



Fire Protection Products

3M™ Fire Barrier Dryer Ventilation Wrap (DVW)

Technical Data Sheet

January / 2020

Product Description

3M™ Fire Barrier Dryer Ventilation Wrap is a flexible fire-resistant wrap consisting of an inorganic fiber blanket encapsulated with a scrim-reinforced foil. The product is nominally 1/2 in. thick, 8 pcf density (13mm, 128 kg/m³). It is used to create a fire resistive system for protecting domestic kitchen ducts as well as other small cross-section ducts such as bathroom exhaust and dryer vent ducting. 3M™ Fire Barrier Dryer Ventilation Wrap is a proven method to create a 1-hour fire-resistant rated enclosures for sheet steel ducts up to 7 inches (178mm) in diameter or 10 inch by 4 inch (254 x 102mm) rectangular. With its low weight and thin profile, it is an ideal choice for a duct enclosure system. This non-asbestos¹ wrap installs easily due to its high flexibility and strength

¹Has been demonstrated to be exonerated from carcinogen classification under the criteria listed in Nota Q of European Commission Directive 97/68EU.

Product Features

- One-layer wrap for fire-resistive ventilation ducts per ASTM E2816 Condition B
- High flexibility for installation ease
- Foil encapsulated for blanket protection, less dust, and high wrap strength
- Available in 16 in. x 25 ft. (406 mm x 7.62 m), 20 in. x 25 ft. (508 mm x 7.62 m), and 32 in. x 25 ft. (813 mm x 7.62 m) rolls

Applications

3M™ Fire Barrier Dryer Ventilation Wrap is ideal for multi-residential facilities and ventilation ducts. It is proven to provide a 1-hour fire-resistant rated enclosure for ducts and provides equal Fire & Temperature (F&T) ratings throughout the entire enclosure system. Duct seams should be sealed with a silicone sealant (3M Fire Barrier 1000 NS as an option) or covered with FSK tape (3M™ Venture Tape 1525CW). 3M™ Fire Barrier Dryer Ventilation Wrap can be installed with either 1 inch transverse and longitudinal overlaps, or tightly butted seams. As installation aide, glass filament tape such as 3M™ Scotch® Filament Tape 898 can be used to affix the DVW to the duct. When the DVW is then wrapped around the circumference/perimeter of the duct, the end can be affixed to itself with again 898. The final fastening of the DVW is accomplished with minimum 18 gauge (0.048", 0.0019 mm) stainless steel wire spaced max 12 inches (30.5 cm) on-center. A number of 3M™ sealants (FireDam 150+, Fire Barrier IC 15WB+, Fire Barrier CP 25WB+) are approved to firestop the framed-opening locations where the duct protected with 3M™ Fire Barrier Dryer Ventilation Wrap penetrates fire-rated assemblies.

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Single-layer air duct applications: 3M™ Fire Barrier Dryer Ventilation Wrap has passed ASTM E2816 Condition B fire resistance test. ASTM E2816 Condition B is used to evaluate HVAC vertical duct systems, without openings, exposed to fire and passing through a fire-separating element.

The table below displays the width of 3M™ Fire Barrier™ Dryer Ventilation Wrap (DVW) that is optimal for circumferential wrapping of various duct sizes. These sizes will deliver the minimum 1 inch lap needed when using the overlap method.

Shape	Duct Dimension, inches (mm)	3M DVW Width, inches
Round	4 (102)	16
Round	5 (127)	20
Round	6 (152)	20
Rectangular	4 x 10 (102x254)	32

Specifications

Installation shall be in strict accordance with manufacturer’s written instructions, as shown on the approved shop drawings. 3M™ Fire Barrier Dryer Ventilation Wrap shall be a high-temperature fiber blanket thermal insulation encapsulated in a fiberglass-reinforced aluminized polyester foil. Dryer Ventilation Wrap density shall be nominal 8 pcf (128 kg/m3) and have a nominal 1/2 in. (13 mm) thickness. The fiber blanket shall have a continuous use limit of 1832 °F (1000 °C). The blanket thermal resistance (R-value) at ambient temperature shall be minimum $2.3 \text{ }^{\circ}\text{F} \cdot \text{ft}^2 \cdot \text{hr} / \text{Btu}$. Smoke Developed Index and Flame Spread Index of the bare blanket, and of the foil encapsulated blanket shall be 15/5.

