



# Interam™ I-10 Series Mat

## Intumescent Ceramic Fiber Blanket

Interam I-10 Series Mats are ceramic fiber based materials that expand into 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.

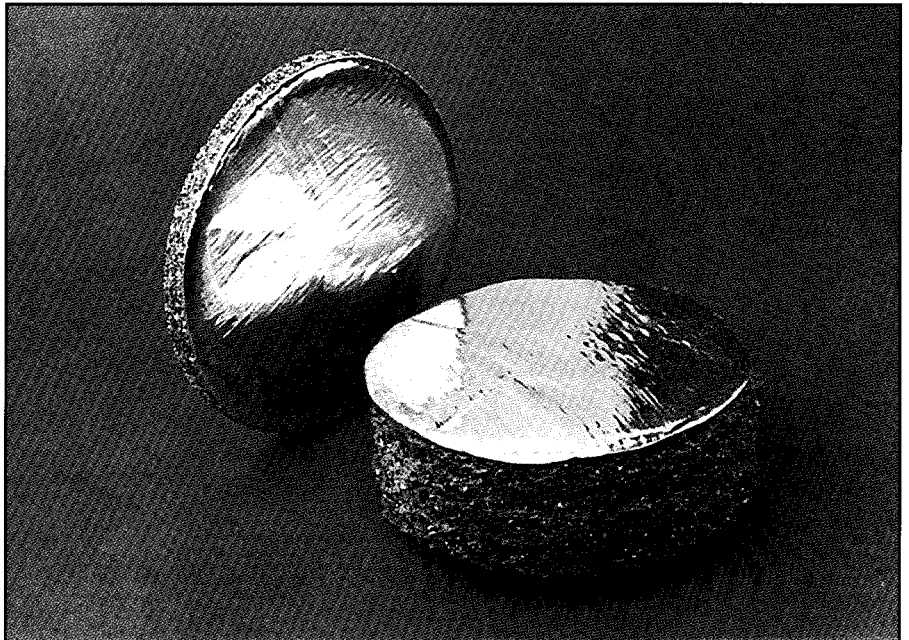
The mats can be easily wrapped around complex shapes and surfaces. This feature allows them to be easily incorporated into various fire protection systems such as electrical raceway fire-breaks and fire rated roofing systems. Exposure to fire will cause intumescence or expansion, thus filling openings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

Interam I-10 Series Mats are 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.

Should you require engineering support to address your specific fire protection or high temperature sealing problems, call on the 3M applications and engineering staff. This staff has the experience and fire testing facilities necessary for validation of our engineering judgement.

Find out more about 3M intumescent (and endothermic) products. Phone 1 800 328 1687. Or write: Fire Protection Products, 3M, Building 207-1S-02, 3M Center, St. Paul, MN 55144-1000.



### Typical Applications

- Cable tray fire breaks
- Fire rated roofing
- High temperature gasketing
- Industrial furnace seals
- Wood stove catalytic converter mounting device

### I-10 Series Mat Features:

- Expands only in thickness direction
- Non-flame supporting
- Allows heat dissipation in unexpected 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

## Mat Descriptions

	I-10A Mat	I-10 Mat 1/16 in.	I-10 Mat 3/16 in.	I-10 Mat 7/32 in.
Mat Laminations	3 mil aluminum (one side)	None	None	None
Thickness	0.198 in. (5,02mm)	0.067 in. (1,70mm)	0.193 in. (4,90mm)	0.224 in. (5,69mm)
Roll length	25 ft. (7,62m)	75 ft. (22,8m)	25 ft. (7,62m)	22 ft. (6,70m)
Roll width	49 in. (1,24m)	53 in. (1,34m)	53 in. (1,34m)	53 in. (1,34m)
Weight/unit area	0.68 lbs./ft. <sup>2</sup> (3,32kg/m <sup>2</sup> )	0.21 lbs./ft. <sup>2</sup> (1,05kg/m <sup>2</sup> )	0.63 lbs./ft. <sup>2</sup> (3,10kg/m <sup>2</sup> )	0.83 lbs./ft. <sup>2</sup> (4,07kg/m <sup>2</sup> )
Bulk Density	41.2 lbs./ft. <sup>3</sup> (660kg/m <sup>3</sup> )	38.5 lbs./ft. <sup>3</sup> (617kg/m <sup>3</sup> )	39.4 lbs./ft. <sup>3</sup> (631kg/m <sup>3</sup> )	44.6 lbs./ft. <sup>3</sup> (714kg/m <sup>3</sup> )

## Properties and Characteristics

### Surface Burning Characteristics

UL 723 (ASTM E 84)

Flame spread.....	3.7
Fuel contribution.....	0
Smoke developed.....	0

### Heat Expanding Characteristics

Expansion begins.....	665°F(352°C)
Significant expansion .....	1000°F(538°C)
Expansion in thickness direction .....	3x
Loss on ignition .....	5-16%
Refractory temperature.....	2200°F(1204°C)

### Thermal Conductivity

Unexpanded .....	0.033 @ 110°F BTU/ft./hr. - °F (0.057W/m - °C @ 43°C)
	0.048 @ 210°F BTU/ft./hr. - °F (0.083W/m - °C @ 99°C)
	0.067 @ 575°F BTU/ft./hr. - °F (0.116W/m - °C @ 302°C)
Expanded .....	0.038 @ 750°F BTU/ft./hr. - °F (0.066W/m - °C @ 399°C)
	0.053 @ 1100°F BTU/ft./hr. - °F (0.092W/m - °C @ 593°C)
	0.078 @ 1450°F BTU/ft./hr. - °F (1.35W/m - °C @ 788°C)

### Mean specific heat

Unexpanded .....	0.242 @ 75-400°F BTU/lb. - °F (1013 J/kg - °C @ 24-204°C)
Expanded .....	0.265 @ 75-1650°F BTU/lb. - °F (1109 J/kg - °C @ 24-899°C)

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