CAFCO® BLAZE-SHIELD® HP
Spray-Applied Fireproofing

DESCRIPTION
CAFCO BLAZE-SHIELD HP is an inorganic, Portland cement based, medium density Spray-Applied Fire Resistant Material (SFRM) designed to provide fire protection for structural steel in commercial construction. Tested and classified by UL as “investigated for exterior use”, CAFCO BLAZE-SHIELD HP’s durable surface and cement based formula enable it to withstand indirect weather exposure conditions and limited physical abuse, thus allowing for application in parking garages, mechanical rooms, elevator shafts, etc.

In addition to fire resistance, CAFCO BLAZE-SHIELD HP also provides thermal and acoustical benefits. As a thermal insulator, it is effective in reducing heat loss, particularly when applied to the underside of a roof deck. The R-value added by CAFCO BLAZE-SHIELD HP may also allow a reduction in roof insulation. As an efficient sound absorbing material, it adds value to the fire protection application in areas where high noise levels are anticipated.

With a simple one-step application process, CAFCO BLAZE-SHIELD HP is able to provide complete passive fire protection for most construction conditions at reduced costs and in less time.

PRODUCT ADVANTAGES
• UL “Investigated for exterior use”
• Meets current IBC high rise bond strength requirement of 430 psf
• Inorganic Portland cement based formulation
• Highest recycled content in its class (56% pre-consumer)

Thermal Performance

<table>
<thead>
<tr>
<th>Product</th>
<th>Conductivity(k)*</th>
<th>Resistance (R/inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLAZE-SHIELD HP</td>
<td>0.41 BTU in/hr ft² °F @ 75° F (0.059 W/mK @ 24°C)</td>
<td>2.43</td>
</tr>
</tbody>
</table>

*When tested in accordance with ASTM C518

Acoustical Performance

<table>
<thead>
<tr>
<th>Product</th>
<th>Thickness</th>
<th>Base</th>
<th>NRC Rating*</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLAZE-SHIELD HP</td>
<td>1/2 inch</td>
<td>Deck &amp; Beam</td>
<td>0.85</td>
</tr>
</tbody>
</table>

*When tested in accordance with ASTM C423

Physical Performance

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>ASTM Method</th>
<th>Standard Performance*</th>
<th>Tested Performance**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>E605</td>
<td>22 pcf (352 kg/m³)</td>
<td>24 - 26 pcf (384 - 416 kg/m³)</td>
</tr>
<tr>
<td>Combustibility</td>
<td>E136</td>
<td>Noncombustible</td>
<td>Noncombustible</td>
</tr>
<tr>
<td>Cohesion/Adhesion</td>
<td>E736</td>
<td>430 psf (20.6 kPa)</td>
<td>1.525 psf (73.0 kPa)</td>
</tr>
<tr>
<td>Deflection</td>
<td>E759</td>
<td>No Cracks or Delaminations</td>
<td>No Cracks or Delaminations</td>
</tr>
<tr>
<td>Bond Impact</td>
<td>E760</td>
<td>No Cracks or Delaminations</td>
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</tr>
<tr>
<td>Compressive Strength</td>
<td>E761</td>
<td>7,344 psf (351 kPa)</td>
<td>7,920 psf (379.2 kPa)</td>
</tr>
<tr>
<td>Air Erosion Resistance</td>
<td>E859</td>
<td>Less than 0.025 g/ft² (0.27 g/m²)</td>
<td>0.000 g/ft² (0.000 g/m²)</td>
</tr>
<tr>
<td>Corrosion Resistance</td>
<td>E937</td>
<td>Does Not Promote Corrosion of Steel</td>
<td>Does Not Promote Corrosion of Steel</td>
</tr>
<tr>
<td>Fungal Resistance</td>
<td>G21</td>
<td>No Growth After 28 Days</td>
<td>Passed</td>
</tr>
</tbody>
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* Standard performance based on industry standards and practices. Refer to UL design for density requirement.
** Values represent independent laboratory tests under controlled conditions.

