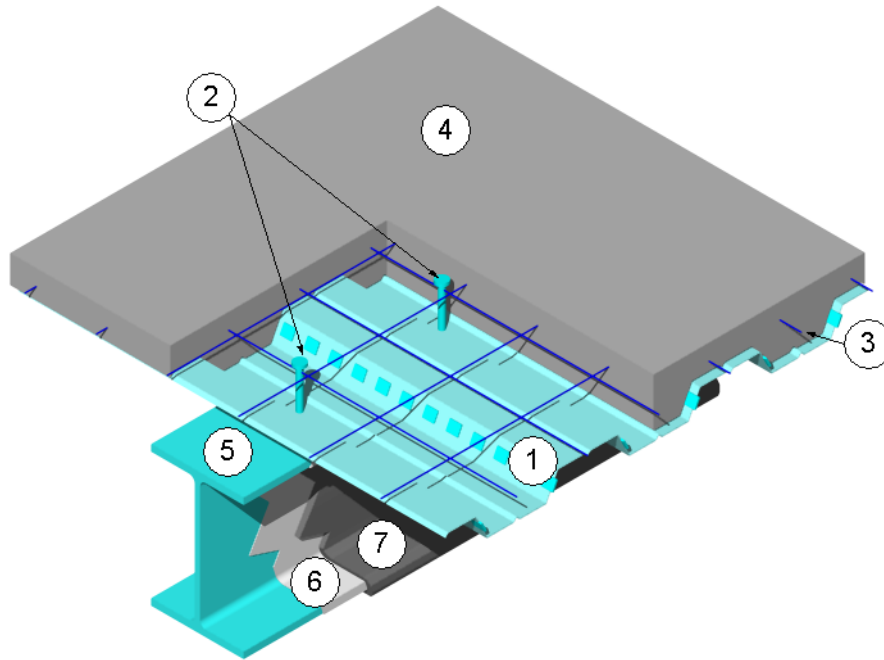


**AD/IMF 120-01**  
**(Formerly AD/FCA 120-01)**  
**LOADED RESTRAINED OR UNRESTRAINED COMPOSITE BEAM**  
**A/D Fire Protection Systems, Inc.**  
 A/D FIREFILM® II, A/D FIREFILM® IIIC, A/D FIREFILM® III and A/D FIREFILM® A3  
 Intumescent Coatings  
**ASTM E 119 (2000)**  
**See Table For Ratings**



**Table 1**

			Minimum Concrete Cover Thickness		Min. Dry Thickness of A/D FIREFILM II, A/D FIREFILM IIIC, A/D FIREFILM III and A/D FIREFILM A3 on Beam of minimum size indicated	
			Normal Density	Low Density	W6X12 W/D=0.51	W6X25 W/D=0.82
Restrained Assembly Rating (Hour)	Unrestrained Assembly Rating (Hour)	Unrestrained Beam Rating (Hour)				
2	0, see item 1	1	4-1/2"	3-1/4"	0.065"	0.045"
2	0, see item 1	2	4-1/2"	3-1/4"	---	0.101"
1-1/2	0, see item 1	1	4'	2-3/4"	0.065"	0.045"
1	0, see item 1	1	3-1/4"	2-1/2"	0.065"	0.045"
3/4	0, see item 1	3/4	2-1/2"	2-1/2"	0.045"	0.045"

1. FLOOR UNITS – Fluted composite or non-composite floor deck made from sheet steel conforming to ASTM A1008 (A1008M) with a minimum yield strength of 33 ksi (230 MPa), or select other acceptable structural sheet steels or high strength low alloy steels from the North American Specification for the Design of Cold-Formed Steel Structural Members. Install minimum 0.030 in. fluted sections or 0.040/0.040 in. thick cellular sections, welded to top of structural steel beam (Item 5) and covered with minimum concrete (Item 4) requirements as required herein. When maximum clear span of floor units is less than or equal to 9 ft, 6 in., unrestrained assembly rating is increased to 2, 1 or ¾ hour to match the unrestrained beam rating.
2. SHEAR STUD CONNECTORS: OPTIONAL – When used puddle weld steel studs, headed type or equivalent per AISC specifications, to composite steel floor deck (Item 1) and structural steel beam (Item 5) providing a nominal concrete cover over the steel stud heads as required. Install shear stud connectors per AISC guidelines to provide composite action between the beam and the concrete deck assembly as required.
3. CONCRETE REINFORCEMENT: Non-structural applications – Use minimum 6 in. x 6 in. 9 GA wire mesh installed mid depth of concrete (Item 4) topping.
4. CONCRETE: Use minimum compressive strength of 3500 psi. Place concrete topping (as measured from top of floor units (Item 1) to wearing surface of concrete) as required by rated floor construction.
5. SOLID STRUCTURAL STEEL BEAM: Use steel sections, I-beam or W-beam, having nominal W/D section factors based on three sided exposure with one surface in contact with composite steel floor deck (Item 1). Intumescent mastic fireproofing (Item 7) thickness for nominal W/D section factors based on one side in contact with composite steel floor units (Item 1). Refer to table 1 above for specific application thickness of intumescent mastic fireproofing (Item 7).
6. PRIMER COATING: Apply an approximate 2 mil dry film thickness of primer recommended by the certified intumescent mastic fireproofing manufacturer, which is compatible with the intumescent mastic fireproofing (Item 7), to the solid structural steel beam (Item 5).
7. CERTIFIED MANUFACTURER: A/D Fire Protection Systems, Inc.  
  
CERTIFIED PRODUCT: Intumescent Mastic Fireproofing  
  
MODEL: A/D FIREFILM® II, A/D FIREFILM® IIIC, A/D FIREFILM® III and A/D FIREFILM® A3.  
  
Install intumescent mastic fireproofing in accordance with Table 1 above. Apply only to clean and dry surfaces free of loose scale and oil. Apply in one or more coats to achieve minimum thickness of intumescent mastic fireproofing to three exposed sides of solid structural steel beam (Item 5) as noted in Table 1. Allow each coat to set before applying next coat. Voids (flutes) between floor units (Item 1) and top of solid structural steel beam (Item 5) shall have the same thickness of fireproofing, or flute spaces above structural steel beam (Item 5) shall be completely filled with mineral wool insulation (not shown) having a minimum density of 6.0 pcf.
8. FINISH COATING (Not Shown) – Apply an optional Silicone Alkyd paint designated A/D COLORCOAT per the manufacturer's published specification