

1" Roof Deck (1.0RD, 1.0RDV)

PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
26	0.0179	36	0.94
24	0.0238		1.24
22	0.0295		1.54
20	0.0358		1.87



ICC-ES APPROVED
REFER TO ESR-3818

ASD

SECTION PROPERTIES

DESIGN STRENGTHS

Gage	F _y (ksi)	I _D 1 Span (in ⁴ /ft)	I _D 2+ Span (in ⁴ /ft)	I _p (in ⁴ /ft)	I _n (in ⁴ /ft)	S _p (in ³ /ft)	S _n (in ³ /ft)	M _{n,p} /Ω (in-lb/ft)	M _{n,n} /Ω (in-lb/ft)	V _n /Ω (lb/ft)	*R _{be} /Ω (lb/ft)	*R _{bi} /Ω (lb/ft)
26	60	0.042	0.042	0.041	0.041	0.068	0.071	2428	2547	1663	466	828
24	60	0.056	0.056	0.056	0.056	0.098	0.105	3518	3782	2739	789	1422
22	60	0.070	0.070	0.070	0.070	0.129	0.132	4631	4744	3388	1169	2126
20	60	0.085	0.085	0.085	0.085	0.160	0.160	5749	5749	4101	1665	3047

- Notes:**
- Section properties are calculated in accordance with the AISI S100-16.
 - Web crippling design strengths* are based on minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing.

ALLOWABLE UNIFORM LOADS AND MAXIMUM CONSTRUCTION SPANS

Span Condition	Gage	Allowable Uniform Total Load (psf) / Load that Produces L/240 Deflection (psf)										SDI Max. Constr. Span (ctr / ctr)
		Center to Center Span (ft - in)										
		3 - 0	3 - 6	4 - 0	4 - 6	5 - 0	5 - 6	6 - 0	6 - 6	7 - 0	8 - 0	
Single	26	180 / 101	132 / 64	101 / 43	-	-	-	-	-	-	-	4 - 0
	24	261 / 137	191 / 86	147 / 58	116 / 41	94 / 30	78 / 22	65 / 17	-	-	-	5 - 9
	22	343 / 170	252 / 107	193 / 72	152 / 50	123 / 37	102 / 28	86 / 21	73 / 17	63 / 13	48 / 9	7 - 6
	20	426 / 206	313 / 130	240 / 87	189 / 61	153 / 45	127 / 33	106 / 26	91 / 20	78 / 16	60 / 11	9 - 2
Double	26	185 / 244	136 / 154	105 / 103	83 / 72	67 / 53	-	-	-	-	-	4 - 11
	24	275 / 331	203 / 208	156 / 139	124 / 98	100 / 71	83 / 54	70 / 41	59 / 32	51 / 26	-	7 - 0
	22	345 / 410	255 / 258	196 / 173	155 / 121	126 / 89	104 / 67	87 / 51	75 / 40	64 / 32	49 / 22	9 - 2
	20	418 / 497	309 / 313	237 / 210	188 / 147	152 / 107	126 / 81	106 / 62	90 / 49	78 / 39	60 / 26	11 - 2
Triple	26	229 / 191	169 / 120	130 / 81	103 / 57	84 / 41	-	-	-	-	-	5 - 0
	24	341 / 259	252 / 163	194 / 109	154 / 77	125 / 56	103 / 42	87 / 32	74 / 25	64 / 20	49 / 14	7 - 2
	22	428 / 321	316 / 202	243 / 135	193 / 95	157 / 69	130 / 52	109 / 40	93 / 32	80 / 25	62 / 17	9 - 3
	20	518 / 389	383 / 245	295 / 164	234 / 115	190 / 84	157 / 63	132 / 49	113 / 38	97 / 31	75 / 21	11 - 4

- Notes:**
- Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
 - ANSI/SDI RD-2017 Standard for Steel Roof Deck
 - Minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
 - Maximum construction spans shown include a check for deck self-weight plus a nominal 200 lbs. concentrated load supported by a one foot section of deck per SDI criteria which exceeds the IBC requirement of a 300 lbs. roof maintenance load distributed over an area of 2 1/2 feet by 2 1/2 feet per Section 1607.4 and Table 1607.1.
 - "Load that Produces L/240 Deflection" values shown in RED exceed the "Allowable Uniform Total Load". These loads may be used to determine the deck capacity under deflection limits more stringent than L/240. In no case shall the "Allowable Uniform Total Load" be exceeded.
 - See website at www.newmill.com for Factory Mutual approved deck types and maximum FM construction spans.

MAXIMUM CANTILEVER SPANS

Gage	F _y (ksi)	Back-Span Condition		
		Single	Double	Triple
26	60	0 - 9	0 - 9	0 - 9
24	60	0 - 11	0 - 11	0 - 11
22	60	1 - 0	1 - 0	1 - 0
20	60	1 - 2	1 - 2	1 - 2

Notes:

- Maximum cantilever spans shown are based on the following criteria:
 - ANSI/SDI RD-2017 Standard for Steel Roof Deck
 - Adjacent span assumed to be at least 3 times longer than the cantilever and no greater than the maximum design or construction spans shown in table above
 - Bearing width at perimeter support assumed to be 3" minimum
 - Design total uniform load of 45 psf in conjunction with a 100 lb. concentrated load.