



Fire Protection Products

3M™ Fire Barrier Watertight Spray

Product Data Sheet

July 2017

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| Product Description | <p>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.</p> |
| Product Features | <ul style="list-style-type: none">• Premium 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 | <p>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.</p> |
| Specifications | <p>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 and to the criteria of CAN / ULC S102, ASTM E 90 Standard Test Method for Laboratory Measurement of</p> |

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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

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| Colours Available | White or red |
| Unit/vol | 18.9 litre (5 Gallon) pail / 18,926.9 cu cm (1,155.0 cu. in) |
| Density | 1,470 g/L (12.25 lb/gallon) |
| Solids Content by Weight | 91% |
| VOC | 131 g/L |
| Viscosity | 45,000 - 55,000 cps, shear thinning |
| Coverage* | 0.40 sq m/liter (16 sq ft/gallon) |
| Pail Weight | 65 lbs (29.5 kg) |
| Surface Burning Characteristics (ASTM E 84, CAN / ULC S102) | 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 22°C/50% RH (72°F/50% RH) |
| Tack-free Time (ASTM D 1640) | 4.5 hours, at 22°C/50% RH (72°F/50% RH) |
| Bulk Cure Time (ASTM D 1640) | 6.5 hours, at 22°C/50% RH (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 | -35°C to 150°C (-30°F to 300°F) |
| QUV (ASTM G 154 Cycle 4) | Up to 1,000 hours with no product degradation |

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

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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)

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| Flow Output | 2.65 litre/minute (0.7 gpm) minimum |
| Liquid Pressure | 17.2 MPa (2,500 psi) minimum |
| Motor Size | 0.75 horsepower (0.55 kW) minimum |
| Recommended Orifice Size | 0.48 - 0.78 mm (0.019 - 0.031 in) |
| Hose Diameter | 6 mm (1/4 in) 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 fibre insulation in accordance with system details for density, depth, fibre orientation and compression requirements. Apply 3M™ Fire Barrier Watertight Spray using an airless sprayer. A nominal 2.5 mm (1/10 in) 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 4°C (40°F) and 43°C (110°F). 3M™ Fire Barrier Watertight Spray can be applied and expected to cure to surfaces that are -12°C (10°F) 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 0°C (32°F) 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 21°C (70°F) and 50% R.H. a 2.5 mm (1/10 in) thick wet coating is fully cured in 6.5 hours.

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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 third-party tested and listed system. The new product must overlap a minimum 25.4 mm (1 in) 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 4°C (40°F) prior to spraying material.

3M™ Fire Barrier Watertight Spray shelf life is 12 months from date of manufacture when stored below 38°C (100°F).

3M™ Fire Barrier Watertight Spray has been cycled from -12–21°C (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 digits = 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/Fire . |
| 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. |
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