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Fire Protection Products

3M™ Interam™ Mat I-10/I-10A

Technical Data Sheet	September / 2019

Product Description

3M™ Interam™ Mat I-10/I-10A is a ceramic fiber-based material that expands into a low-density insulation blankets when exposed to high temperatures or flames. These mats are used to protect against fire and to act as high temperature sealing mechanisms.

The mat can be easily wrapped around complex shapes and surfaces. This feature allows them to be easily incorporated into various fire protection systems such as electrical raceway fire-breaks and fire rated roofing systems. Exposure to fire will cause intumescence or expansion, thus filling openings to block the movement of flames and retard the transfer of heat.

The intumescent characteristic of the material offers another unique opportunity for using the mats as a high temperature sealing or mounting device. As a sealant and gasketing material, systems can be engineered to have the mat expand and fill a desired area. The mat's pressure of expansion can also be used to hold devices in place.

The Interam™ Mat I-10/I-10A is lightweight, flexible and easily cut to the desired size and shape. Custom die cut parts are available to simplify installation of gaskets or other uniquely shaped components.

Product Features

- Expands only in thickness direction
- Non-flame supporting
- Allows heat dissipation in unexpanded state
- Inhibits heat transfer when expanded
- Lightweight and flexible
- Easily cut to desired size and shape
- Economical and easy to install — no surface preparation required

Applications

- Electrical circuit protection
- Cable tray fire-breaks
- Junction box protection
- Expansion joints
- High temperature gasketing
- Fire rated roofing systems
- Fire and smoke protection in OEM applications

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Specifications

Installation shall be in strict accordance with manufacturer's written instructions, as shown on approved shop drawings. 3M™ Interam™ Mat I-10/I-10A shall be a flexible, intumescent mat with low smoke evolution capable of being layered for 1-, 2- and 3-hour electrical system applications. When properly installed, 3M™ Interam™ Mat I-10/I-10A helps protect the encapsulated item(s) against heat penetration and flame spread. 3M™ Interam™ Mat I-10/I-10A shall be listed by independent test agencies such as UL, ULC, Intertek, or FM. Suitability for the intended application should be determined prior to installation.

Typically Specified Master Format

Section 07 80 00 – Fire and Smoke Protection
Section 07 84 00 – Firestopping
Section 26 01 00 – Operation and Maintenance of Electrical Systems
Section 27 20 00 – Data communications

Performance and Typical Physical Properties

Product Availability	I-10A Mat 3/16 in. 98-0400-0229-1	I-10 Mat 1/16 in. 98-0400-0506-2	I-10 Mat 3/16 in. 98-0400-0507-0
Mat Lamination	4 mil aluminum (one side)	None	None
Thickness	0.202 in. (5.13 mm)	0.0689 in. (1.75 mm)	0.198 in. (5.02 mm)
Roll Length	25 ft. (7.62 m)	75 ft. (22.8 m)	25 ft. (7.62 m)
Roll Width	49 in. (1.24 m)	50 in. (1.27 m)	50 in. (1.27 m)
Weight/Unit Area	0.68 lb/ft^2 (3,32kg/m^2)	0.21 lb/ft^2 (1,05 kg/m^2)	0.63 lb/ft^2 (3,10 kg/m^2)
Bulk Density	41.2 lb/ft^3 (660kg/m^3)	38.5 lb/ft^3 (617 kg/m^3)	39.4 lb/ft^3 (631kg/m^3)
UL Certification	Yes	No	No

Surface Burning Characteristics (ASTM E 84/UL 723)	Flame Spread: 3.7 Smoke Developed Index: 0 Fuel Contribution: 0	
Heat Expanding Characteristics	Expansion Begins: Significant Expansion: Expansion Ratio: Loss on Ignition: Refractory Temperature:	665F (352C) 1000F (538C) 3x in Thickness Direction 5-16% 2200F (1204C)
Thermal Conductivity	Unexpanded 0.033 BTU/ft/hr-F @ 110F (0.057 W/m-C @ 43C) 0.048 BTU/ft/hr-F @ 210F (0.083 W/m-C @ 99C) 0.067 BTU/ft/hr-F @ 575F (0.116 W/m-C @ 302C) Expanded 0.038 BTU/ft/hr-F @ 750F (0.066 W/m-C @ 399C) 0.053 BTU/ft/hr-F @ 1100F (0.092 W/m-C @ 593C) 0.078 BTU/ft/hr-F @ 1450F (0.135 W/m-C @ 788C)	
Mean Specific Heat	Unexpanded - 0.242 BTU/lb.-F @ 75-400F (1013 J/kg-C @ 24-204C) Expanded - 0.265 BTU/lb.-F @ 75-1650F (1109 J/kg-C @ 24-899C)	

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.

