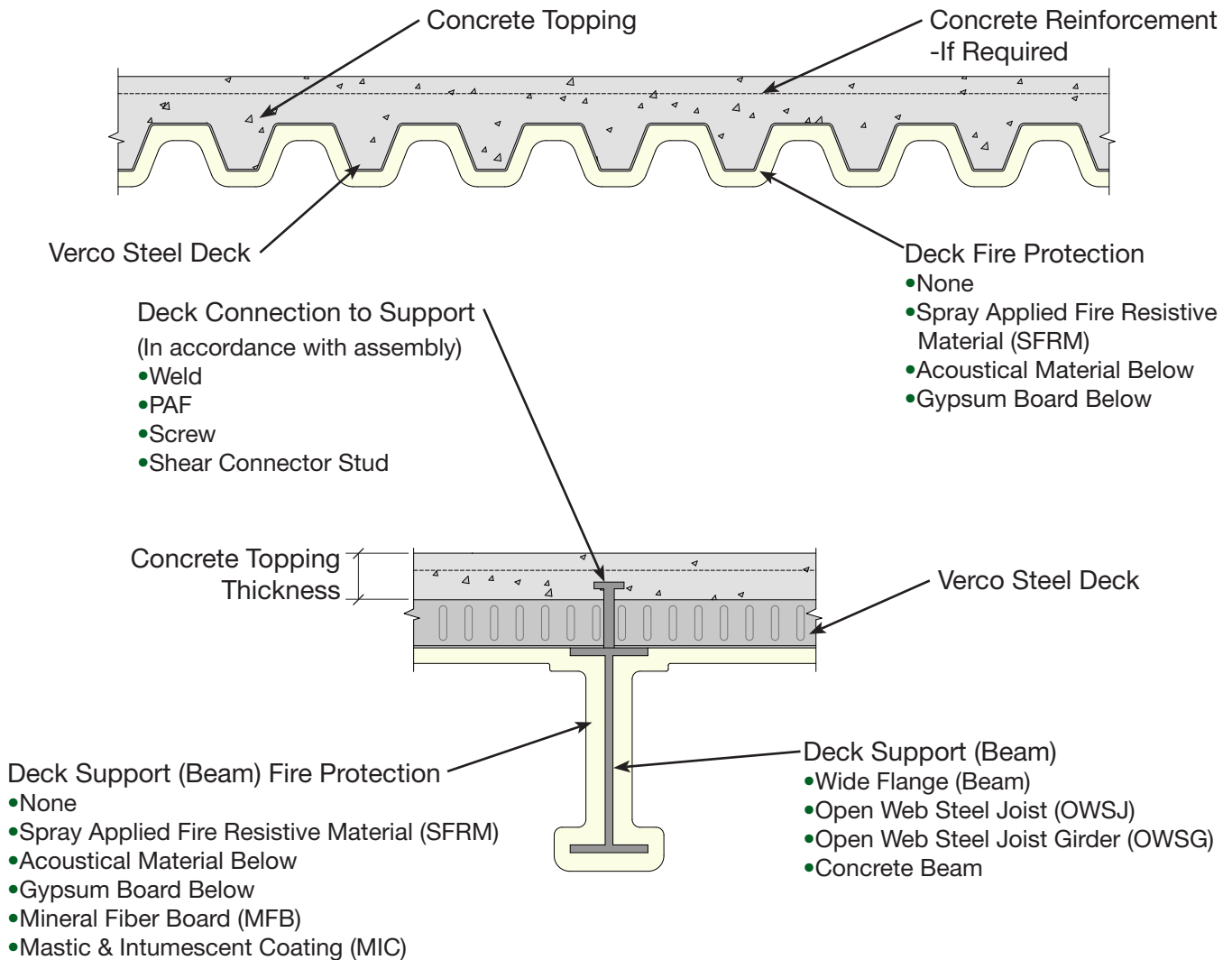


# VERCO® COMPOSITE & NON-COMPOSITE DECK UL FIRE RATED ASSEMBLIES

## USE UL RECOGNIZED FORMLOK® AND VERCOR® DECKS FOR YOUR FIRE RATED ASSEMBLIES WITH STRUCTURAL CONCRETE FILL

- Vercor FormLok composite and Vercor non-composite slabs may be used to meet hourly fire ratings. The type and thickness of concrete specified will generally determine whether fireproofing will be required on the underside of the FormLok or Vercor deck.



## REPRESENTATIVE FIRE RATED ASSEMBLY

The table on the following pages lists the UL fire rated assemblies that include Vercor FormLok and Vercor decks profiles. This summary table is provided to assist in identification of assemblies to meet specific project requirements. Refer to the particular UL assembly for full details of construction including, specific information about concrete slab, framing, type of fire protection, deck types and span limitations. Use the links in the table or the UL Online Certification Directory at [www.ul.com](http://www.ul.com) to see the assembly listings.

