Metal Dek Group®
a unit of CSI®

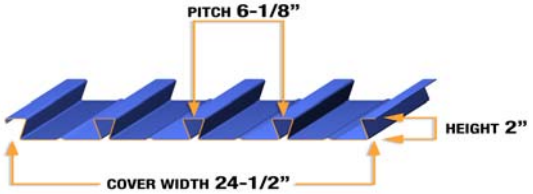
VERSA-DEK® LS ROOF (ASD)

2" high x 6-1/8" pitch x 24-1/2" wide

SECTION PROPERTIES

fy = 40 ksi

GAGE	Wd	I_D (DEFLECTION)	Sp	Sn	Rbe			Rbi		Va
					2"	3"	4"	3"	4"	
22	2.23	0.407	0.288	0.281	712	820	910	1271	1395	2949
20	2.71	0.495	0.361	0.347	1013	1162	1287	1811	1981	3562
18	3.58	0.658	0.483	0.484	1688	1923	2121	3020	3289	4676
16	4.51	0.832	0.614	0.617	2574	2915	3204	4613	5003	5844



ASD DESIGN		MAXIMUM SUPERIMPOSED UNIFORM ASD LOADS, psf											
		SINGLE SPAN				DOUBLE SPAN				TRIPLE SPAN			
Span	Load Combinations	GAGE											
		22	20	18	16	22	20	18	16	22	20	18	16
8'-6"	D+L (Strength)	62	77	103	131	55*	68*	95*	120*	66*	81*	113*	144*
	D+L (Deflection)	41	50	67	84	55	68	95	120	66	81	113	144
	L (Deflection)	29	35	47	59	55	68	95	120	55	66	88	112
9'-0"	D+L (Strength)	55	69	92	117	51*	62*	86*	110*	60*	75*	103*	132*
	D+L (Deflection)	34	42	56	70	51	62	86	110	60	75	103	132
	L (Deflection)	24	30	39	50	51	62	86	110	46	56	74	94
9'-6"	D+L (Strength)	49	61	82	104	46*	57*	79*	100*	55*	69*	95*	121*
	D+L (Deflection)	29	35	47	59	46	57	79	100	55	69	91	116
	L (Deflection)	21	25	34	42	46	57	79	100	39	48	63	80
10'-0"	D+L (Strength)	44	55	74	94	43*	53*	73*	92*	51*	63*	87*	111*
	D+L (Deflection)	24	30	40	50	43	53	73	92	48	58	78	98
	L (Deflection)	18	22	29	36	43	52	69	88	34	41	54	69
10'-6"	D+L (Strength)	40	50	66	85	38*	47*	66*	85*	47*	59*	81*	103*
	D+L (Deflection)	21	25	34	43	38	47	66	85	41	50	67	84
	L (Deflection)	15	19	25	31	37	45	60	76	29	35	47	59
11'-0"	D+L (Strength)	36	45	60	77	35*	43*	60*	77*	44*	54*	75*	95*
	D+L (Deflection)	18	22	29	37	35	43	60	77	36	43	58	73
	L (Deflection)	13	16	22	27	32	39	52	66	25	31	41	52
11'-6"	D+L (Strength)	33	41	55	70	32*	39*	55*	70*	40*	49*	69*	88*
	D+L (Deflection)	15	19	25	31	32	39	55	70	31	38	50	63
	L (Deflection)	12	14	19	24	28	34	46	58	22	27	36	45
12'-0"	D+L (Strength)	30	37	50	64	29*	36*	50*	64*	37*	45*	63*	81*
	D+L (Deflection)	13	16	21	27	29	36	50	64	27	33	43	55
	L (Deflection)	10	13	17	21	25	30	40	51	19	24	31	40
12'-6"	D+L (Strength)	27	34	46	58	26*	33*	46*	58*	34*	41*	58*	74*
	D+L (Deflection)	11	14	19	23	26	33	46	58	24	29	38	48
	L (Deflection)	9	11	15	19	22	27	35	45	17	21	28	35
13'-0"	D+L (Strength)	25	31	42	54	24*	30*	42*	54*	31*	38*	53*	68*
	D+L (Deflection)	10	12	16	20	24	30	42	54	21	25	33	42
	L (Deflection)	8	10	13	17	19	24	32	40	15	19	25	31
13'-6"	D+L (Strength)	23	29	39	49	22*	28*	39*	50*	29*	35*	49*	63*
	D+L (Deflection)	9	10	14	18	22	28	39	49	18	22	29	37
	L (Deflection)	7	9	12	15	17	21	28	36	14	17	22	28
14'-0"	D+L (Strength)	21	27	36	46	21*	26*	36*	46*	26*	33*	46*	58*
	D+L (Deflection)	7	9	12	15	21	26	34	43	16	20	26	33
	L (Deflection)	6	8	10	13	16	19	25	32	12	15	20	25
14'-6"	D+L (Strength)	20	25	33	42	19*	24*	33*	42*	24*	30*	42*	54*
	D+L (Deflection)	7	8	11	13	19	23	31	39	14	17	23	29
	L (Deflection)	6	7	9	12	14	17	23	29	11	13	18	23
15'-0"	D+L (Strength)	18	23	31	39	18*	22*	31*	39*	23*	28*	39*	50*
	D+L (Deflection)	6	7	9	12	17	20	27	34	13	15	21	26
	L (Deflection)	5	6	9	11	13	15	21	26	10	12	16	20

8'-6"	D+L (Strength)	62	← Max. superimposed ASD dead + live load (psf) (governed by strength limitation)
	D+L (Deflection)	41	← Max. superimposed ASD dead + live load (psf) (governed by deflection limitation)
↑	L (Deflection)	29	← Max. superimposed ASD live load (psf) (governed by deflection limitation)
			← Vertical load span (center to center spacing)

Wd Weight of deck (uncoated), psf

I_D Moment of inertia for deflection per foot of deck width (in^4)/ft

Sp Section modulus for positive bending per foot of deck width, (in^3)/ft

Sn Section modulus for negative bending per foot of deck width, (in^3)/ft

Va Allowable shear value per foot of deck width, plf

Rbe Allowable exterior web crippling value per foot of deck, plf

Rbi Allowable interior web crippling value per foot of deck, plf

D Uniform dead load, psf

L Uniform live load, psf

Notes:
1. Bending strength based on allowable flexural stress of 24 ksi.
2. Loads marked with asterisk (*) are governed by moment & shear, interior reactions (web crippling) or applied moment & reactions assuming 4" of interior bearing.
3. Deflection based on maximum dead + live load deflection of L/240 or 1 in. and on maximum live load deflection of L/360 or 1 in.
4. An upper limit of 400 psf has been applied to the loads.
5. Deck length over 45'-0" require inquiry and special accommodations. Please contact the Metal-Dek Group® for further information.

The section properties table is based on 2001 AISI's North American Specification for the Design of Cold-Formed Steel Structural Members (2004 Supplement).
Acoustical profile is also available.