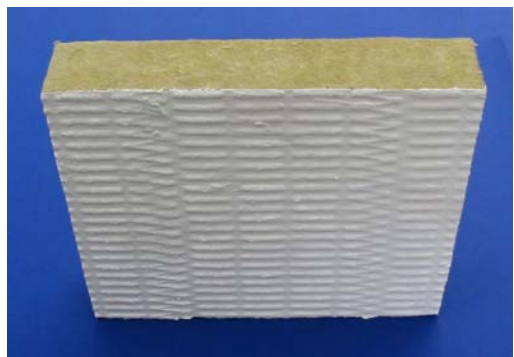
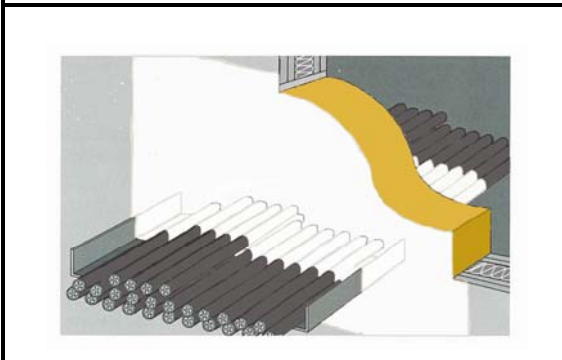
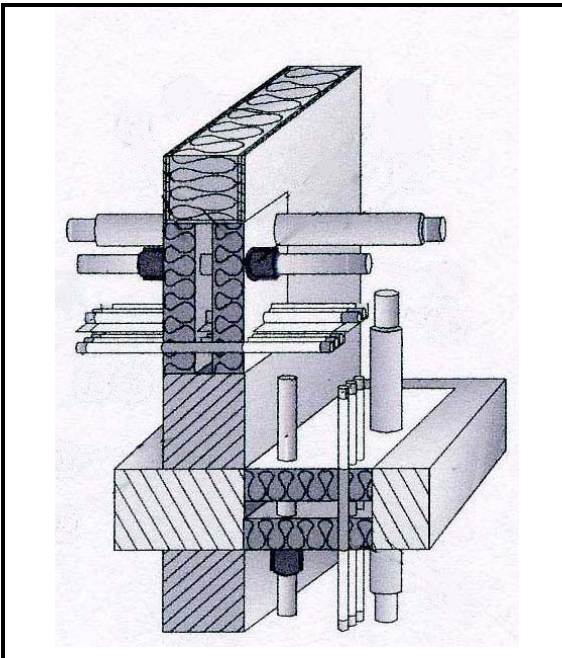


FPT FLAMMADUR[®] MW FIRE STOP SYSTEM

Mineral Wool Board (panel) coated with Intumescent Fire Retardant Flammadur[®] A77HF



Properties

- Mineral Wool density: $150 \text{ kg/m}^3 = 0.15 \text{ g/cm}^3 = 9.2 \text{ pcf}$
- Melting point; $\geq 1000^\circ\text{C}$ (1832°F)
- Board Dimensions: 1.2m x 60cm x 6cm (47.2" x 23.6" x 2.36"), for an opening area of 0.72m^2 (7.75ft²), with 4 boards/box
- Max. opening, wall W x H=1.2mx1m (47.2" x 39.3")
- Max. opening, floor W x L=1 m (39") x unlimited
- Mineral Wool coated with 1mm(dry) intumescent Flammadur[®] A77HF and gaps and voids filled with elastomeric Flammadur[®] A107

Applications

In concrete walls and floors and in drywall and masonry walls with the following penetrants:

- Cables (individual or grouped) power, control, data, communication, fiber optic
- Cable trays, or racks (aluminum, steel, plastic)
- Metallic pipes with mineral wool or ceramic sleeve
- Plastic pipes with wraps and collars

Advantages

- Material saving design
- Sealing out fire, smoke, water and toxic gases
- Water based materials
- Easy to install, remove and to re-install
- Fair acoustical properties
- No ampacity derating in cables
- Free of asbestos, halogens, lead, solvents, no noxious vapors

Tests

Fire rating of 120 minutes for cables, cables in trays and 90 minutes for metallic and plastic pipes , (UK and German test, 1988-2006 based on BS 478-20 and DIN 4102-9)



Fire Protection Technologies, Inc.

