

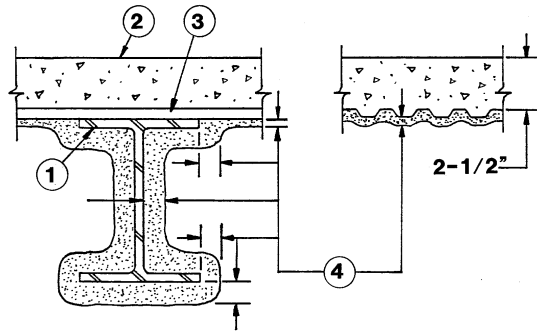
Design No. N706

(Formerly 34 — 5 Hr., 40 — 4 Hr., 216 — 3 Hr., 239 — 2 Hr.)

Restrained Beam Ratings — 1, 1-1/2, 2, 3, and 4 Hr.

Unrestrained Beam Ratings — 1, 1-1/2, 2, 3, and 4 Hr.

Load Restricted for Canadian Applications — See Guide BXUV7



1. Steel Beam — Min beam size for ratings shall be:

Rating Hr	Restrained Beam		Unrestrained Beam	
	Rating Hr	Beam Size	Rating Hr	Beam Size
4		W8x24		W8x28
3		W8x24		W8x28
2		W8x28		W8x28
1-1/2		W8x28		W8x28
1		W8x28		W8x28

2. Normal Weight or Lightweight Concrete — For normal weight concrete either carbonate or siliceous aggregate may be used. Unit weight 148 pcf. For lightweight concrete, unit weight 110 pcf.

3. Steel Floor and Form Units* — Min 1-1/2 to 3 in. deep cellular or fluted type, welded to beam.

4. Spray-Applied Fire Resistive Materials* — Applied by mixing with water and spraying in more than one coat to beam and in one coat to steel deck to final thicknesses shown below. Steel surfaces must be clean and free of dirt, loose scale, and oil. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 19/18 pcf respectively for Types 7GP and 7HD. For method of density determination, refer to Design Information Section. Types 4, MK-6/CBF, RG, VP4, 5GP, 7GP, 7HD, 8GP, 9GP, may be used only with all fluted steel floor units or blends consisting of one or more fluted units to one 24 in. wide max cellular unit, 1-1/2 or 3 in. deep, with cells spaced approx 6 and 8 in. respectively. When fluted units are used, crest areas above the beam shall be filled with Spray-Applied Fire Resistive Materials.

Rating Hr	Normal Weight Concrete				Lightweight Concrete			
	Restrained		Unrestrained		Restrained		Unrestrained	
	Beam	Deck	Beam	Deck	Beam	Deck	Beam	Deck
4	1-1/2	1/2	2	None	1-5/8	1/2	2	None
3	1-1/8	1/2	1-1/4	1/2	1-1/4	1/2	1-9/16	1/2
2	3/4	3/8	7/8	3/8	7/8	3/8	1	3/8
1-1/2	5/8	3/8	11/16	3/8	11/16	3/8	13/16	3/8
1	1/2	None	1/2	None	1/2	None	1/2	None

The thicknesses of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the thickness applied to the beam's lower flange edges is reduced to one-half that shown in the table:

Rating Hr	Normal Weight Concrete				Lightweight Concrete			
	Restrained		Unrestrained		Restrained		Unrestrained	
	Beam	Deck	Beam	Deck	Beam	Deck	Beam	Deck
4	1-11/16	1/2	2-1/4	None	1-7/8	1/2	2-1/4	None
3	1-5/16	1/2	1-7/16	1/2	1-7/16	1/2	1-3/4	1/2
2	7/8	3/8	1	3/8	1	3/8	1-1/8	3/8
1-1/2	3/4	3/8	13/16	3/8	13/16	3/8	15/16	3/8
1	9/16	None	9/16	None	9/16	None	9/16	None

ARABIAN VERMICULITE INDUSTRIES —Types MK-5, MK-6/CBF, MK-6/ED, MK-6/HY, MK-6/HB, MK-10 HB, MK-6s, Sonophone 1.

GRACE KOREA INC —Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6/HB, MK-10 HB, MK-6s, Monokote Acoustic 1.

PYROK INC —Type LD.

SOUTHWEST FIREPROOFING PRODUCTS CO —Types 4, 5, 5EF, 5GP, 5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD.

W R GRACE & CO - CONN —Types MK-5, MK-6/HY, MK-10 HB, MK-6/HB, MK-6s, Monokote Acoustic 1, RG.

*Bearing the UL Classification Mark