# VERCO® COMPOSITE & NON-COMPOSITE DECK UL FIRE RATED ASSEMBLIES



UL Design Number	Restrained Assembly Rating <sup>1</sup> (hr.)	Concrete Topping		Deck Type <sup>2, 4, 5, 6, 7</sup>										
		Thickness (in.)	Type (pcf)	B	BR	N24	N3	W2	W3	2.0D	3.5D	SV	DV	
<a href="#">D216</a>	1, 1½, 2, 3	2½-3½ <sup>8</sup>	147-153 NW 107-113 LW	✓	✓	✓	✓	✓	✓					
<a href="#">D219</a>	1, 1½, 2, 3	2½-3½ <sup>8</sup>	147-153 NW 107-113 LW	✓	✓	✓	✓	✓	✓					
	1	3½	147-153 NW	✓	✓	✓	✓	✓	✓					
	1½	4	147-153 NW	✓	✓	✓	✓	✓	✓					
	2	4½	147-153 NW	✓	✓	✓	✓	✓	✓					
	3	5¼	147-153 NW	✓	✓	✓	✓	✓	✓					
	¾, 1	2½	107-113 LW	✓	✓	✓	✓	✓	✓					
<a href="#">D303</a>	1	2 <sup>5</sup> / <sub>8</sub>	107-120 LW	✓	✓	✓	✓	✓	✓					
	1½	3	107-113 LW	✓	✓	✓	✓	✓	✓					
	2	3¼	107-113 LW	✓	✓	✓	✓	✓	✓					
	2	3¼	107-116 LW			✓	✓	✓	✓					
	2	3½	114-120 LW	✓	✓	✓	✓	✓	✓					
	3	4 <sup>3</sup> / <sub>16</sub>	107-113 LW	✓	✓	✓	✓	✓	✓					
	3	4 <sup>7</sup> / <sub>16</sub>	114-120 LW	✓	✓	✓	✓	✓	✓					
<a href="#">D502</a>	1½, 2	2½	147-153 NW	✓	✓	✓	✓	✓	✓					
<a href="#">D703</a>	1, 1½, 2, 3	2½	142-148 NW 105 LW	✓	✓	✓	✓	✓	✓					
<a href="#">D708</a> <a href="#">D768</a>	3	2½	145-151 NW 109-115 LW	✓	✓	✓	✓	✓	✓					
<a href="#">D716</a>	2	2½	139 NW 109-115 LW	✓	✓	✓	✓	✓	✓					
<a href="#">D722</a>	1, 1½, 2	2½	142-148 NW 112 LW	✓	✓	✓	✓	✓	✓					
<a href="#">D739</a>	1, 1½, 2, 3, 4	2½	142-148 NW 102-120 LW 110 LW with OWSJ	✓	✓	✓	✓	✓	✓					
<a href="#">D742</a> <a href="#">D771</a>	2 3	2½ 3½	147-153 NW	✓	✓	✓	✓	✓	✓					
<a href="#">D743</a>	1, 1½, 2, 3	2	147-153 NW 107-113 LW					✓	✓					
<a href="#">D750</a>	2	2½	142-148 NW 105-111 LW	✓	✓	✓	✓	✓	✓					
<a href="#">D754</a>	3, 4	3¼	115-121 LW	✓	✓	✓	✓	✓	✓					

Type of Protection <sup>3</sup>		Minimum Beam or Joist	Minimum Concrete Reinforcement	Unrestrained Assembly Rating <sup>1</sup> (hr)	UL Design Number
Deck	Beam				
Acoustical Material below	Acoustical Material below	Beams: W8x15, OWSJ: 10J3, 12K4 or LH Series, OWSG: 20 in. deep at 13 plf	6x6-W1.4xW1.4, or Synthetic or Steel Fibers	1, 1½, 2, 3	<a href="#">D216</a>
Acoustical Material below	Acoustical Material below	Beams: W8x15, OWSJ: 10J3, 12K4 or LH Series, OWSG: 20 in. deep at 13 plf	6x6-W1.4xW1.4	1, 1½, 2, 3	<a href="#">D219</a>
Mineral Fiber Board	Mineral Fiber Board	Beams: W8x28	6x6-10/10 SWG	1, 1½, 2	<a href="#">D303</a>
Gypsum Board below	Gypsum Board below	Beams: W8x28, OWSJ: 12K1 or LH Series, OWSG: 20 in. deep at 13 plf	6x6-W1.4xW1.4	1½, 2	<a href="#">D502</a>
SFRM	SFRM	Beams: W8x20	6x6-W2.9xW2.9	1, 1½	<a href="#">D703</a>
SFRM	SFRM	Beams: W10x17	6x6-W2.9xW2.9	1½, 3	<a href="#">D708</a> <a href="#">D768</a>
SFRM	SFRM	Beams: W8x28	6x6-10/10 SWG	1½, 2	<a href="#">D716</a>
SFRM	SFRM	Beams: W6x12	6x6-W1.4xW1.4	1, 1½, 2	<a href="#">D722</a>
SFRM	SFRM	Beams: W8x28, W6x12, OWSJ, Concrete Beams	Beams: 6x6-W1.4xW1.4 Joists: 6x6-W2.9xW2.9 or Synthetic Fibers	1, 1½, 2, 3, 4	<a href="#">D739</a>
SFRM	SFRM	Beams: W8x24	6x6-W1.4xW1.4	½	<a href="#">D742</a> <a href="#">D771</a>
SFRM	SFRM	Beams: W8x20, W8x28, W8x15, Concrete Beams	6x6-W1.4xW1.4	1, 1½, 2, 3	<a href="#">D743</a>
SFRM	SFRM	Beams: W8x21	6x6-W1.4xW1.4	1½, 2	<a href="#">D750</a>
SFRM	SFRM	Beams: W8x28	6x6-W1.4xW1.4	1½, 2	<a href="#">D754</a>

