

Table 1
Fire Resistance Ratings

Assembly Rating
(see Table A)

UL Design No.	Structural Substrate	Ceiling Condition	Insulating ZIC	Concrete NVS	Insulcel	Zonocel	Restrained Hourly Ratings	Unrestricted Hourly Ratings	Maximum Insulperm Thickness (inches)	Minimum Steel Deck Size	Minimum Bar Joist/ Beam Size	Maximum Bar Joist/ Beam Spacing
Fire Rated Designs Allowing the Use of Insulperm												
D708	Steel/Concrete	Exposed	Y	Y	Y	NO	3	1-1/2,3	8	1-1/2"-22ga	W10X17	
D916	Steel/Concrete	Exposed	Y	Y	Y	Y	3/4,1,1-1/2,2,3	0	8	1-1/2"-22ga	W8X28	
D923	Steel/Concrete	Exposed	Y	Y	Y	Y	3/4,1,1-1/2,2,3	0	8	1-1/2"-22ga	W8X28	
D925	Steel/Concrete	Exposed	Y	Y	Y	Y	3/4,1,1-1/2,2,3	0	8	1-1/2"-22ga	W8X28 OR 10K1	
D927	Steel/Concrete	Exposed	Y	Y	Y	Y	3/4,1,1-1/2,2,3	0	8	1-1/2"-22ga	W8X28	
P708	Precast Concrete	Exposed	Y	Y	Y	Y	1,1-1/2,2	1,1-1/2,2	See Table B	N/A	N/A	N/A
P810	Precast Concrete	Exposed	Y	Y	Y	Y	1,1-1/2,2	1,1-1/2,2	See Table B	N/A	N/A	N/A
P905	Precast Concrete	Exposed	Y	Y	Y	Y	2	1/2	See Table B	N/A	N/A	N/A
P910	Precast Concrete	Exposed	Y	Y	Y	Y	1,1-1/2,2	1	See Table B	N/A	N/A	N/A
P913	Precast Concrete	Exposed	Y	Y	Y	Y	1,1-1/2,2	1,1-1/2	See Table B	N/A	N/A	N/A
P916	Precast Concrete	Exposed	Y	Y	Y	Y	1,1-1/2,2	1,1-1/2	See Table B	N/A	N/A	N/A
D750	Steel/Concrete	Exposed	Y	Y	Y	NO	2	1-1/2, 2	Unlimited	1-1/2 22ga	W8X21	12" o.c.
D902	Steel/Concrete	Exposed	Y	NO	NO	NO	1,1-1/2,2,3	0,1,1-1/2,2,3	8	1-1/2"-22ga	W8X28	
D922	Steel/Concrete	Exposed	NO	NO	Y	Y	3/4,1,1-1/2,2,3	0	8	1-1/2"-22ga	W8X28	
P231	Steel Deck	Suspended	Y	NO	Y	Y	1	1	8	15/16"-26ga	10J4 or 12K1	72"
P246	Steel Deck	Suspended	Y	NO	Y	Y	1	1	8	9/16"-28ga	8H3 or 10K1	72"
P251	Steel Deck	Suspended	Y	NO	Y	Y	2	2	8	9/16"-28ga	10H3 or W6X12	72"
P255	Steel Deck	Suspended	Y	NO	Y	Y	1	1	3	9/16"-28ga	8H3 or W8X15	72"
P261	Steel Deck	Suspended	Y	NO	Y	Y	1	1	8	9/16"-28ga	10H3 or W6X12	72"
P264	Steel Deck	Suspended	Y	NO	Y	Y	1	1	8	15/16"-26ga	W8X15	
P410	Steel Deck	Plaster	Y	NO	Y	Y	2	2	8	15/16" Note 3	10J4	Note 3
P509	Steel Deck	Gypsum Wallboard	Y	NO	Y	Y	1	1	8	15/16" Note 4	10J4	Note 4
P511	Steel Deck	Gypsum Wallboard	Y	NO	Y	Y	N/A	1	8	9/16"-28ga	8H3 or 7-1/4 [24"
P513	Steel Deck	Gypsum Wallboard	Y	NO	Y	Y	1-1/2	1-1/2	8	9/16"-28ga	10J4	48"
P902	Steel Deck	Exposed	NO	NO	Y	Y	1,1-1/2,2	0, Note 5	8	Note 6, 28ga	Note 7	96"
P919	Steel Deck	Exposed	Y	NO	Y	Y	1,1-1/2	0, Note 15	See Table B	15/16"- 26ga	12J4 or W6X16	Note 16,17
P920	Steel Deck	Exposed	NO	NO	Y	Y	1,1-1/2,2	0, Note 18	8	9/16", Note 19	Note 10	Note 13,17
P921	Steel Deck	Exposed	Y	NO	Y	Y	1,1-1/2,2	0, Note 15	8	Note 20, 28ga	Note 7	Note 13,17
P922	Steel Deck	Exposed	NO	NO	Y	Y	1,1-1/2,2	0, Note 15	8	Note 20, 28ga	Note 21	Note 22
P923	Steel Deck	Exposed	NO	NO	Y	Y	1,1-1/2,2	0, Note 23	8	Note 20, 28ga	Note 7	Note 22,17
P924	Steel Deck	Exposed	Y	NO	Y	Y	1,1-1/2,2	0, Note 23	8	Note 20, 28ga	W8X28	Note 24
P925	Steel Deck	Exposed	Y	NO	Y	Y	1,1-1/2,2	0	8	Note 18, 28ga	10K5 or W6X16	Note 22
P214	Steel Deck	Suspended	Y	NO	Y	Y	1	1	0	Note 1	10J4 or 12K3	Note 1
P215	Steel Deck	Suspended	Y	NO	Y	Y	2	2	0	9/16" - 28ga	10J3	48"