For a typical mat installation, the following tools may be of assistance: razor knife or large scissors (to cut mat), T-Square or similar straight edge (to help with straight cuts of mat), tape measure (to measure mat required), marking pen (to identify layers of mat), 3M™ Aluminum Foil Tape 425 (to seal cut edges of mat), rubber roller (to ensure good adhesion of tape), Scotch® Filament Tape 898 (to temporarily hold mat pieces in place - optional), stainless steel bands 1/2 in. wide x .020 in. min thick (12.7 mm x .5 mm) and band clips or stainless steel tie wire to help secure mat, band tensioners, 3M™ Fire Barrier Sealant CP 25WB+ (where required).

Determine the appropriate number of layers required for your application. Ensure proper covering and protection of joints, seams, overlaps and any area that requires special cutting and fitting. Ensure proper use of banding to mechanically restrain the mat system. Refer to listed system details for sealant, securement requirements, layer requirements and other installation procedures.

Maintenance

No maintenance is expected to be required when installed in accordance with listed system details. Once installed, if any section of the 3M™ Interam™ Mat I-10/I-10A damaged, the following procedure will apply: for damage to the outer metallic covering, install 3M™ Aluminum Foil Tape 425 to overlap a min. 2" (50.8 mm) in all directions. For more extensive damage (including damage to the mat material), contact 3M Fire Protection Products at 1-800-328-1687.

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3M™ Interam™ Mat I-10/I-10A

Storage and Shelf Life	3M™ Interam™ Mat I-10/I-10A is packaged in a corrugated cardboard box, 1 roll per box. 3M™ Interam™ Mat I-10/I-10A is stable under normal storage conditions, store in a dry warehouse environment in original, unopened container. Normal stock and stock rotation practices are recommended. Product shelf life is indefinite when stored indoors.
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™ Interam™ Mat I-10/I-10A.
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.
Warranty, Limited Remedy and Disclaimer	Warranty: 3M warrants that the Product will be free from defects in material and manufacture during the Extended Warranty Period. If the Product does not conform to this warranty during the Extended Warranty Period, then 3M will, as the sole and exclusive remedy, provide replacement Product (or, if replacement material is unavailable, refund the Product purchase price) for the Project. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. This warranty is void if the Product is not installed: (1) in accordance with the applicable UL or Intertek listings; (2) in accordance with the applicable Product data sheet and installation instructions; (3) in accordance with the specifications for the Project; and (4) by a 3M trained Installer. This warranty does not cover damage or failure caused by Product misuse, improper Product storage, improper Product installation, Product or Project abuse, natural disasters, or other force majeure events.
Limitation of Liability	EXCEPT FOR THE LIMITED EXTENDED WARRANTY AND REMEDY STATED ABOVE, AND EXCEPT TO THE EXTENT PROHIBITED BY LAW, 3M WILL NOT BE LIABLE FOR ANY LOSS OR DAMAGE ARISING FROM OR RELATING TO THE PRODUCT, WHETHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL, (INCLUDING, BUT NOT LIMITED TO, LOST PROFITS OR BUSINESS OPPORTUNITY), REGARDLESS OF THE LEGAL OR EQUITABLE THEORY ASSERTED, INCLUDING, BUT NOT LIMITED TO, WARRANTY, CONTRACT, NEGLIGENCE, OR STRICT LIABILITY.
Product Selection and 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. As a result, customer is solely responsible for evaluating the 3M product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

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Industrial Adhesives and Tapes Division
3M Center, Building 225-3S-06
St. Paul, MN 55144-1000

Phone 800-328-1687
Fax 877-369-2923
Web 3M.com/firestop

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