

FireMaster® UI-T-Wrap



Datasheet Code US: 714 - 250

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1. Product Description

Thermal Ceramics FireMaster UI-T-Wrap is a flexible thermal barrier wrap material used to enclose conduit and pipe to provide up to 2-hour fire protection. The proprietary matrix cools the protected item by absorbing the energy of the fire while at the same time insulating against the extreme heat of a fire.

FireMaster UI-T-Wrap is specifically tested to protect against the full engulfment of an ASTM E 119 fire environment and to keep the temperatures on the protected item below 250F average temperature rise as per the acceptance criteria defined in ASTM E 1725. This makes it ideally suited to protect critical building systems like life-safety related electrical systems and emergency generator fuel transfer lines.

Product Features

- Up to 2 hour fire ratings for circuit protection applications
- Flexible material easy to install even on small diameter conduits and pipes
- Fully encapsulated for easy handling and installation
- Gore shapes available for sweeps and elbows to eliminate field-fabrication
- Does not contain refractory ceramic fiber (RCF)

2. Applications

- Protecting electrical circuits including cables, conduits, cable trays
- Fuel transfer lines (double or single wall)
- Columns and beams
- Other enclosure applications where space is a significant constraint

3. Testing and Approvals

Performance Criteria	Standards	Values
Thermal Barrier Protection	ASTM E 1725 ASTM E 119, ASTM E 814, UL 1724	1 and 2 hour ratings per UL FHIT-38 and XCLF-TB-8

4. Physical Characteristics

Color	silver
Encapsulation	3 ply aluminum foil scrim reinforced polypropylene facing
Thickness	0.4 in (10mm)
Dimensions	34 x 72 in sheets (86 x 183cm)
Weight	0.55 lbs/ft ² (0.23 kg/m ²)
Density	16 pcf (256.3 kg/m ³)
Wrap Area / Sheet	17 sq. ft. (1.58 m ²)
Thermal Conductivity @ 75°F	0.20 BTU•in/hr•ft ² •°F (0.029 W/m•°C)
Loss on Ignition	<1% @ 400°F (149°C), <20 % @ 1850°F (1010°C)
Tensile Strength	150 psi (1.03 MPa)
Shelf Life	Unlimited (when stored properly)

5. Specification - 8 31 00 (Circuit Integrity); 23 07 00 (Mechanical Insulation)

Thermal Ceramics FireMaster UI-T-Wrap applied in multiple layers onto steel EMT, rigid conduit, pipe, or cable tray in accordance with UL Design Listings FHIT-38 and XCLF-TB8 to achieve 1 or 2-hour protection in accordance with ASTM E 119, ASTM E 1725, and ASTM E 814. Product shall be nominal 0.40 inch (10 mm) thick per layer and a nominal 16 pcf density homogenous mix of endothermic and microporous structured insulation material quilted between high temperature glass fabrics and fully encapsulated in scrim reinforced polypropylene and aluminum foil facings.

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6. Installation

Typical tools required include industrial shears, aviation snips or electric cutting shears, measuring and marking implements, putty knife, sharp knife, 2 mil aluminum foil tape, FireMaster Putty and Blanket for penetrations and joints, No. 18 AWG steel tie wire.

Refer to UL System and determine required number of layers. Follow design listing requirements for joints, seams, and overlaps. Mechanically restrain protective wrap with appropriate steel tie wire.

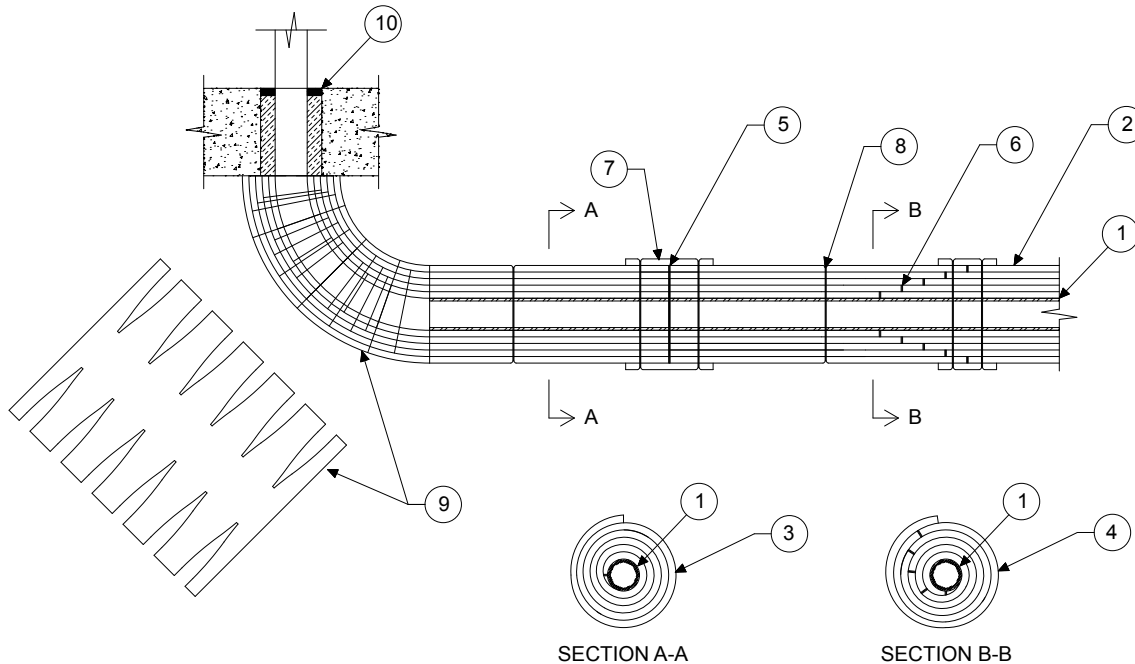
7. Maintenance

No maintenance is ordinarily needed. If foil scrim is damaged, repair with aluminum foil tape and maintain min. 2 in. (51 mm) overlap. For more extensive damage, remove and repair as per original UL design listing.

8. Storage

Material to be stored in floored, covered warehouse and protected from rain, water, other liquids, and inclement weather where moisture and dampness may deteriorate product. Direct liquid contact will be detrimental and destructive to insulating and physical properties. Store on pallets, timber or concrete blocks to prevent moisture absorption from the ground. Do not stack pallets to prevent compression of insulation.

The values given herein are typical average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Therefore, the data contained herein should not be used for specification purposes. Check with your Thermal Ceramics office to obtain current information.



LEGEND

1	EMT, Rigid Conduit, Pipe, Cable Tray as specified in UL Design Listings
2	FireMaster UI-T-Wrap applied in multiple layers as specified in UL Design Listings
3	Continuous layers scroll wrapped with 6" (150mm) overlap over starting edge
4	Optional: Multiple individual layers installed with butt-joint to start layer and 2" (51mm) circumferential overlaps
5	Butt Joint used where continuous wrap technique is employed, sealed with FireMaster Putty
6	2" (51mm) transverse offset of joints between layers where multiple individual layers are installed
7	6" (150mm) wide collars installed over outermost joints
8	Minimum 18 gage steel tie wire attached on maximum 8" (200mm) centers.
9	Special prefabricated "gore" shapes available for sweeps and elbows
10	Firestop per UL Design Listings per ASTM E814 (UL1479)

The integrity of Thermal Ceramics FireMaster UI-T-Wrap systems is limited to the quality of the installation.
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