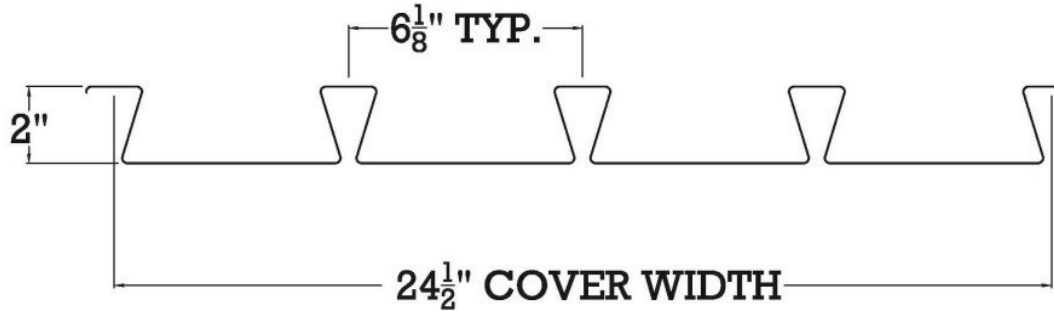


**MARCORE-S COMPOSITE DECK-20 GAUGE**  
(WITHOUT STIFFENER RIBS)



SECTION PROPERTIES OF STEEL DECK		Fy=50 ksi
THICKNESS	in.	0.0358
WEIGHT	psf	2.7
AREA	in <sup>2</sup>	0.80
MOMENT OF INERTIA (I <sub>p</sub> )	in <sup>4</sup> /ft	0.50
MOMENT OF INERTIA (I <sub>N</sub> )	in <sup>4</sup> /ft	0.33
SECTION MODULUS (S <sub>p</sub> )	in <sup>3</sup> /ft	0.33
SECTION MODULUS (S <sub>N</sub> )	in <sup>3</sup> /ft	0.32
MOMENT CAPACITY (M <sub>P</sub> )	lb-in/ft	9900
MOMENT CAPACITY (M <sub>N</sub> )	lb-in/ft	9600

**GENERAL INFORMATION**

CONCRETE THICKNESS	in	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
COMPOSITE DECK THICKNESS	in	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0
CONCRETE - 145 lb. NWC	psf	44.5	50.5	56.7	63.3	68.6	74.6	80.6	86.5	92.6
SECTION MODULUS (S <sub>p</sub> )	in <sup>3</sup> /ft	1.8	2.1	2.4	2.7	3.1	3.4	3.8	4.1	4.5
EFFECTIVE AREA (A)	in <sup>2</sup>	38.0	42.8	47.5	52.3	57.0	61.8	66.5	71.3	76.0
AVG/ MOMENT OF INERTIA (I <sub>av</sub> )	in <sup>4</sup> /ft	6.6	9.0	12.0	15.6	19.9	24.8	30.5	36.9	44.2
TEMP. REINFORC. W.W. F. 6"X6"		w1.4xw1.4	w1.4xw1.4	w1.4xw1.4	w2xw2	w2.9xw2.9	w2.9xw2.9	w2.9xw2.9	w2.9xw2.9	w2.9xw2.9

**SHORING RECOMMENDATION**

Span	Composite Slab Thickness, in.		4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0
	MARCORE-S										
Single	20 ga.	ft.	8.00	7.75	7.50	7.25	7.00	6.75	6.50	6.50	6.25
Double	20 ga.	ft.	8.75	8.50	8.00	7.75	7.50	7.25	7.00	6.75	6.75

\*Normal Weight Concrete 145 pcf

UNDERWRITERS LABORATORIES, INC. FIRE RATED FLOOR DESIGN ASSEMBLY LIVE LOAD LIMIT FOR COMPOSITE DECK SLABS IS 250 P

**MARCORE-S COMPOSITE DECK-20 GAUGE**  
(WITHOUT STIFFENER RIBS)

**SUPERIMPOSED LIVE LOAD ON COMPOSITE DECK, SINGLE SPAN**

**20 GAUGE**

COMPOSITE DECK THICKNESS	in	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
		MAXIMUM WORKING ALLOWABLE UNIFORM LIVE LOAD LL, LB/FT <sup>2</sup>									
SPAN											
9	ft.	321	400	400	400	400	400	400	400	400	400
10	ft.	221	328	400	400	400	400	400	400	400	400
11	ft.	154	233	388	400	400	400	400	400	400	400
12	ft.	108	167	284	331	400	400	400	400	400	400
13	ft.	75	120	210	246	330	400	400	400	400	400
14	ft.	50	86	156	184	250	326	360	392	400	400
15	ft.	32	60	115	137	190	251	306	333	360	386
16	ft.	18	40	84	101	144	193	251	284	307	330
17	ft.		24	59	73	108	148	195	244	264	284
18	ft.		12	40	51	79	112	151	196	228	245
19	ft.			25	34	57	84	116	153	196	212
20	ft.			12	19	38	61	87	118	154	184
21	ft.					23	42	64	90	120	154
22	ft.					11	26	45	67	92	121
23	ft.						13	29	47	68	93
24	ft.							15	31	49	69
25	ft.								17	32	50
26	ft.									18	33
27	ft.										18

