**ST-16**  
**2 HOUR FIRE ASSEMBLY - MEDIUM WEIGHT STRUCTURAL STEEL BEAM**

**TYPICAL ASSEMBLY - MEDIUM WEIGHT STRUCTURAL STEEL MEMBER USED HORIZONTALLY AS A BEAM OR 45 DEG BRACING**  
*Medium weight defined as 10 LBS·23.9 LBS. per liner foot of material*

![Diagram of I, O, and square shapes with captions](image)

**TO ACHIEVE 2 HOUR RATING (USING CRITERIA 1300° F AVERAGE):**  
**PREPARATION OF STEEL MEMBER:** CLEAN AND APPLY COMPATIBLE STEEL PRIMER @ 2.5 MIL.  
**APPLY 60 MIL THICKNESSES (DRY) OF ForceField® FireGuard® E-84 TO ALL EXPOSED SIDES OF STEEL BEAM.**

![Diagram of I, O, and square shapes with captions](image)

**60 MIL THICKNESS (DRY) OF FFG E-84 INTUMESCENT COATING**

<table>
<thead>
<tr>
<th>FIRE TEST ENDURANCE RATING:</th>
<th>2 HOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STANDARD TESTED TO:</strong></td>
<td>ASTM E-119-IA STRUCTUAL STEEL SECTION; NFPA 251; UL 263; ULC S-101-07 WITH NO LOAD CAPACITY, NO RESTRAINT, SMALL SCALE TEST</td>
</tr>
</tbody>
</table>
| **FIRE TESTED LABORATORY**  | GUARDIAN FIRE LABORATORIES, INC.  
                                | 480 HINMAN AVE.  
                                | BUFFALO, NY 14216 |
| **REPORT NO:**              | GL 115611 |
| **PRODUCT:**                | ForceField® FireGuard E-84® INTUMESCENT COATING (FFG E-84) |
| **MANUFACTURER:**           | SHIELD INDUSTRIES, INC.  
                                | 131 SMOKEHILL LANE  
                                | WOODSTOCK, GA 30188 |

*SEE MANUFACTURER APPLICATION INSTRUCTIONS AND SPECIFICATIONS FOR SURFACE PREPARATION AND APPLICATION PROCESS*

**GUARDIAN**

**R. Joseph Pearson**  
5/19/14

**REGISTERED PROFESSIONAL ENGINEER**  
**STATE OF CALIFORNIA**

**Laura Ann Hinton**  
5/19/14