# VERCO® COMPOSITE & NON-COMPOSITE DECK UL FIRE RATED ASSEMBLIES



UL Design Number	Restrained Assembly Rating <sup>1</sup> (hr.)	Concrete Topping		Deck Type <sup>2, 4, 5, 6, 7</sup>										UL Design Number			
		Thickness (in.)	Type (pcf)	B	BR	N24	N3	W2	W3	2.0D	3.5D	SV	DV				
<a href="#">D755</a>	2, 3	2½	147-153 NW 109-115 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D759</a>	1, 1½, 2, 3	2½	147-153 NW 109-115 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D760</a>	2, 3, 4	2½	144-150 NW 107-113 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D764</a>	2	2½	147-153 NW 117 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D767</a> <a href="#">D796</a>	1, 1½, 2, 3, 4	2½	142-148 NW 102-120 LW 110 LW with OWSJ	✓	✓	✓	✓	✓	✓								
<a href="#">D775</a>	2	2½	142-148 NW 105-111 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D777</a>	3, 4	¾	115-121 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D779</a>	1, 1½, 2, 3, 4	2½	142-148 NW 102-120 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D780</a>	1, 1½, 2, 3	2½	147-153 NW 107-113 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D782</a>	1, 1½, 2, 3, 4	4½ ¾	142-148 NW 115-121 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D785</a>	2, 3, 4	2½	142-148 NW 102-120 LW	✓	✓				✓	✓							
<a href="#">D786</a>	2	2½	142-148 NW 102-120 LW	✓	✓				✓	✓							
<a href="#">D788</a>	1, 1½, 2, 3, 4	2½	NW, LW	✓	✓	✓	✓	✓	✓								
<a href="#">D794</a>	2	2½	147-153 NW 117 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D795</a>	1, 1½, 2, 3	2½	147-153 NW 109-115 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D798</a>	1, 1½, 2, 3, 4	2½	142-148 NW 107-113 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D799</a>	1, 1½, 2, 3	2½	150-153 NW 112-115 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D816</a>	3	2½	147-153 NW 107-113 LW	✓	✓	✓	✓	✓	✓								
<a href="#">D825</a>	2	2½	147-153 NW 105-111 LW	✓	✓	✓	✓	✓	✓								

Type of Protection <sup>3</sup>		Minimum Beam or Joist	Minimum Concrete Reinforcement	Unrestrained Assembly Rating <sup>1</sup> (hr)	UL Design Number
Deck	Beam				
SFRM	SFRM	Beams: W8x24, W8x28, OWSJ: 10H3, 12J6	6x6-W1.4xW1.4 only when electrical inserts are used	1, 1½, 2, 3	<a href="#">D755</a>
SFRM	SFRM	Beams: W8x28, OWSJ or OWSG	Beams:6x6-W1.4xW1.4 Joists: 6x6-W2.9xW2.9	1, 1½, 2, 3	<a href="#">D759</a>
SFRM	SFRM	Beams: W8x28, OWSJ or OWSG	6x6-W1.4xW1.4	1, 1½, 2, 3, 4	<a href="#">D760</a>
SFRM	SFRM	Beams: W8x28, OWSJ or OWSG	6x6-6/6 SWG	2	<a href="#">D764</a>
SFRM	SFRM	Beams: W8x28, W6x12, OWSJ, Concrete Beams	Beams:6x6-W1.4xW1.4 Joists:6x6-W2.9xW2.9	1, 1½, 2, 3, 4	<a href="#">D767</a> <a href="#">D796</a>
SFRM	SFRM	Beams: W8x21	6x6-W1.4xW1.4	1½, 2	<a href="#">D775</a>
SFRM	SFRM	Beams: W8x28	6x6-W1.4xW1.4	1½, 2	<a href="#">D777</a>
SFRM	SFRM	Beams: W8x28, OWSJ: 8K1	6x6-W1.4xW1.4 or Synthetic Fibers	1, 1½, 2, 3, 4	<a href="#">D779</a>
SFRM	SFRM	Beams: W8x28, OWSJ: 10K1, 12K3, 16K2	6x6-W2.0xW2.0	1, 1½, 2, 3	<a href="#">D780</a>
SFRM	SFRM	Beams: W8x28, OWSJ: Minimum 10" depth.	6x6-W1.4xW1.4	1, 1½, 2, 3, 4	<a href="#">D782</a>
SFRM	MIC	Beams: W6x16	6x6-W1.4xW1.4	1, 1½, 2, 3	<a href="#">D785</a>
SFRM	MIC	Beams: W12x106	6x6-W1.4xW1.4	1, 1½	<a href="#">D786</a>
SFRM	SFRM	Beams: W8x28, OWSJ: 10K1	6x6-8/8 SWG	1, 1½, 2, 3, 4	<a href="#">D788</a>
SFRM	SFRM	Beams: W8x28, OWSJ or OWSG	6x6-6/6 SWG	2	<a href="#">D794</a>
SFRM	SFRM	Beams: W8x28, OWSJ	Beams:6x6-W1.4xW1.4 Joists:6x6-W2.9xW2.9	1, 1½, 2, 3	<a href="#">D795</a>
SFRM	SFRM	Beams: W8x28, OWSJ: 10K1	Beams:6x6-10/10 SWG Joists:6x6-W1.4xW1.4 or Synthetic Fibers	1, 1½, 2, 3, 4	<a href="#">D798</a>
SFRM	SFRM	Beams: W8x28, OWSJ: 10K1 or 10 in. deep at 4.8 plf	Beams:6x6-W1.4xW1.4 Joists:6x6-W2.9xW2.9	1, 1½, 2, 3	<a href="#">D799</a>
SFRM	SFRM	Beams: W10x17, W10x25	None	1½, 2	<a href="#">D816</a>
SFRM	SFRM	Beams: W8x17	6x6-W1.4xW1.4	1, 1½, 2	<a href="#">D825</a>