\*Normal Weight Concrete 145 pcf

UNDERWRITERS LABORATORIES, INC. FIRE RATED FLOOR DESIGN ASSEMBLY LIVE LOAD LIMIT FOR COMPOSITE DECK SLABS IS 250 P

## MARCORE-S COMPOSITE DECK-20 GAUGE (WITHOUT STIFFENER RIBS)

SUPERIMPOSED LIVE LOAD ON COMPOSITE DECK, DOUBLE & TRIPLE SPAN								20 GAUGE	
COMPOSITE DECK THICKNESS	in	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
MAXIMUM WORKING ALLOWABLE UNIFORM LIVE LOAD LL, LB/FT <sup>2</sup>									
SPAN									
16	ft.	170	182	207	232	256	281	305	330
17	ft.	145	155	177	198	220	241	262	283
18	ft.	124	133	152	171	189	208	226	244
19	ft.	102	114	131	147	163	180	196	212
20	ft.	79	95	113	127	141	155	170	183
21	ft.	59	73	97	110	122	135	147	159
22	ft.	44	55	84	95	106	117	128	138
23	ft.	30	40	65	82	91	101	111	120
24	ft.	19	27	49	70	79	87	96	104
25	ft.	10	16	35	56	68	75	83	90
26	ft.			23	41	58	64	71	77
27	ft.			13	29	47	55	61	66
28	ft.				18	34	46	51	56
29	ft.					22	39	43	47
30	ft.					12	27	35	39
31	ft.						16	29	32
32	ft.							19	25
33	ft.								19
34	ft.								12

\*Normal Weight Concrete 145 pcf

UNDERWRITERS LABORATORIES, INC. FIRE RATED FLOOR DESIGN ASSEMBLY LIVE LOAD LIMIT FOR COMPOSITE DECK SLABS IS 250 PSF

## MARCORE-S COMPOSITE DECK-20 GAUGE (WITHOUT STIFFENER RIBS)

### TWO SPAN COMPOSITE DECK 20 GAUGE 2 SPAN CONDITION REINFORCING OVER INTERMEDIATE SUPPORT

	COMPOSITE SLAB THICKNESS														
	4.0"			4.5"			5.0"			5.5"			6.0"		
	25+40	25+50	5+100	25+40	25+50	5+100	25+40	25+50	5+100	25+40	25+50	5+100	25+40	25+50	5+100
SPAN															
13'-0"	#4@9	#4@8	#5@8	#4@10	#4@9	#5@10	#4@11	#4@9	#4@7	#4@11	#4@10	#4@8	#4@12	#4@11	#4@8
13'-6"	#4@8	#5@11	#5@7	#4@9	#4@8	#5@9	#4@10	#4@9	#5@10	#4@10	#4@9	#4@7	#4@11	#4@10	#4@8
14'-0"	#5@11	#5@10	#5@7	#4@8	#4@7	#5@8	#4@9	#4@8	#5@9	#4@10	#4@9	#5@11	#4@10	#4@9	#4@7
14'-6"	#5@10	#5@9	#4@4	#4@7	#5@10	#5@7	#4@8	#4@7	#5@9	#4@9	#4@8	#5@10	#4@9	#4@9	#5@11
15'-0"	#5@9	#5@8	#5@5	#5@11	#5@10	#5@7	#4@8	#5@11	#5@8	#4@8	#4@7	#5@9	#4@9	#4@8	#5@10
15'-6"	#5@9	#5@8	#5@5	#5@10	#5@9	#5@6	#4@7	#5@10	#5@7	#4@7	#4@7	#5@8	#4@8	#4@7	#5@9
16'-0"	#5@8	#5@7	#5@5	#5@9	#5@8	#5@6	#5@10	#5@9	#5@7	#4@7	#5@10	#5@8	#4@7	#4@7	#5@8
16'-6"	#5@7	#5@6	#5@4	#5@8	#5@7	#5@5	#5@9	#5@8	#5@6	#5@10	#5@9	#5@7	#4@7	#5@10	#5@8
17'-0"	#5@7	#5@6		#5@8	#5@7	#5@5	#5@9	#5@8	#5@6	#5@10	#5@9	#5@7	#5@11	#5@10	#5@7
17'-6"	#5@6	#5@5		#5@7	#5@7	#5@5	#5@8	#5@7	#5@5	#5@9	#5@8	#5@6	#5@10	#5@9	#5@7
18'-0"	#5@5			#5@7	#5@6	#5@4	#5@8	#5@7	#5@5	#5@8	#5@8	#5@5	#5@9	#5@8	#5@6
18'-6"				#5@6	#5@5		#5@7	#5@7	#5@5	#5@8	#5@7	#5@5	#5@9	#5@8	#5@6
19'-0"				#5@6	#5@5		#5@7	#5@6	#5@4	#5@7	#5@7	#5@5	#5@8	#5@7	#5@5
19'-6"				#5@5	#5@5		#5@6	#5@5		#5@7	#5@6	#5@5	#5@8	#5@7	#5@5
20'-0"				#5@5			#5@6	#5@5		#5@7	#5@6	#5@4	#5@7	#5@7	#5@5
20'-6"							#5@5	#5@5		#5@6	#5@5		#5@7	#5@6	#5@5
21'-0"							#5@5	#5@5		#5@6	#5@5		#5@6	#5@6	#5@4
21'-6"							#5@5			#5@5	#5@5		#5@6	#5@5	
22'-0"										#5@5	#5@5		#5@5	#5@5	
22'-6"										#5@5	#5@4		#5@5	#5@5	
23'-0"										#5@5			#5@5	#5@5	

