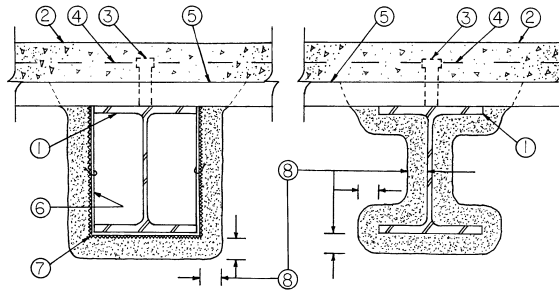


Design No. N759

Restrained Beam Rating — 1, 1-1/2, 2, 3 and 4 Hr. (See Item 8)
Unrestrained Beam Rating — 1, 1-1/2, 2, 3 and 4 Hr. (See Item 8)
Load Restricted for Canadian Applications — See Guide BXUV7



1. **Steel Beam** — W8x28 min size.
2. **Normal Weight or Lightweight Concrete** — Normal weight or lightweight concrete, 2-1/2 in. min thickness over the steel floor and form unit crests or min 3 in. thick slab with a compressive strength of 3500 psi and min dry unit weight of 110 pcf.
3. **Shear Connector** — (Optional) — Studs, 3/4 in. diam headed type or equivalent per AISC specification. Welded to the top flange of beam through the steel floor units.
4. **Welded Wire Fabric** — 6x6, W1.4 x W1.4.
5. **Steel Floor and Form Units** — 1-1/2 to 3 in. deep fluted, cellular or corrugated units in any combination, welded to beam (refer to Item 8).
6. **Lath Hangers** — (To be used with Item 7) — No. 6 SWG steel wire, spaced 27 in. OC max.
7. **Metal Lath** — (Optional) — 3.4 lb/sq yd expanded steel, tied to lath hangers with No. 18 SWG steel wire spaced 6 in. OC max.
8. **Spray-Applied Fire Resistive Materials*** — See tables below for appropriate thicknesses. Applied by mixing with water in accordance with instructions on each bag of materials and spraying in one or more coats to beam or lath surfaces which must be free of dirt, loose scale or oil. Surface of applied material may be lightly finished with a trowel. Crest areas above the beam shall be filled with Spray-Applied Fire Resistive Materials. Min average and min individual density of 15 and 14 pcf, respectively. For method of density determination, see Design Information Section, Sprayed Material.

Fluted, Cellular and Corrugated Floor Units

Rating Hr	Min Thkns In.	
	Restrained Beam Rating Hr	Unrestrained Beam Rating Hr
1	5/16	5/16
1-1/2	7/16	9/16
2	9/16	13/16
2-1/2*	13/16	1-1/16
3	1	1-5/16
3-1/2*	1-1/4	1-9/16
4	1-7/16	1-13/16

Fluted Floor Units Only or Min 3 in. Thick Slab

Rating Hr	Min Thkns In.	
	Restrained Beam Rating Hr	Unrestrained Beam Rating Hr
1	5/16	5/16
1-1/2	3/8	1/2
2	9/16	11/16
2-1/2*	13/16	7/8
3	1	1-1/16
3-1/2*	1-3/16	1-1/4
4	1-7/16	1-1/2

* The 2-1/2 and 3-1/2 hour ratings are for use when mineral fiber boards, polystyrene insulation exceeding 5 pcf, or polyisocyanurate insulation are used over the concrete in D900 series designs as stated in the front of the Fire Resistance Directory - III. FLOOR-CEILINGS AND ROOF-CEILINGS, item 21. Roof Insulation.

The thicknesses of Spray-Applied Fire Resistive Materials shown in the following table are applicable when the thickness applied to the beams' lower flange edges is reduced by one-half. The min thickness applied to the lower flange edges is 1/4 in.

