



FireMaster® Cable Tray Data and Installation

Datasheet Code US: 714-115

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Product Description

FireMaster Blanket is a flexible blanket composed of high temperature fibers classified for applications to 1200°C (2192°F). The core fibers inside this FireMaster Blanket are manufactured using Morgan Advanced Materials patented Superwool® technology which is alkaline-earth silicate wool with low biopersistence and therefore offers increased safety for installers. FireMaster Blanket is offered standard with full encapsulation in a durable glass fiber reinforced aluminum foil for easy handling and installation. FireMaster Blanket is approved by Factory Mutual for fire protection of grouped electrical cables according to the most current fire testing protocols required by the American Petroleum Institute. FireMaster Blanket is under FM Global follow-up inspection service at manufacturing locations in the Americas, Europe, and Asia, which insures that the product received for installation meets the same exacting quality standards of the material that was submitted for testing.

Product Features

- Thin, lightweight, and flexible at 51mm (2 in) thick, and 128kg/m³ (8 pcf) density
- Tested per ASTM E1725 and ASTM E1529, simulating full engulfment of a cable tray in a 30 minute hydrocarbon pool fire
- FM Global approved for 30 minute protection
- FM Global manufacturing inspection at sites around the world
- Optimized installation in single layer with 75mm (3 in) overlaps at seams
- Offered in fully foil encapsulated for increased protection against damage and easy handling during installation
- Core blanket is completely inorganic and non-combustible
- Contains 1200°C (2192°F) rated fibers for added safety margin

Applications

- 30 minute fire protection against a hydrocarbon pool fire for grouped electrical cables inside conduit, ducts, or cable tray
- 30 minute protection of instrumentation cables in refineries per API 2218
- 30 minute protection of power conductors when proper evaluation of Ampacity derating due to added insulation value is considered

Dimensions and Weights

Size	Units/ctn.	Wt./Ctn.
51mm x 610mm x 3810mm (2in x 24in x 12.5ft)	1	15.1 kg (33.3 lbs)
51mm x 1220mm x 3810mm (2in x 48in x 12.5ft)	1	30.2 kg (66.7 lbs)

Certification (view FM Global certification at www.approvalguide.com)



Wrap for Grouped Electrical Cables: These wraps are nonflammable insulating blankets which are wrapped around grouped electrical cables. The purpose of the wrap is to protect the cable for an extended fire exposure period to maintain control of equipment operated by the cables. The fire exposure period is rated in proportion to the wrap thickness.

FireMaster Blanket Wrap, FireMaster 607 Blanket Wrap system for 12 in. (305 mm) cable trays and conduits tested under ASTM E 1725 and the Hydrocarbon fire curve defined by ASTM E 1529. Metalized Polypropylene scrim and other non-combustible metal facings may be used.

Density, lb/ft ³ (kg/m ³)	Wrap Thickness, in. (mm)	Fire Exposure Rating, min.
8 (128)	1 layer of 2 in. (51)	30 minutes