	COMPOSITE SLAB THICKNESS											
	6.5"			7.0"			7.5"			8.0"		
	25+40	25+50	5+100	25+40	25+50	5+100	25+40	25+50	5+100	25+40	25+50	5+100
SPAN												
13'-0"	#4@13	#4@12	#4@9	#4@14	#4@13	#4@10	#4@14	#4@13	#4@10	#4@15	#4@14	#4@11
13'-6"	#4@12	#4@11	#4@8	#4@13	#4@12	#4@9	#4@13	#4@12	#4@10	#4@14	#4@13	#4@10
14'-0"	#4@11	#4@10	#4@8	#4@12	#4@11	#4@8	#4@12	#4@11	#4@9	#4@13	#4@12	#4@9
14'-6"	#4@10	#4@9	#4@7	#4@11	#4@10	#4@8	#4@11	#4@10	#4@8	#4@12	#4@11	#4@9
15'-0"	#4@9	#4@8	#5@11	#4@10	#4@9	#4@7	#4@10	#4@10	#4@7	#4@11	#4@10	#4@8
15'-6"	#4@9	#4@8	#5@10	#4@9	#4@8	#5@11	#4@10	#4@9	#4@7	#4@10	#4@9	#4@7
16'-0"	#4@8	#4@7	#5@9	#4@8	#4@8	#5@10	#4@9	#4@8	#5@11	#4@9	#4@9	#4@7
16'-6"	#4@7	#4@7	#5@9	#4@8	#4@7	#5@9	#4@8	#4@8	#5@10	#4@9	#4@8	#5@10
17'-0"	#4@7	#5@10	#5@8	#4@7	#4@7	#5@9	#4@8	#4@7	#5@9	#4@8	#4@7	#5@10
17'-6"	#5@11	#5@10	#5@7	#4@7	#5@10	#5@8	#4@7	#4@7	#5@9	#4@8	#4@7	#5@9
18'-0"	#5@10	#5@9	#5@7	#5@11	#5@10	#5@7	#4@7	#5@10	#5@8	#4@7	#5@11	#5@8
18'-6"	#5@9	#5@8	#5@7	#5@10	#5@9	#5@7	#5@11	#5@10	#5@7	#4@7	#5@10	#5@8
19'-0"	#5@9	#5@8	#5@6	#5@9	#5@8	#5@7	#5@10	#5@9	#5@7	#5@10	#5@10	#5@7
19'-6"	#5@8	#5@7	#5@5	#5@9	#5@8	#5@6	#5@9	#5@8	#5@7	#5@10	#5@9	#5@7
20'-0"	#5@8	#5@7	#5@5	#5@8	#5@7	#5@6	#5@9	#5@8	#5@6	#5@9	#5@8	#5@7
20'-6"	#5@7	#5@7	#5@5	#5@8	#5@7	#5@5	#5@8	#5@7	#5@6	#5@9	#5@8	#5@6
21'-0"	#5@7	#5@6	#5@5	#5@7	#5@7	#5@5	#5@8	#5@7	#5@5	#5@8	#5@7	#5@6
21'-6"	#5@7	#5@6	#5@5	#5@7	#5@6	#5@5	#5@7	#5@7	#5@5	#5@8	#5@7	#5@5
22'-0"	#5@6	#5@5	#5@4	#5@7	#5@6	#5@5	#5@7	#5@6	#5@5	#5@7	#5@7	#5@5
22'-6"	#5@6	#5@5		#5@6	#5@5		#5@7	#5@6	#5@5	#5@7	#5@6	#5@5
23'-0"	#5@5	#5@5		#5@6	#5@5		#5@7	#5@6	#5@4	#5@7	#5@6	#5@5
23'-6"	#5@5	#5@5		#5@5	#5@5		#5@6	#5@5		#5@6	#5@6	#5@5
24'-0"	#5@5	#5@5		#5@5	#5@5		#5@5	#5@5		#5@6	#5@5	
24'-6"	#5@5	#5@4		#5@5	#5@5		#5@5	#5@5		#5@5	#5@5	
25'-0"	#5@5			#5@5			#5@5	#5@5		#5@5	#5@5	

(\* ) allowable superimposed dead and live loads (lb/ft<sup>2</sup>)