

MARCORE-R (Roof Deck)

MARCORE-RA (Acoustical Roof Deck)

SECTION PROPERTIES							
GAUGE	t (in)	Wd (psf)	Ip (in ⁴)	In (in ⁴)	Sp (in ³)	Sn (in ³)	Fy (ksi)
22	0.0295	2.2	0.407	0.277	0.299	0.263	50
20	0.0358	2.6	0.493	0.361	0.0362	0.326	50
18	0.0474	3.4	0.649	0.478	0.473	0.429	40

Where:

- t = the thickness of cold-formed steel sheet
- Wd = deck self weight per foot of width
- Ip = Moment of inertia per foot of width of deck (positive bending)
- In = Moment of inertia per foot of width of deck (negative bending)
- Sp = Section modulus per foot of width of deck (positive bending)
- Sn = Section modulus per foot of width of deck (negative bending)
- Fy = Yield stress of steel deck

GAUGE	Va (lb/ft)		Fy (ksi)
	LRFD	ASD	
22	5525	3223	50
20	6704	3911	50
18	7101	4142	40

Where:

- Va = allowable shear value per foot of deck
- LRFD = Load and Resistance Factor Design
- ASD = Allowable Stress Design

****Note:** Reduce loads on pages 35 and 36 by approximately 5% for acoustical deck.
Contact Marlyn Steel Decks, Inc. for details.

MARCORE-R AND MARCORE-RA (see note page 34)**

MAXIMUM UNIFORM ALTERNATE LOAD (psf), LRFD			
SINGLE SPAN			
GAUGE	22	20	18
Fy	Fy = 50 ksi	Fy = 50 ksi	Fy = 40 ksi
SPAN (ft)			
4.0	499	603	634
4.5	394	477	501
5.0	319	386	406
5.5	241	292	336
6.0	186	225	282
6.5	146	177	234
7.0	117	142	187
7.5	95	115	152
8.0	78	95	125
8.5	65	79	104
9.0	55	67	88
9.5		57	75
10.0			64
10.5			
11.0			

MAXIMUM UNIFORM ALTERNATE LOAD (psf), LRFD			
DOUBLE SPAN			
GAUGE	22	20	18
Fy	Fy = 50 ksi	Fy = 50 ksi	Fy = 40 ksi
SPAN (ft)			
4.0	501	622	679
4.5	396	491	536
5.0	320	398	434
5.5	265	329	359
6.0	223	276	302
6.5	190	236	257
7.0	163	203	222
7.5	142	177	193
8.0	125	155	170
8.5	111	138	150
9.0	99	123	134
9.5	89	110	120
10.0	80	100	109
10.5	73	90	99
11.0	66	82	90
11.5	61	75	82
12.0	56	68	75
12.5		60	70
13.0			64
13.5			60
14.0			55

LOADS IN SHADED AREA ARE GOVERNED BY THE DEFLECTION.

See note "e" on page 40.

MARCORE-R AND MARCORE-RA (see note page 34)**

MAXIMUM UNIFORM ALTERNATE LOAD (psf), LRFD			
TRIPLE SPAN			
GAUGE	22	20	18
Fy	Fy = 50 ksi	Fy = 50 ksi	Fy = 40 ksi
SPAN (ft)			
4.0	556	691	754
4.5	440	546	596
5.0	356	442	483
5.5	294	366	399
6.0	247	307	335
6.5	211	262	286
7.0	182	226	246
7.5	158	197	215
8.0	139	173	189
8.5	123	149	167
9.0	104	126	149
9.5	88	107	134
10.0	76	92	121
10.5	65	79	104
11.0	57	69	91
11.5		60	79
12.0		53	70
12.5			62
13.0			55
13.5			
14.0			

LOADS IN SHADED AREA ARE GOVERNED BY THE DEFLECTION.

See note "e" on page 40.

MARCORE-R AND MARCORE-RA

ROOF NET UPLIFT (psf)			
5/8" DIAMETER PUDDLE WELD; WELD PATTERN IS 24.5/4			
GAUGE	22	20	18
Fy	Fy = 50 ksi	Fy = 50 ksi	Fy = 40 ksi
SPAN (ft)			
4.0	131	158	205
4.5	117	140	182
5.0	105	126	164
5.5	95	115	149
6.0	87	105	137
6.5	81	97	126
7.0	75	90	117
7.5	70	84	109
8.0	66	79	103
8.5	62	74	97
9.0	58	70	91
9.5	55	66	86
10.0	52	63	82
10.5	50	60	78
11.0	48	57	75
11.5	46	55	71
12.0	44	53	68
12.5	42	50	66
13.0	40	49	63
13.5	39	47	61
14.0	37	45	59

NOTES:

1. Loads given in this table are allowable working loads.
2. No 1.33 increase factor was taken into consideration in this table.

MARCORE-R AND MARCORE-RA

ROOF NET UPLIFT (psf)			
3/4" DIAMETER PUDDLE WELD; WELD PATTERN IS 24.5/4			
GAUGE	22	20	18
Fy	Fy = 50 ksi	Fy = 50 ksi	Fy = 40 ksi
SPAN (ft)			
4.0	160	192	249
4.5	142	171	221
5.0	128	154	199
5.5	116	140	181
6.0	106	128	166
6.5	98	118	153
7.0	91	110	142
7.5	85	102	133
8.0	80	96	124
8.5	75	90	117
9.0	71	85	111
9.5	67	81	105
10.0	64	77	100
10.5	61	73	95
11.0	58	70	91
11.5	56	67	87
12.0	53	64	83
12.5	51	61	80
13.0	49	59	77
13.5	47	57	74
14.0	45	55	72

NOTES:

1. Loads given in this table are allowable working loads.
2. No 1.33 increase factor was taken into consideration in this table.