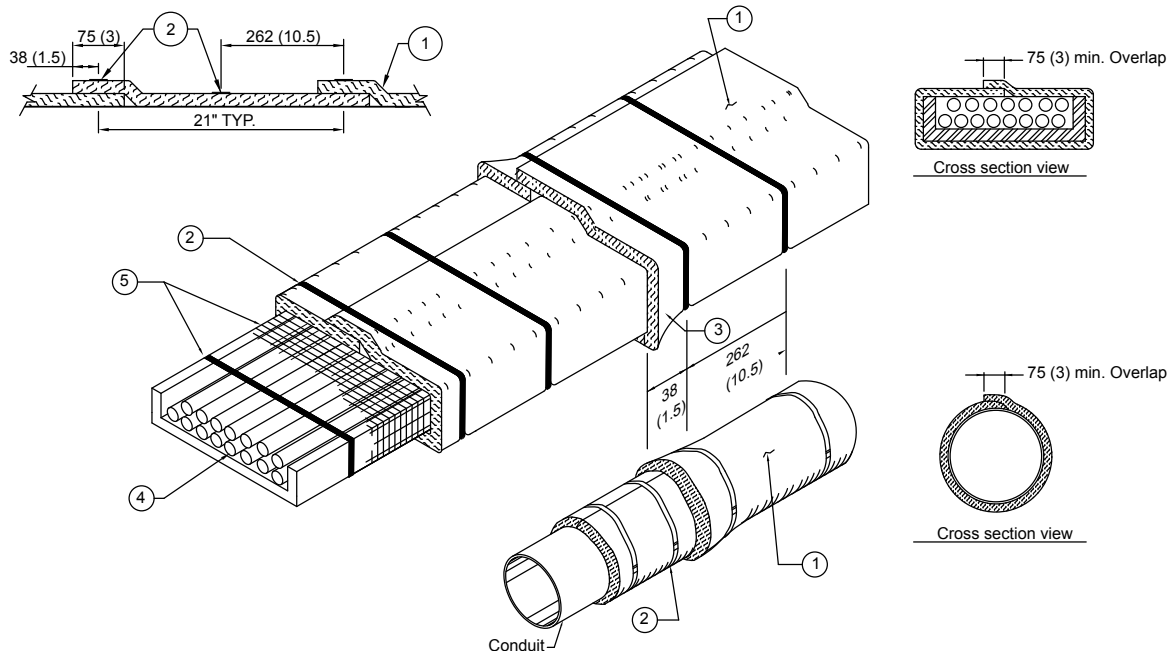


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Installation (See Figure 1)

- a) Storage: FireMaster blanket must be stored in a dry warehouse environment on pallets. Pallets should not be stacked.
- b) Installation: FireMaster blanket shall be installed by a qualified contractor in strict accordance with Morgan Advanced Materials installation instructions and certification requirements.
- c) Materials Required:
 - FireMaster blanket
 - 100mm (4 in) wide adhesive backed aluminum foil tape
 - Minimum 12.5mm (1/2 in) wide by 0.4mm (0.015 in) thick stainless steel banding, and clips
 - Hand banding tensioner and crimping tool
- d) Tray Preparation: Before installation of the FireMaster Blanket it is suggested that the cable tray be covered with steel wire mesh or steel bands spaced on minimum 8" centers. This is to prevent sagging of the blanket into the cable tray which can result in gaps at the joints between blankets.
- e) Installation: Cut the FireMaster Blanket to a length that will allow it to be wrapped directly around the cable tray or conduit and overlap itself a minimum of 75mm (3 in). Adjacent blankets must be installed with minimum 75mm (3 in) overlaps. Any joints or overlaps that are not tight or that have an opening must be tightly packed with pieces of the FireMaster Blanket. Where fully encapsulated or faced blankets are used, cut edges shall be sealed with 100mm (4 in) wide aluminum foil tape.

- f) Mechanical Attachment: Glass filament tape is recommended to hold the blanket in place until permanent attachment is accomplished. For permanent attachment of the blanket to the cable tray or conduit, minimum 12.5mm (1/2 in) wide by 0.4mm (0.015 in) thick stainless steel bands and banding clips must be tightened around the outside of the blanket centered on the overlaps, and at minimum 262mm (10-1/2 in) centers in the span between overlaps. Additional bands may be placed as needed such as at elbows and 90 degree bends to assure tight joints. The bands must be tightened so as to securely hold the FireMaster Blanket to the tray, but not so tight as to cut the blanket.
- g) Supports: Hanger supports with appropriate fire rating which are external to the FireMaster do not need to be wrapped. Hangers that can conduct heat directly to the cable tray or conduit shall be wrapped to prevent conduction.
- h) Repair Procedure: Damaged areas shall be replaced and installed per Morgan Advanced Materials approved installation procedures.



Legend	
1	FireMaster Blanket one layer 50mm (2 in.) and 128kg/cu. m. (8 lb./cu. ft.) encapsulated with aluminized polypropylene scrim, or faced with protective material
2	Banding- 304 stainless steel, minimum 12.5mm (1/2 in.) wide x 0.4mm (0.015 in.) thick
3	Blanket joint with 75mm (3 in.) overlap or butt joint with 150mm (6 in.) collar
4	Galvanized steel cable tray or conduit with 0% to 100% loading
5	(Optional) wire mesh or bands placed on 200mm (8 in.) centers to prevent sagging