



**holmesfire**

20 March 2018

General

Mr. James E. Moseley, CEO  
**Sun FireDefense**  
4300 Promenade Way, Suite 116  
Marina del Rey, CA 90292

San Francisco

SUN FIREDEFENSE CERAMIC AND WOOL BASED FIBER BLANKETS: STRUCTURAL  
FIRE SAFETY APPLICATION

Telephone

+1 415 796 7100

Dear Mr/ Moseley,

Facsimile

Holmes Fire has undertaken a review of the provided product literature of the Sun FireDefense® Ceramic and Wool based Fiber Blankets, with regard to the application of this product to protect structural steel building elements exposed to fire. Please note that our review is limited to the product information received and other documented information that we have found to relate to the application of the Sun FireDefense product.

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Email

**Prescriptive Structural Fire Resistance**

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To be deemed as meeting the minimum prescriptive fire-resistance-ratings of US Building Codes, a passive fire protection system shall be tested in accordance with ASTM E119 or ANSI/UL 263 to achieve the required fire-resistance-rating, designated as a duration of exposure to the standard time-temperature curve. Failure of the structural element, with the applied protection is considered to occur when the structural element no longer supports the design load, permits fire to penetrate the unexposed face, or elevated temperatures are reached on the unexposed face.

Holmes Fire LP

130 Sutter Street

Suite 400

With regard to the fire protection of structural steel elements, the load bearing criteria is the governing factor for the application of fire protective materials.

San Francisco

Our review of the FireMaster Structural Steel Wrap technical information (registered under Thermal Ceramics) indicates that this product has been tested to ASTM E119 for the fire protection of structural steel.

CA 94104

USA

**Alternative Structural Fire Resistance**

In accordance with Section 703.3 of the IBC and CBC, an alternative method may be used to verify the fire-resistance-rating of the product applied to structural steel. In summary these permitted procedures are:

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1. Fire-resistance designs documented in approved sources.
2. Prescriptive designs of fire-resistance-rated building elements as prescribed in Section 720.
3. Calculations in accordance with Section 721.
4. Engineering analysis based on a comparison of building designs having fire-resistance-ratings as determined by the test procedures set forth in ASTM E119.



5. Alternative protection methods as allowed by Section 104.11.

Our knowledge and research relating to fire protection of structural steel confirms that there are several similar products that have been tested to ASTM E119 and/or ANSI/UL 263 to achieve various fire-resistance-ratings to structural steel based upon thickness of application and installation procedure, we have listed these as follows:

<b>UL Design Number</b>	<b>Tested Application</b>	<b>Rating (minutes)</b>
BXUV.N308	Beam	60, 90, 120
BXUV.N309	Beam	180
BXUV.N310	Beam	60, 90, 120
BXUV.X314	Column	60, 120, 180, 240
BXUV.X314	Column	60, 120, 180, 240
BXUV.X203	Column	60, 120, 180

Based upon the tested performance of insulating products similar to that of the Sun FireDefense Fiber Blanket, it is our professional opinion that the Sun FireDefense product could be successfully utilized to protect structural steel elements, to achieve the required fire-resistance-rating, through an assessment undertaken by a professional fire protection engineer, in accordance with Section 703.3 of the IBC/CBC.

Please do not hesitate to contact me should you require further clarification of the above.

Sincerely,

**HOLMES FIRE LP**

Bevan Jones, P.E.  
FP 1672