# VERCO® COMPOSITE & NON-COMPOSITE DECK UL FIRE RATED ASSEMBLIES



UL Design Number	Restrained Assembly Rating <sup>1</sup> (hr.)	Concrete Topping		Deck Type <sup>2, 4, 5, 6, 7</sup>									
		Thickness (in.)	Type (pcf)	B	BR	N24	N3	W2	W3	2.0D	3.5D	SV	DV
<a href="#">D826</a>	2	3¼	108-114 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D831</a>	2, 3	2½	148-154 NW 117-123 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D832</a>	1, 1½, 2, 3	2½	147-153 NW 109-115 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D833</a> <a href="#">D884</a>	2, 3	2½	147-153 NW 107-115 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D840</a> <a href="#">D888</a>	2	3¼	107-113 LW	✓	✓	✓	✓	✓	✓				
		3½	107-120 LW	✓	✓	✓	✓	✓	✓				
		3¼	107-116 LW			✓	✓	✓	✓				
<a href="#">D858</a> <a href="#">D891</a>	1, 1½, 2, 3, 4	2½	147-153 NW 108-115 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D859</a> <a href="#">D875</a>	1, 1½, 2, 3	2	142-148 NW 108-115 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D860</a>	2, 3, 4	3¼	115-121 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D867</a> <a href="#">D896</a>	3		144-150 NW 107-113 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D871</a>	1, 1½, 2, 3	2½	147-153 NW 108-115 LW					✓	✓				
<a href="#">D877</a>	2	2½	147-153 NW 105-111 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D878</a>	2	3¼	108-114 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D883</a>	1, 1½, 2, 3	2½	147-153 NW 109-115 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D898</a>	1, 1½, 2, 3	2½	147-153 NW 108-115 LW	✓	✓	✓	✓	✓	✓				
	1	3½	147-153 NW	✓	✓	✓	✓	✓	✓				
	1½	4	147-153 NW	✓	✓	✓	✓	✓	✓				
	2	4½	147-153 NW	✓	✓	✓	✓	✓	✓				
	3	5¼	147-153 NW	✓	✓	✓	✓	✓	✓				
<a href="#">D902</a>	1	2½	107-113 LW	✓	✓	✓	✓	✓	✓				
	1	2⅝	107-120 LW	✓	✓	✓	✓	✓	✓				
	1½	3	107-113 LW	✓	✓	✓	✓	✓	✓				
	2	3¼	107-113 LW	✓	✓	✓	✓	✓	✓				

D902 Continued on Next Page

Type of Protection <sup>3</sup>		Minimum Beam or Joist	Minimum Concrete Reinforcement	Unrestrained Assembly Rating <sup>1</sup> (hr)	UL Design Number
Deck	Beam				
SFRM	SFRM	Beams: W8x20	6x6-W1.4xW1.4	1, 1½, 2	<a href="#">D826</a>
SFRM	SFRM	Beams: W6x12, W8x28	6x6-W1.4xW1.4	1, 1½, 2	<a href="#">D831</a>
SFRM	SFRM	Beams: W8x28, OWSJ	6x6-W1.4xW1.4 only when electrical inserts used	1, 1½, 2, 3	<a href="#">D832</a>
SFRM	SFRM	Beams: W10x25	WWF Optional	2, 3	<a href="#">D833</a> <a href="#">D884</a>
None	SFRM	Beams: W8x28	6x6-10/10 SWG	1½	<a href="#">D840</a> <a href="#">D888</a>
SFRM	SFRM	Beams: W8x28, OWSJ, Concrete Beams	6x6-W1.4xW1.4	1, 1½, 2, 3, 4	<a href="#">D858</a>
		Beams: W10x25, Concrete Beams			<a href="#">D891</a>
SFRM	SFRM	Beams: W8x20	6x6-W1.4xW1.4	1, 1½, 2, 3	<a href="#">D859</a> <a href="#">D875</a>
SFRM	SFRM	Beams: W8x20, W8x28	6x6-W1.4xW1.4	1, 1½, 2	<a href="#">D860</a>
SFRM	SFRM	Beams: W8x18	6x6-6/6 SWG	1½, 2	<a href="#">D867</a> <a href="#">D896</a>
SFRM	SFRM	Beams: W8x21, Concrete Beams	6x6-W1.4xW1.4 or Synthetic Fibers	1, 1½, 2, 3	<a href="#">D871</a>
SFRM	SFRM	Beams: W8x17	6x6-W1.4xW1.4	1, 1½, 2	<a href="#">D877</a>
SFRM	SFRM	Beams: W8x20	6x6-W1.4xW1.4	1, 1½, 2	<a href="#">D878</a>
SFRM	SFRM	Beams: W8x24, W8x28	6x6-W1.4xW1.4 only when electrical inserts used	1, 1½, 2, 3	<a href="#">D883</a>
SFRM	SFRM	Beams: W8x21, Concrete Beams	6x6-W1.4xW1.4 or Synthetic Fibers	1, 1½, 2, 3	<a href="#">D898</a>
None	SFRM	Beams: W8x28, W8x24, W6x12, OWSJ: 8K1, 12K5	6x6-W1.4xW1.4 or Negative Reinforcement with Synthetic Fibers	1, 1½, 2, 3	<a href="#">D902</a>