Typically Specified Division or Section

Division 7 – Thermal and Moisture Protection

Section 23 07 13 – Duct Insulation

Related Sections

Section 07 21 00 – Thermal Protection

Section 07 21 16 – Blanket Insulation

Section 07 84 00 – Firestopping

Section 23 00 00 – Heating, Ventilation and Air-Conditioning (HVAC)

Section 23 31 13 – Metal Ducts

3M™ Fire Barrier Dryer Ventilation Wrap has been tested in accordance with the following: **ASTM E2816 Condition B, ASTM E814, ASTM E84, ASTM E136, ASTM C518, ASTM C411.**

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Performance and Typical Physical Properties	Scrim Color	Aluminum with Black Text	
	Blanket Color	White	
	Blanket Weight	0.35 lbs./ft² (1.94 kg/m²)	
	Surface Burning Characteristics (ASTM E84)	Foil Encapsulated Blanket: Flame Spread Index: 15 Smoke Developed Value: 5	
	Thermal Conductivity	$\frac{Btu \cdot in}{hr \cdot ft^2 \cdot ^\circ F}$ 0.23	$\frac{W}{m \cdot K}$ 0.03
	Linear Shrinkage	1.2%	
	24 Hour @ 2012°F (1100°C)		

Installation Techniques	Consult a 3M Authorized Fire Protection Products Distributor Sales Representative for applicable UL, ULC, Intertek or other third-party drawings and system details.		
	Installation Details: Tested and listed system details must be followed for each specific application:		
	Ventilation Duct Listings – ASTM E2816 Condition B		
	Fire Resistive Rating	Enclosure System	Third-Party Testing Services Design Listing
	1 hour	1 Layer of 3M™ Fire Barrier Dryer Ventilation Wrap	Intertek 3MU/DI 60-02
			Description
			Rect. or Round Duct

Listing available on submitwizard.3m.com and bpdirectory.intertek.com

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Maintenance

No maintenance is expected when installed in accordance with the applicable Intertek, UL or other third-party listed system and in accordance with 3M™ Fire Barrier Dryer Ventilation Wrap Installation Guidelines. Once installed, if any section of the 3M™ Fire Barrier Dryer Ventilation Wrap is damaged such that the blanket requires repair, the following procedure will apply:

1. If the blanket has not been damaged but the foil has ripped, seal the rips with aluminum foil tape.
 2. If the blanket has been damaged:
 - a. The damaged section should be removed by cutting the stainless steel tie wire holding it in place.
 - b. A new section of the same dimension should be cut from a roll of 3M™ Fire Barrier Dryer Ventilation Wrap.
 - c. The new section should be placed and fitted ensuring the same overlap that existed previously (i.e. the original installation method).
 - d. The stainless steel tie wire should be placed around the material and tensioned so as to sufficiently hold the 3M™ Fire Barrier Dryer Ventilation Wrap in place.
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Storage and Shelf Life	3M™ Fire Barrier Dryer Ventilation Wrap rolls are stable under normal storage conditions. Normal stock and stock rotation practices are recommended. 3M™ Fire Barrier Dryer Ventilation Wrap shelf life is indefinite when stored in original unopened packaging in a dry warehouse environment. Pallets should not be stacked. Lot numbering (e.g. 1807200223): First two digits = last two digits of the year manufactured (2018=18), third and fourth digit = month of manufacture, fifth and sixth digits = is the day of manufacture, seventh and eighth digits = crew code from fiber blanket, last two digits = day of encapsulation.
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 Article Information Sheet prior to handling and disposing of 3M™ Fire Barrier Dryer Ventilation Wrap.
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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