Table 1 continued
Fire Resistance Ratings

Assembly Rating
(see Table A)

UL Design No.	Structural Substrate	Ceiling Condition	Insulating ZIC	Concrete NVS	Insulcel	Zonocel	Restrained Hourly Ratings	Unrestrained Hourly Ratings	Maximum Insulperm Thickness (inches)	Minimum Steel Deck Size	Minimum Bar Joist/ Beam Size	Maximum Bar Joist/ Beam Spacing
Fire Rated Designs Not Allowing the Use of Insulperm												
P216	Steel Deck	Suspended	Y	NO	Y	Y	1	3/4	0	9/16" - 28ga	10J3	48"
P231	Steel Deck	Suspended	Y	NO	Y	Y	1,1-1/2	1,1-1/2	0	15/16" -26ga	10J4 or 12K1	72"
P241	Steel Deck	Suspended	Y	NO	Y	Y	2	2	0	9/16" - 28ga	10J3	48"
P269	Steel Deck	Suspended	Y	NO	Y	Y	1, 1-1/2	1, 1-1/2	8	15/16" – 26ga	10J4 or 12K1	4' o.c.
P405	Steel Deck	Plaster	NO	NO	Y	Y	3	3	0	9/16" - 28ga	10J3 or 10K1	48"
P406	Steel Deck	Plaster	NO	NO	Y	Y	3	2	0	N/A	8J2	24"
P407	Steel Deck	Plaster	NO	NO	Y	Y	2	2	0	9/16" - 28ga	10J2	48"
P812	Normal Weight	Exposed	Y	NO	Y	Y	2	1	0	N/A	N/A	N/A
P903	Steel Deck	Exposed	NO	NO	Y	Y	1	0, Note 8	0	1-1/4" -24ga	W12X27	
P936	Steel Deck	Exposed	Y	NO	Y	Y	1, 1-1/2, 2	0	8	28ga	10K1 or W6x16	Note 22
P907	Concrete	Exposed	NO	NO	Y	Y	1,1-1/2,2	0, Note 9	0	28ga, Note 6,11	Note 10	Note 11
J701	Concrete	Exposed	Y	NO	NO	Y	2	1	0	N/A	N/A	N/A
P908	Steel Deck	Exposed	Y	NO	Y	Y	1,1-1/2,2	0, Note 12	0	Note 6, 28ga	Note 14	Note 13