D902 Continued on Next Page





UL Design Number	Restrained Assembly Rating <sup>1</sup> (hr.)	Concrete Topping		Deck Type <sup>2, 4, 5, 6, 7</sup>									
		Thickness (in.)	Type (pcf)	B	BR	N24	N3	W2	W3	2.0D	3.5D	SV	DV
D902 Continued from Previous Page													
D902	2	3¼	107-116 LW			✓	✓	✓	✓				
	2	3½	114-120 LW	✓	✓	✓	✓	✓	✓				
	3	4¾	107-113 LW	✓	✓	✓	✓	✓	✓				
	3	4¾	114-120 LW	✓	✓	✓	✓	✓	✓				
D904 D961	1	2	147 NW							✓			
	1½	2¾	147 NW							✓			
	2	3¼	147 NW							✓			
	3	4¾	147 NW							✓			
	2	3	130 SLW							✓			
	3	4	130 SLW							✓			
	1	2	112 LW							✓			
	2	2½	112 LW							✓			
D907	2	3¼	110 LW	✓	✓	✓	✓	✓	✓				
	2	3¼	102 LW	✓	✓			✓	✓				
D914	¾, 1	2½	110 LW	✓	✓	✓	✓	✓	✓				
D916 D922 D925 D927 D929 D931 D949 D957 D958	1	3½	147-153 NW	✓	✓	✓	✓	✓	✓				
	1½	4	147-153 NW	✓	✓	✓	✓	✓	✓				
	2	4½	147-153 NW	✓	✓	✓	✓	✓	✓				
	3	5¼	147-153 NW	✓	✓	✓	✓	✓	✓				
	¾ or 1	2½	107-113 LW	✓	✓	✓	✓	✓	✓				
	1	2⅝	107-120 LW	✓	✓	✓	✓	✓	✓				
	1½	3	107-113 LW	✓	✓	✓	✓	✓	✓				
	2	3¼	107-113 LW	✓	✓	✓	✓	✓	✓				
	2	3¼	107-116 LW			✓	✓	✓	✓				
	2	3½	114-120 LW	✓	✓	✓	✓	✓	✓				
D917 D928	3	4¾	107-113 LW	✓	✓	✓	✓	✓	✓				
	3	4¾	114-120 LW	✓	✓	✓	✓	✓	✓				
	1	2	147-153 NW							✓			
	1½	2¾	147-153 NW							✓			
	2	3¼	147-153 NW							✓			
D917 D928	3	4¾	147-153 NW							✓			
	2	3	130 SLW							✓			

D917, D928 Continued on Next Page

Type of Protection <sup>3</sup>		Minimum Beam or Joist	Minimum Concrete Reinforcement	Unrestrained Assembly Rating <sup>1</sup> (hr)	UL Design Number																																				
Deck	Beam																																								
D902 Continued from Previous Page																																									
None	SFRM	Beams: W8x28, W8x24, W6x12, Joist: 8K1, 12K5	6x6-W1.4xW1.4 or Negative Reinforcement with Synthetic Fibers	1, 1½, 2, 3	D902																																				
None	SFRM	Beams: W8x28, W10x29	6x6-6/6 SWG	¾, 1, 1½	D904 D961																																				
						None	SFRM	Beams: W8x17, W8x28	6x6-W1.4xW1.4	1, 2	D907																														
												None	SFRM	Beams: W8x17	6x6-W1.4xW1.4	1	D913																								
																		None	SFRM	Beams: W8x28	6x6-W1.4xW1.4	0	D914																		
																								None	SFRM	Beams: W8x28, OWSJ, OWSG	6x6-W1.4xW1.4	1, 1½, 2, 3	D916												
																														None	SFRM	Beams: W8x28, OWSJ, OWSG	6x6-10/10 SWG	3	D922						
																																				None	SFRM	Beams: W8x28, W12x16, OWSJ: 8K1	6x6-10/10 SWG, Optional: Negative Reinforcing with Synthetic Fibers	1, 1½, 2, 3	D925
None	MFB	Beams: W8x28	6x6-10/10 SWG	1, 1½, 2	D929																																				
						None	MIC	Beams: W8x28	6x6-10/10 SWG	1	D931																														
												None	SFRM	Beams: W8x28, OWSJ: 10K1	6x6-10/10 SWG	1, 1½, 2, 3	D949																								
																		None	SFRM	Beams: W12x14, W8x28, W8x24, W6x12, OWSJ	6x6-10/10 SWG	1, 1½, 2, 3	D957																		
																								None	SFRM	Beams: W8x28, OWSJ, OWSG	6x6-10/10 SWG	3	D958												
																														None	SFRM	Beams: W10x29	6x6-6/6 SWG	¾	D917						
																																				None	SFRM	Beams: W10x29	6x6-6/6 SWG	¾, 1	D928