INSTALLATION

1. Clean and cover the inner surfaces of the penetration opening with a layer of elastomeric intumescent Flammadur[®] A107 extending at least 10 mm (0.4 inch) from front to rear
2. The coated mineral wool panels are fitted tightly. Any remaining gaps, spaces and joints, on both sides of Fire Stop, are filled with mineral wool.
 - a. For copper pipes, with a diameter greater than 18 mm (0.7 inch), use a mineral wool sleeve, on both sides, with a thickness greater than 2 cm (0.8 inch), with a minimum length of 30 cm (1 inch) in floors and 23 cm (9 inch) in walls. To obtain a high T(temperature)-rating, it is recommended that mineral wool be covered with Flammadur[®] E424 to a minimum thickness of 3 mm (1/8 inch) for a minimum distance of 30 mm (12 inch) beyond both surfaces of floor or wall, (as per UL[®] System No. CAJ5202)
 - b. For other metallic pipes, cover with 60 mm (2 inch nominal) thick ceramic fiber or mineral wool jacket, or blanket with a minimum density of 130 kg/m² (8pcf). Longitudinal and transverse joints butted together and secured together by means of No.14 AWG stainless steel wire spaced 76 mm (3 inch) off-center (OC). To obtain a high T-rating, it is recommended that the mineral wool be covered with Flammadur[®] E424 to a minimum wet thickness of 3 mm (1/8 inch) for a minimum distance of 305 mm (12 inch) beyond both surfaces of floor or wall, (as per UL[®] System No. CAJ5202).
3. Over the length of at least 200 mm (7.8 inch) before and behind Fire Stop System all the cables and cable trays are coated with intumescent Flammadur[®] A77HF at the dry thickness of minimum 1mm (0.04 inch), or use step 5.
4. (Option for high temperature T rating) Paint with heat absorbing Flammadur[®] E424 over cables, with a minimum thickness of 3 mm (1/8 inch)-dry coat, on both sides of wall or floor, extending a minimum of 380 mm (15 inch) from each surface of the mineral board (as was done in UL[®] Systems CBJ 3008, CBJ 4010 and CAJ 4012)
5. Fill gaps and joints with mineral wool and cover with Flammadur[®] A107, filling all joints and spaces between cables and cable trays
6. Inside firestop the cables are embedded in Flammadur[®] A107.
7. For floors, use a construction mash over the opening to protect it from walking or other loads
8. In Retrofitting the cables are coated with intumescent cable coating, Flammadur[®] A77HF, with minimum 1 mm (dry) over the length of 20 cm (0.8 in.) on both sides of Fire Stop System.
9. If the surface coating on MW board is damaged, use intumescent Flammadur A77HF. It is to be sprayed 0.7 mm (0.028") wet, drying to 0.5mm, then second coating 2 to 4 hr later with 0.7 mm wet (total 1.4 mm wet, 1 mm dry using spray with A77HF with 1.82 kg/m²=0.372 lb/ft²). Its wet density is 1.3 g/cm³.



Fire Protection Technologies, Inc.

FPT FLAMMADUR® MW Mineral Wool Board

Products and Technical Assistance available from

	<p align="center">Fire Protection Technologies, Inc. Suite 160 8000 Research Forest Drive The Woodlands, TX 77382 Website: www.flammadur.com</p>	
<p>Adolf R. Hochstim, PhD Technical Director</p>	<p>e-mail: ahochstim@earthlink.net</p>	<p>Phone: (818) 730-7749 FAX: (936) 271-4114 (Fax only)</p>
<p>Charles R. Eminhizer, PhD Thermal Physicist</p>	<p>e-mail: charles.eminhizer@yahoo.com ceminhizer@att.net</p>	<p>Phone: (858) 442-2192</p>

Warranty:

The information provided is based upon typical installation conditions and tests Fire Protection Technologies, Inc. believes to be reliable. However, due to a wide variety of possible use conditions, the manufacturer and distributor does not guarantee that typical values expressed will necessarily be obtained. THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY. Seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. NEITHER SELLER, DISTRIBUTOR, OR MANUFACTURER SHALL BE LIABLE FOR ANY INJURY, LOSS, OR DAMAGE, DIRECT, INCIDENTAL OR CONSEQUENTIAL, ARISING OUT OF THE USE OF OR THE INABILITY TO USE THE PRODUCT. Before using, user shall determine the suitability of the product of their intended use, and user assumes all risk and liability whatsoever in connection therewith. No statement or recommendation not contained herein shall have any force or effect unless in an agreement signed by officers of the manufacturer, or distributor.