Notes:

- Max. 72" o.c. support spacing for 1 1/2-inch, 22-gauge steel deck.
Max. 48" o.c. support spacing for 9/16-inch, 28-gauge steel deck.
- Paper backed wire fabric.
- Max. 96" o.c. support spacing for 24-gauge steel deck.
Max. 66" o.c. support spacing for 26-gauge steel deck.
- Max. 60" o.c. support spacing for 24-gauge steel deck.
Max. 48" o.c. support spacing for 26-gauge steel deck.
- The Unrestrained Assembly Rating is equal to the Restrained Assembly Rating for 1 5/16-inch steel deck with clear spans £ 90-inch.
- When steel deck £ 1-inch is used, the Restrained Assembly Rating £ 1 1/2 hr.
- 12J4/W8 x 10 or W6 x 16.
- The Unrestrained Assembly Rating is equal to the Restrained Assembly Rating for 24-gauge steel deck with clear spans £ 78-inch.
- An Unrestrained Assembly Rating of 1 hr. is achieved for 1 5/16-inch, 24-gauge steel deck with clear spans £ 90-inch.
- W6 x 16, W8 x 10, W8 x 18, 12J4, 12K5, 14K3.
- For 2 hour Restrained Assembly Rating:
96" o.c. support spacing for 22-gauge 1 1/2-inch or 3-inch fluted steel deck.
96" o.c. support spacing for 24-gauge steel deck.
72" o.c. support spacing for 26-gauge steel deck.
For 1 hour Restrained Assembly Rating:
108" o.c. support spacing for 22-gauge 1 1/2-inch or 3-inch fluted steel deck.
108" o.c. support spacing for 24-gauge steel deck.
72" o.c. support spacing for 26-gauge steel deck.
- For 2 hour Unrestrained Assembly Rating: 1 5/16-inch steel deck w/clear span £ 91-inch supported by W6 x 18 or W8 x 18.
- For 1 1/2 hour Unrestrained Assembly Rating: 1/5/16-inch steel deck w/clear span £ 91-inch supported by 12J4.
- Max. 96" o.c. support spacing for 24-gauge steel deck.
Max. 72" o.c. support spacing for 26-gauge steel deck.
Max. 48" o.c. support spacing for 28-gauge steel deck.
- W6 x 16, W8 x 10, W8 x 18, 12J4, 14K4, 16K3.
- The Unrestrained Assembly Rating is equal to the Restrained Assembly Rating for clear spans £ 92-inch.
- Max. 96" o.c. support spacing for 24-gauge steel deck.
Max. 72" o.c. support spacing for 26-gauge steel deck.
- See U.L. Fire Resistance Directory for classified steel floor and form units that permit greater spans.
- The Unrestrained Assembly Rating is equal to the Restrained Assembly Rating or the Unrestrained Beam Rating, whichever is less for clear spans £ 92-inch.
- When 28-gauge steel deck is used, the Restrained Assembly Rating £ 1 1/2 hr.
- When 9/16-inch steel deck is used, the Restrained Assembly Rating £ 1 1/2 hr.
- 8H3/W6 x 16, W8 x 10 or W8 x 18.
- Max. 96" o.c. support spacing for 1 1/2-inch, 22- gauge steel deck.
Max. 96" o.c. support spacing for 1 5/16-inch, 24- gauge steel deck.
Max. 72" o.c. support spacing for 15/16-inch, 26-gauge steel deck.
Max. 48" o.c. support spacing for 9/16-inch, 28-gauge steel deck.
- The Unrestrained Assembly Rating is equal to the Restrained Assembly Rating for 1 5/16-inch, 24 gauge steel deck with clear spans £ 90-inch.
- Max. 96" o.c. support spacing for 1 1/2-inch, 22-gauge steel deck.
Max. 72" o.c. support spacing for 1 5/16-inch, 24-gauge steel deck.
Max. 48" o.c. support spacing for 9/16-inch, 28-gauge steel deck.