



# Fire Protection Products

## 3M™ Interam™ Endothermic Mat E-54A and E-54C

Technical Data Sheet

October / 2019

### Product Description

When properly installed, 3M™ Interam™ Endothermic Mats E-54A and E-54C provide a uniform covering that, when exposed to high temperatures, releases chemically-bound water to cool the outer surfaces of the wrap material and significantly retard heat transfer. Helps protect structural steel, critical electrical and communication systems. 3M™ Interam™ Endothermic Mats E-54A and E-54C are non-flame supporting with low-smoke evolution. The mat is flexible which aids in installation and allows it to more easily be applied on complex shapes and around corners.

### Product Features

- Provides up to 4 hour fire protection for structural steel applications<sup>1</sup> in accordance with ASTM E119
- Provides up to 3 hour fire protection for electrical circuit applications<sup>1,2</sup> in accordance with ASTM E1725 and UL practice 1724
- Chemically-bound water helps cool protective item(s) in the event of a fire
- Non-flame supporting and low-smoke evolution per ASTM E84
- Flexible – can be installed on complex shapes and around corners
- Easy-to-cut for various shapes and sizes
- For use in new or retrofit applications
- Easy-to-clean

<sup>1</sup>Specific fire-ratings are achieved via single layer or multiple layering of mat per listed system requirements. Per system details, additional layers of mat increase the hourly-rating of the installation.

<sup>2</sup>Under normal operating conditions, the mat's ambient conductivity allows heat, such as that generated by power cables, to dissipate rather than be trapped by it.

### Applications

3M™ Interam Endothermic Mats E-54A and E-54C are a flexible and space-saving wrap system that protects against fire spread and smoke contamination in a wide range of new or retrofit applications requiring full envelope protection, including: structural steel and electrical circuitry (e.g. raceways, cables, cable trays, junction boxes, conduits). Consult system details, contact your local 3M sales representative or call 1-800-328-1687 to inquire about application-specific installation guides). For further information, visit [3M.com/emat](http://3M.com/emat).

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### Specifications

Installation shall be in strict accordance with written instructions, as shown on approved shop drawings. 3M™ Interam™ Endothermic Mat E-54A and E-54C shall be a flexible, endothermic (i.e. heat absorbing) mat with low smoke evolution capable of being layered for 1-, 2-, 3- and 4-hour structural steel applications; 1-, 2- and 3-hour electrical system applications. When properly installed, 3M™ Interam™ Endothermic Mat E-54A and E-54C help protect the encapsulated item(s) against heat penetration and flame spread. Suitability for the intended application should be determined prior to installation.

### Typically Specified Master Format

Section 05 12 00 – Structural Steel Framing

Section 07 80 00 – Fire and Smoke Protection

Section 07 81 00 – Applied Fireproofing

Section 07 84 00 – Firestopping

Section 26 01 00 – Operation and Maintenance of Electrical Systems

Section 27 20 00 – Data communications

### Standardized Test Methods and 3<sup>rd</sup> Party Certifications

ASTM, UL, ULC and ISO Standard Test Methods:

ASTM E84 (UL 723) Surface Burning Characteristics of Building Materials

ASTM E119 (UL 263) Fire Tests of Building Construction and Materials

ASTM E1725 (UL 1724) Fire Tests of Fire-Resistive Barrier Systems for Electrical System Components

ASTM E814 (UL 1479) Standard Test Method for Fire Tests of Penetration Firestop Systems

IEEE P848 Ampacity Derating Factor for Fire-Protected Cable Systems

### Performance and Typical Physical Properties

Color	Silver exterior, white interior
Mat Lamination	E-54A: 3 mil. aluminum/scrim E-54C: 3 mil. stainless steel/scrim
Mat Thickness	0.408 in. (10.3 mm)
Roll Dimensions	24.5 in. x 20 ft. roll (622 mm x 6.09 m)
Roll Weight	74.6 lbs. (33.8 kg)
Weight/Unit Area	1.83 lbs/ft <sup>2</sup> (8.93 kg/m <sup>2</sup> )
Bulk Density	54 lbs/ft <sup>3</sup> (865 kg/m <sup>3</sup> )
Mat Area/Roll	40.8 ft <sup>2</sup> (3.79 m <sup>2</sup> )

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Installation Considerations	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, banding requirements, layer requirements and other installation procedures.
Availability	Available from 3M Authorized Fire Protection Products Distributors. For additional technical and purchasing information, call 1-800-328-1687 or visit <a href="http://3M.com/firestop">3M.com/firestop</a> and <a href="http://3M.com/emat">3M.com/emat</a> .
Safe Handling	Consult Safety Data Sheet prior to handling and disposing of 3M™ Interam™ Endothermic Mat E-54A or E-54C.
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	<p>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.</p> <p>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.</p>
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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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