



**CAFCO<sup>®</sup> BLAZE-SHIELD<sup>®</sup> II and CAFCO-BOARD<sup>™</sup>**

## **Provide Fireproofing with an R-Value**



The present power crisis in the State of California has compelled the architectural community to look at ways to create additional energy - saving features in building design. Monetary tax credits are available for building owners who build within certain energy conservation parameters.

Isolatek International provides building owners with energy saving opportunities. We have been supplying fire protection materials for more than 40 years. Isolatek is the only manufacturer in the industry who offers a complete line of passive fire protection products and an extensive range of customized solutions.

Ruling code agencies (i.e. ICBO, BOCA, SBCCI, IBC) require hourly fire-resistance ratings for different types of construction. These ratings are frequently achieved through the use of Spray-Applied Fire Resistive Materials (SFRMs). Unless the application is exterior or requires a higher degree of abrasion resistance, commercial SFRMs are usually specified.

Protected roof assemblies often allow for the opportunity to conserve energy. A roof assembly that requires passive fire protection to the underside of the decking is termed a "protected" roof assembly. These roof structures typically include a metal deck with polyisocyanurate or other insulation material applied directly to the deck and a built-up roof membrane. An "unprotected" roof assembly usually includes an adequate volume of normal weight, light-weight, or insulating concrete providing the deck with an inherent fire-resistive value. In either case the beams, girders, or joists are protected with SFRMs.

### **Built-up Roof Applications with SFRMs**

CAFCO<sup>®</sup> BLAZE-SHIELD<sup>®</sup> II is a portland cement based SFRM designed to provide fire resistive ratings for structural steel and concrete in commercial construction. The unique formulation of BLAZE-SHIELD II also makes this product a very effective thermal insulator, resulting in an R-Value of 3.33 per inch. This added benefit is significant in reducing heat loss when applied to the underside of a roof deck.



BLAZE-SHIELD II meets or exceeds industry standards as tested in accordance with ASTM test methods and also meets mechanical code requirements for use in air plenums including ASTM E859 (Air Erosion), ASTM E84 (Surface Burning Characteristics), and ASTM E136 (Combustibility).

## The Design Aesthetic Opportunity

Cafco-Board™ is available with an ASJ (All Service Jacket) finish, an FSC (Foil Scrim), or plain-faced finish. These 3 finishes may be used in combination with other Cafco® passive fire-resistive products including commercial, medium, and high density SFRMs and/or Cafco SprayFilm™ Intumescent paint. Never before has such flexibility been available to the design professional.



## Built-up Roof Applications with Rigid Mineral Board Fireproofing

Cafco-Board is a 9 pcf density rigid mineral board. As with our other systems, Isolatek International has invested in testing at Underwriter's Laboratories to develop floor-ceiling assemblies (D301), roof-ceiling assemblies (P301), as well as roof beam, floor beam, and column designs. The typical roof/ceiling assembly requires that 2 - 2 1/2 inches of Cafco-Board be fastened to the underside of the roof deck for a 1-hour fire-resistance rating. 2 1/2 inches of Cafco-Board provides an R-Value of 10.5 and a 1-hour fire-resistance rating!

Cafco-Board can be applied to the roof deck in combination with Cafco SFRMs to the beams and joists as detailed in UL Design P301. A common industry problem associated with the application to the underside of roof decks is the possibility of delamination of the SFRM due to deflection caused by roof construction. This possibility is effectively eliminated with the use of Cafco-Board because it is mechanically fastened. Since beams and joists are not susceptible to the same degree of deflection, they can be protected with traditional, low-density SFRMs at significant cost savings.

## Cost vs. Savings

### • Blaze-Shield® II

If the building in design requires a fire-resistance rating, the use of a material with an R-value at the roof deck makes economic sense. The installed cost of Blaze-Shield II is typically 10-15% below that of wet mix (cementitious) materials. The long term saving of the added R-value is appreciable as well. Blaze-Shield II should be the material of choice in any application involving a protected roof assembly in areas where energy conservation is a priority.

### • Cafco-Board™

The higher R-value of Cafco-Board provides substantial energy savings that will result in larger monetary tax credits. Additionally, Cafco-Board solves problems associated with roof traffic, seismic activity and future re-roofing concerns.

The Cafco-Board system will pay for itself many times over. Its clean, neat, uniform appearance is an additional benefit. Cafco-Board is the paramount choice of the Architectural design community.

## For Further Information

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