D917, D928 Continued on Next Page

UL Design Number	Restrained Assembly Rating <sup>1</sup> (hr.)	Concrete Topping		Deck Type <sup>2, 4, 5, 6, 7</sup>									
		Thickness (in.)	Type (pcf)	B	BR	N24	N3	W2	W3	2.0D	3.5D	SV	DV
D917, D928 Continued from Previous Page													
	3	4	130 SLW							✓			
D917 D928	1	2	107-113 LW							✓			
	2	2½	107-113 LW							✓			
	3	3¼	107-113 LW							✓			
D919 D968	1	3½	147-153 NW	✓	✓	✓	✓	✓	✓				
	1½	4	147-153 NW	✓	✓	✓	✓	✓	✓				
	2	4½	147-153 NW	✓	✓	✓	✓	✓	✓				
	3	5¼	147-153 NW	✓	✓	✓	✓	✓	✓				
	1	2½	107-113 LW	✓	✓	✓	✓	✓	✓				
	1½	3	107-113 LW	✓	✓	✓	✓	✓	✓				
	2	3¼	107-116 LW	✓	✓	✓	✓	✓	✓				
	2	3½	114-120 LW	✓	✓	✓	✓	✓	✓				
	3	4¾	107-113 LW	✓	✓	✓	✓	✓	✓				
	3	4¾	114-120 LW	✓	✓	✓	✓	✓	✓				
D920	2	3¼	110-120 LW							✓	✓		
D923	1	3½	147-153 NW	✓	✓	✓	✓	✓	✓				
	1½	4	147-153 NW	✓	✓	✓	✓	✓	✓				
	2	4½	147-153 NW	✓	✓	✓	✓	✓	✓				
	3	5¼	147-153 NW	✓	✓	✓	✓	✓	✓				
	¾ or 1	2½	107-113 LW	✓	✓	✓	✓	✓	✓				
	1	2⅝	107-120 LW	✓	✓	✓	✓	✓	✓				
	1½	3	107-113 LW	✓	✓	✓	✓	✓	✓				
	2	3¼	107-113 LW	✓	✓	✓	✓	✓	✓				
	2	3¼	107-116 LW			✓	✓	✓	✓				
	2	3½	107-120 LW	✓	✓	✓	✓	✓	✓				
D924 D969	3	4¾	107-113 LW	✓	✓	✓	✓	✓	✓				
	3	4¾	107-120 LW	✓	✓	✓	✓	✓	✓				
	2	4⅞	142-148 NW <sup>9</sup>	✓	✓					✓	✓		
	3	5	142-148 NW <sup>9</sup>	✓	✓					✓	✓		
	2	4¾	142-148 NW <sup>10</sup>	✓	✓					✓	✓		
	3	5¾	142-148 NW <sup>10</sup>	✓	✓					✓	✓		
	2	3⅞	105-111 LW	✓	✓					✓	✓		
	3	4	105-111 LW	✓	✓					✓	✓		

Type of Protection <sup>3</sup>		Minimum Beam or Joist	Minimum Concrete Reinforcement	Unrestrained Assembly Rating <sup>1</sup> (hr)	UL Design Number
Deck	Beam				
D917, D928 Continued from Previous Page					
None	SFRM	Beams: W10x29	6x6-6/6 SWG	¾	D917
				¾, 1	D928
None	SFRM	Beams: W8x28	6x6-W1.4xW1.4	1½	D919 D968
None	SFRM	Beams: W8x28	6x6-W1.4xW1.4	1½	D920
None	SFRM	Beams: W8x28	6x6-10/10 SWG	1½	D923
None	SFRM	Beams: W8x28	Negative Reinforcing and Synthetic Fibers	1½	D924
				1½	D969

# VERCO® COMPOSITE & NON-COMPOSITE DECK UL FIRE RATED ASSEMBLIES



UL Design Number	Restrained Assembly Rating <sup>1</sup> (hr.)	Concrete Topping		Deck Type <sup>2, 4, 5, 6, 7</sup>									
		Thickness (in.)	Type (pcf)	B	BR	N24	N3	W2	W3	2.0D	3.5D	SV	DV
<a href="#">D947</a> <a href="#">D964</a> <a href="#">D984</a>	1½	2	147-153 NW										✓
	2	2¼	147-153 NW										✓
	3	3¾	147-153 NW										✓
	1½	2	107-113 LW										✓
	2	2	107-113 LW										✓
	3	2¼	107-113 LW										✓
<a href="#">D966</a>	2	3¼	102 LW	✓	✓			✓	✓				
<a href="#">D967</a>	¾, 1	2½	110 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D973</a>	2	3¾	142-148 NW					✓	✓				
<a href="#">D974</a>	1, 1½, 2, 3	4½	114-120 NW	✓	✓	✓	✓	✓	✓				
<a href="#">D976</a>	1, 1½, 2	3½	111-117 NW	✓	✓	✓	✓	✓	✓				
<a href="#">D977</a>	1, 1½, 2	3½	106.5-112.5 LW	✓	✓	✓	✓	✓	✓				
<a href="#">D978</a> <a href="#">D985</a>	1	3½	147-153 NW	✓	✓	+	+	✓	✓				
	1½	4	147-153 NW	✓	✓	+	+	✓	✓				
	2	4½	147-153 NW	✓	✓	+	+	✓	✓				
	3	5¼	147-153 NW	✓	✓	+	+	✓	✓				
	¾ or 1	2½	107-113 LW	✓	✓	+	+	✓	✓				
	1	2 <sup>5</sup> / <sub>8</sub>	107-120 LW	✓	✓	+	+	✓	✓				
	1½	3	107-113 LW	✓	✓	+	+	✓	✓				
	2	3¼	107-113 LW	✓	✓	+	+	✓	✓				
	2	3¼	107-116 LW			+	+	✓	✓				
	2	3½	114-120 LW	✓	✓	+	+	✓	✓				
<a href="#">D981</a>	3	4 <sup>3</sup> / <sub>16</sub>	107-113 LW	✓	✓	+	+	✓	✓				
	3	4 <sup>7</sup> / <sub>16</sub>	114-120 LW	✓	✓	+	+	✓	✓				
	2	4½	147-153 NW	✓	✓			✓	✓				
	2	3¼	107-113 LW	✓	✓			✓	✓				
<a href="#">D996</a>	2	3¼	107-116 LW					✓	✓				
	2	3½	114-120 LW	✓	✓			✓	✓				
	2	3½	114-120 LW	✓	✓			✓	✓				
<a href="#">D996</a>	2	3¾	142-148 NW					✓	✓				

