mm) thick wet coating is fully cured in 6.5 hours.

Maintenance	No maintenance is expected to be required when installed in accordance with the 3M™ Fire Barrier Watertight Spray Installation Guide. Once installed, if any section of the 3M™ Fire Barrier Watertight Spray is damaged, the following procedure will apply: Any damaged product must be cut out and removed. The insulation material must be inspected to ensure no moisture is evident. The open area created must then be filled with new product, installed as detailed in the original applicable 3rd party tested and listed system. The new product must overlap a minimum 1 in. (25.4 mm) onto the previously installed product.
Storage and Shelf Life	3M™ Fire Barrier Watertight Spray should be stored indoors in dry conditions. It is recommended that the pails of product remain in heated storage above 40°F (4°C) prior to spraying material. 3M™ Fire Barrier Watertight Spray shelf life is 12 months from date of manufacture when stored below 100°F (38°C). 3M™ Fire Barrier Watertight Spray has been cycled from 10–70°F up to 10 times with no significant effects to product performance. Lot numbering (e.g. 8183AS): First digit = Last digit of year manufactured, second to fourth digit = Julian Date, Letters = Random to distinguish between lot numbers.

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Availability	Available from 3M Authorized Fire Protection Products Distributors. For additional technical and purchasing information, call 1-800-328-1687 or visit 3M.com/firestop.
Safe Handling	Consult Safety Data Sheet prior to handling and disposing of 3M™ Fire Barrier Watertight Spray.
Technical Information	The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.
Product Use	Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.
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