Fluted, Cellular and Corrugated Floor Units

Rating Hr	Min Thkns In.	
	Restrained Beam Rating Hr	Unrestrained Beam Rating Hr
1	3/8	3/8
1-1/2	1/2	5/8
2	5/8	7/8
3	1-1/8	1-7/16
4	1-5/8	2

Fluted Floor Units Only or Min 3 in. Thick Slab

Rating Hr	Min Thkns In.	
	Restrained Beam Rating Hr	Unrestrained Beam Rating Hr
1	3/8	3/8
1-1/2	7/16	9/16
2	5/8	3/4
3	1-1/8	1-3/16
4	1-5/8	1-11/16

2013 FIRE RESISTANCE DIRECTORY - ISOLATEK

ISOLATEK INTERNATIONAL —Types 300, 300AC, 300ES, 300HS, 300N or SB.

LUCKY CORE INSULATING MATERIALS

MANUFACTURING L L C —Types 300, 300ES, 300N, or SB

NEWKEM PRODUCTS CORP —Types 300, 300ES, 300N or SB.

- 8A. (As an alternate to Item 8 and 8B) **Spray-Applied Fire Resistive Materials*** — See tables below for appropriate thicknesses. Applied by mixing with water in accordance with instructions on each bag of materials and spraying in one or more coats to beam or lath surfaces which must be free of dirt, loose scale or oil. Surface of applied material may be lightly finished with a trowel. Crest areas above the beam shall be filled with Spray-Applied Fire Resistive Materials. Min average and min individual density of 17.5 and 16 pcf, respectively, for Type 300TW. Min average and min individual density of 22 and 19 pcf, respectively, for Type 400. For method of density determination, see Design Information Section, Sprayed Material.

Fluted, Cellular and Corrugated Floor Units

Rating Hr	Min Thkns In.	
	Restrained Beam Rating Hr	Unrestrained Beam Rating Hr
1	5/16	5/16
1-1/2	7/16	9/16
2	9/16	13/16
2-1/2*	13/16	1-1/16
3	1	1-5/16
3-1/2*	1-1/4	1-9/16
4	1-7/16	1-13/16

Fluted Floor Units Only or Min 3 in. Thick Slab

Rating Hr	Min Thkns In.	
	Restrained Beam Rating Hr	Unrestrained Beam Rating Hr
1	5/16	5/16
1-1/2	3/8	1/2
2	9/16	11/16
2-1/2*	13/16	7/8
3	1	1-1/16
3-1/2*	1-3/16	1-1/4
4	1-7/16	1-1/2

* The 2-1/2 and 3-1/2 hour ratings are for use when mineral fiber boards, polystyrene insulation exceeding 5 pcf, or polyisocyanurate insulation are used over the concrete in D900 series designs as stated in the front of the Fire Resistance Directory - III. FLOOR-CEILINGS AND ROOF-CEILINGS, item 21. Roof Insulation.

The thicknesses of Spray-Applied Fire Resistive Materials shown in the following table are applicable when the thickness applied to the beams' lower flange edges is reduced by one-half. The min thickness applied to the lower flange edges is 1/4 in.

Fluted, Cellular and Corrugated Floor Units

Rating Hr	Min Thkns In.	
	Restrained Beam Rating Hr	Unrestrained Beam Rating Hr
1	3/8	3/8
1-1/2	1/2	5/8
2	5/8	7/8
3	1-1/8	1-7/16
4	1-5/8	2

Fluted Floor Units Only or Min 3 in. Thick Slab

Rating Hr	Min Thkns In.	
	Restrained Beam Rating Hr	Unrestrained Beam Rating Hr
1	3/8	3/8
1-1/2	7/16	9/16
2	5/8	3/4
3	1-1/8	1-3/16
4	1-5/8	1-11/16

BERLIN CO LTD —Type 400.

ISOLATEK INTERNATIONAL — Types 300TW, Type 400

LUCKY CORE INSULATING MATERIALS

MANUFACTURING L L C —Type 400.

NEWKEM PRODUCTS CORP —Type 400.

- 8B. (As an alternate to Item 8A) — **Spray-Applied Fire Resistive Materials*** — Prepared by mixing with water according to instructions on each bag of mixture and spray or trowel applied to steel surfaces which are free of dirt, oil or scale. Min average density of 18.0 pcf with min individual value of 17.0 pcf. For method of density determination, see Design Information Section, Sprayed Material.

ISOLATEK INTERNATIONAL —Type 280.

*Bearing the UL Classification Mark