+ N24 and N3 Decks are not permitted in UL Design D978

Type of Protection <sup>3</sup>		Minimum Beam or Joist	Minimum Concrete Reinforcement	Unrestrained Assembly Rating <sup>1</sup> (hr)	UL Design Number
Deck	Beam				
None	SFRM	Beams: W8x28, W10x29	6x6-W1.4xW1.4	¾, 1½	<a href="#">D947</a> <a href="#">D964</a> <a href="#">D984</a>
None	SFRM	Beams: W8x17	6x6-W1.4xW1.4	1	<a href="#">D966</a>
None	SFRM	Beams: W8x28	6x6-W1.4xW1.4	0	<a href="#">D967</a>
None	MIC or SFRM	Beams: W8x28	Fiber Reinforcement	2	<a href="#">D973</a>
None	MIC or SFRM	Beams: W8x28, OWSJ	6x6-10/10 SWG, Fiber Reinforcement and Concrete Additive	1½	<a href="#">D974</a>
None	MIC or SFRM	Beams: W8x28, OWSJ	6x6-8/8 SWG, Fiber Reinforcement and Concrete Additive	1, 1½, 2	<a href="#">D976</a>
None	MIC or SFRM	Beams: W8x28, OWSJ	6x6-8/8 SWG, Fiber Reinforcement and Concrete Additive	1, 1½, 2	<a href="#">D977</a>
None	MIC	Beams: W6x16	6x6-W1.4xW1.4	1, 1½, 2, 3	<a href="#">D978</a>
None	SFRM	Beams: W8x28, OWSJ: 10K1	6x6-10/10 SWG Optional Negative Reinforcing and Synthetic Fibers	1, 1½, 2, 3	<a href="#">D985</a>
None	MIC	Beams: W6x12	6x6-W1.4xW1.4		<a href="#">D981</a>
None	MIC or SFRM	Beams: W8x28	Fiber Reinforcement	2	<a href="#">D996</a>

# VERCO® COMPOSITE & NON-COMPOSITE DECK UL FIRE RATED ASSEMBLIES



UL Design Number	Restrained Assembly Rating <sup>1</sup> (hr.)	Concrete Topping		Deck Type <sup>2, 4, 5, 6, 7</sup>										
		Thickness (in.)	Type (pcf)	B	BR	N24	N3	W2	W3	2.0D	3.5D	SV	DV	
<a href="#">E701</a>	1, 1½, 2, 3	2½	147-153 NW 109-115 LW	✓	✓	✓	✓	✓	✓					
<a href="#">E702</a>	1, 1½, 2, 3, 4	2½	147-153 NW 108-115 LW	✓	✓	✓	✓	✓	✓					
<a href="#">E703</a>	2, 3	2½	142-148 NW 102-120 LW	✓	✓			✓	✓					
<a href="#">E704</a>	2, 3, 4	2½	142-148 NW 102-120 LW	✓	✓			✓	✓					
<a href="#">G213</a>	1½, 2, 3	2½	152 NW	✓	✓			✓	✓			✓	✓	
<a href="#">G222</a>	2	2½	144-150 NW	✓	✓			✓	✓			✓	✓	
<a href="#">G227</a>	2	2½	147-153 NW	✓	✓			✓	✓			✓	✓	
<a href="#">G229</a>	1½, 2	2½	147-153 NW	✓	✓			✓	✓			✓	✓	
	3	¾	147-153 NW	✓	✓			✓	✓			✓	✓	
<a href="#">G236</a>	1½, 2	2½	147-153 NW	✓	✓			✓	✓			✓	✓	
<a href="#">G243</a>	1½, 2	2½	144-150 NW	✓	✓			✓	✓			✓	✓	
<a href="#">G547</a>	2	2½	149-155 NW	✓	✓			✓	✓			✓	✓	
	3	3	149-155 NW	✓	✓			✓	✓			✓	✓	
<a href="#">G561</a>	1, 1½, 2, 3	2½	147-153 NW 108-120 LW	✓	✓			✓	✓				✓	
<a href="#">G710</a>	1, 1½, 2, 3	¾ <sup>11</sup>	150 NW 117 LW	✓	✓							✓	✓	
<a href="#">N789</a>	1, 1½, 2, 3, 4	2½	142-148 NW 104-120 LW	✓	✓			✓	✓			✓	✓	