FIRE TEST PERFORMANCE
CAFCO BLAZE-SHIELD HP has been extensively tested for fire resistance and is rated for up to 4 hours for floor assemblies, beams, joists, columns, roof assemblies and walls and partitions.
• Classified by UL in accordance with ANSI/UL 263 (ASTM E119)
• Classified by UL in accordance with CAN/ULC-S101 (ASTM E119)

CODE COMPLIANCES
CAFCO BLAZE-SHIELD HP satisfies the requirements of the following:
• IBC-INTERNATIONAL BUILDING CODE® (ICC ESR-1649)
• NBC - National Building Code of Canada

MAJOR SPECIFICATIONS
CAFCO BLAZE-SHIELD HP complies with the requirements of the following specifications:
• MasterSpec®, Section 078100 APPLIED FIREPROOFING (AIA)
• MasterFormat® 2014, Section 07 81 00 Applied Fireproofing (CSC,CSI)
• Unified Facilities Guide Specification, UFGS 07 81 00 Spray-Applied Fireproofing (USACE, NAVFAC, AFCEC, NASA)
• Master Construction Specifications, Number 07 80 10 Applied Fireproofing (VA)
• Code of Federal Regulations, Title 40 Protection of the Environment (EPA)
• PBS-P100 Facilities Standards for the Public Buildings Services (GSA)

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Technical Data Sheet
CAFCO BLAZE-SHIELD HP Guide Specification

SECTION 08100 – APPLIED FIREPROOFING

The following is an outline/short language specification. Complete specifications for Spray-Applied Fire Resistive Materials are available on various media upon request.

PART 1 – GENERAL

1.1 Work Included

1.1.1 Provide all labor, materials, equipment and services necessary for, and incident to, the complete and proper installation of all sprayed fire resistive material and related work as shown on the drawings or where specified herein, and in accordance with all applicable requirements of the Contract Documents.

1.1.2 The material and installation shall conform to the applicable building code requirements and the requirements of all authorities having jurisdiction.

1.2 Quality Assurance

1.2.1 Work shall be performed by a firm with expertise in the installation of fire protection or similar materials. This firm shall be recognized or otherwise approved by the spray-applied fire resistive material manufacturer.

1.2.2 Before proceeding with the fire protection work, approval of the proposed material thicknesses and densities shall be obtained from the architect and other applicable authorities having jurisdiction.

1.3 Related Sections

1.3.1 SECTION 061200 – STRUCTURAL STEEL FRAMING
1.3.2 SECTION 033100 – STEEL DECKING
1.3.3 SECTION 072100 – THERMAL INSULATION
1.3.4 SECTION 074123 – INTUMESCENT FIREPROOFING
1.3.5 SECTION 074820 – JOINT FIRESTOPPING

1.4 References

C. ASTM E138 – (Noncombustibility) Behavior of Materials in a Vertical Tube Furnace at 750°C.
D. ASTM E605 – Thickness and Density of Sprayed Fire-Resistive Materials Applied to Structural Members.
E. ASTM E796 – Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members.
F. ASTM E797 – Effect of Deflection of Sprayed Fire-Resistive Materials Applied to Structural Members.
H. ASTM E761 – Compressive Strength of Sprayed Fire-Resistive Materials Applied to Structural Members.
I. ASTM E762 – Bond Impact of Sprayed Fire-Resistive Materials Applied to Structural Members.
J. ASTM E763 – Corrosion of Steel by Sprayed Fire-Resistive Materials Applied to Structural Members.
L. UL/ULC-S1-012 – Steiner Tunnel Test.

1.4.1 Underwriters Laboratories of Canada (ULC) List of Equipment and Materials.

1.4.2 ISOLATEK INTERNATIONAL is registered with the AIA Continuing Education System (AIA/CES).

We support our customers with unsurpassed technical expertise and customer service, complemented by an extensive global network of experienced sales representatives and recognized applicators. For detailed product information or for the name of the sales representative in your area please contact us.

The performance data herein reflect our expectations based on tests conducted in accordance with recognized standard methods under controlled conditions. The applicator, general contractor, property owner and/or user MUST read, understand and follow the directions, specifications and/or recommendations set forth in Isolatek International’s publications concerning use and application of these products, and should not rely merely on the information contained in this product data sheet. Isolatek International is not responsible for property damage, bodily injuries, cosmetic damages, or losses of any kind, direct or indirect, resulting from or related to the applicator’s, property owner or user’s failure to follow the recommendations set forth in Isolatek International’s publications. The sale of these products shall be subject to the Terms and Conditions set forth in the Company’s invoices.

Isolatek International provides passive fireproofing materials under the CAFCO® trademark throughout the Americas and other markets and under the ISOLATEK® trademark throughout the world.

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