Type of Protection <sup>3</sup>		Minimum Beam or Joist	Minimum Concrete Reinforcement	Unrestrained Assembly Rating <sup>1</sup> (hr)	UL Design Number
Deck	Beam				
SFRM	SFRM	Beams: W8x28, Concrete Beams	6x6-W1.4xW1.4 only when electrical inserts used	1, 1½, 2, 3	<a href="#">E701</a>
SFRM	SFRM	Beams: W8x28, Concrete Beams	6x6-W1.4xW1.4	1, 1½, 2, 3, 4	<a href="#">E702</a>
SFRM	MIC	Beams: W6x16	6x6-W1.4xW1.4	1, 1½, 2	<a href="#">E703</a>
SFRM	MIC	Beams: W6x16	6x6-W1.4xW1.4	1, 1½, 2, 3	<a href="#">E704</a>
Acoustical Material below	Acoustical Material below	Beams: W6x9, W8x24, OWSJ or OWSG: 10 in. deep at 4.9 plf	6x6-W1.4xW1.4	1½, 2, 3	<a href="#">G213</a>
Gypsum Board below	Gypsum Board below	Beams: W6x9, W8x24, OWSJ or OWSG: 10 in. deep at 4.9 plf	6x6-W1.4xW1.4	2	<a href="#">G222</a>
Acoustical Material below	Acoustical Material below	Beams: W6x9, OWSJ or OWSG: 10 in. deep at 4.9 plf	6x6-W1.4xW1.4	2	<a href="#">G227</a>
Acoustical Material below	Acoustical Material below	Beams: W8x24, OWSJ or OWSG: 8 in. deep	6x6-W1.4xW1.4	1½, 2, 3	<a href="#">G229</a>
Acoustical Material below	Acoustical Material below	Beams: W6x9, OWSJ or OWSG: 10 in. deep at 4.9 plf	6x6-W1.4xW1.4	1½, 2	<a href="#">G236</a>
Acoustical Material below	Acoustical Material below	Beams: W6x9, OWSJ or OWSG: 10 in. deep at 4.9 plf	6x6-W1.4xW1.4	1½, 2	<a href="#">G243</a>
Gypsum Board below	Gypsum Board below	Beams: W10x21, OWSJ or OWSG: 8K1, 10K1	6x6-W1.4xW1.4	2, 3	<a href="#">G547</a>
Gypsum Board below	Gypsum Board below	Beams: W6x9, W8x24, OWSJ or OWSG: 10 in. deep at 4.9 plf	6x6-W1.4xW1.4 or Synthetic or Steel Fibers	1, 1½, 2, 3	<a href="#">G561</a>
SFRM	SFRM	OWSJ or OWSG: 8 in. deep at 4.9 plf	6x6-W2.1xW2.1	1, 1½, 2	<a href="#">G710</a>
None	SFRM	OWSJ or OWSG: 8K1	6x6-W1.4xW1.4	1, 1½, 2, 3, 4	<a href="#">N789</a>



# VERCO® COMPOSITE & NON-COMPOSITE DECK UL FIRE RATED ASSEMBLIES

## Notes:

1. Refer to the UL “Fire Resistance Directory” for complete assembly requirements.
2. “B” = PLB-36 and B-36 FormLok  
“BR” = BR-36 FormLok  
“N3” = PLN3-32 and N3-32 FormLok  
“N24” = PLN-24 and N-24 FormLok  
“W2” = PLW2-36 and W2-36 FormLok  
“W3” = PLW3-36 and W3-36 FormLok  
“SV” & “DV” = Shallow Vercor or Deep Vercor, respectively  
“2.0D” = 2.0D FormLok Dovetail Deck  
“3.5D” = 3.5D FormLok Dovetail Deck
3. “SFRM” = Spray-Applied Fire Resistive Materials  
“MFB” = Mineral Fiber Board  
“MIC” = Mastic and Intumescent Coating
4. Vercor steel decks in the assemblies listed above may be galvanized or painted, excluding assemblies D904, D917, D928, D947, D961, D964, and D984 which shall be galvanized only. Painted deck is bare (un-galvanized) steel deck with UL recognized Vercor gray primer paint on the bottom side only.
5. Galvanized decks with UL recognized Vercor gray primer paint on the bottom side only are approved for use in limited fire-rated systems. Refer to specific UL assemblies for complete information.
6. Cellular versions of the Vercor steel decks in the assemblies listed above may be used, excluding assemblies D742, D750, D754, D760, D771, D775, D777, D779, D780, D782, D798, D904, D917, D924, D928, D947, D961, D964, D969, D973, D981, D984, D996, E707 and G710 which shall be non-cellular decks.
7. Cellular acoustical versions of the Vercor steel decks may be used in all listed D9xx assemblies except D904, D917, D924, D928, D947, D961, D964, D969, D973, D981, D984, D996, and all listed Gxx assemblies except G710.
8. Topping thickness varies based on selected acoustical material.
9. Carbonate Aggregate Normal Weight Concrete
10. Siliceous Aggregate Normal Weight Concrete
11. For 1 hr rating, concrete topping thickness may be reduced to 2 1/2 in. when composite or non-composite joist are used. For 1 1/2 or 2 hr ratings, concrete topping thickness may be reduced to 2 1/2 in. when non-composite joist are used.

NOTICE: Design defects that could cause injury or death may result from relying on the information in this document without independent verification by a qualified professional. The information in this document is provided “AS IS”. Nucor Corporation and its affiliates expressly disclaim: (i) any and all representations, warranties and conditions and (ii) all liability arising out of or related to this document and the information in it.