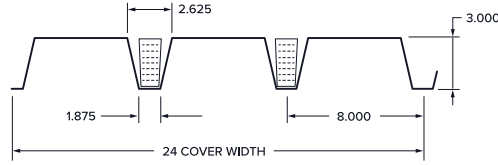


# NDA N-Dek (Memphis Plant Only)

## PROPERTIES

Gage	Thickness (in)	Cover (in)	Weight (psf)
22	0.0295	24	1.82
20	0.0358		2.21
18	0.0474		2.92
16	0.0598		3.68



## ASD

### SECTION PROPERTIES

### DESIGN STRENGTHS

Gage	F <sub>y</sub> (ksi)	I <sub>D</sub> 1 Span (in <sup>4</sup> /ft)	I <sub>D</sub> 2+ Span (in <sup>4</sup> /ft)	I <sub>p</sub> (in <sup>4</sup> /ft)	I <sub>n</sub> (in <sup>4</sup> /ft)	S <sub>p</sub> (in <sup>3</sup> /ft)	S <sub>n</sub> (in <sup>3</sup> /ft)	Mn,p/Ω (in-lb/ft)	Mn,n/Ω (in-lb/ft)	Vn/Ω (lb/ft)	*Rbe/Ω (lb/ft)	*Rbi/Ω (lb/ft)
22	40	0.674	0.796	0.606	0.789	0.330	0.419	7901	10035	1716	248	514
20	40	0.867	0.978	0.809	0.975	0.437	0.522	10456	12503	2525	399	807
18	40	1.217	1.301	1.175	1.301	0.631	0.699	15107	16738	3952	752	1507
16	40	1.596	1.640	1.574	1.640	0.822	0.881	19699	21104	4957	1226	2477

- Notes:**
- Section properties are calculated in accordance with the AISI S100-16, with perforation modifiers.
  - 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)										
		8 - 0	10 - 0	11 - 0	12 - 0	13 - 0	14 - 0	15 - 0	16 - 0	18 - 0	20 - 0	
Single	22	62 / 86	50 / 44	44 / 33	37 / 26	31 / 20	-	-	-	-	-	12 - 5
	20	100 / 111	70 / 57	58 / 43	48 / 33	41 / 26	36 / 21	31 / 17	27 / 14	-	-	16 - 0
	18	157 / 156	101 / 80	83 / 60	70 / 46	60 / 36	51 / 29	45 / 24	39 / 19	31 / 14	25 / 10	21 - 8
	16	205 / 204	131 / 105	109 / 79	91 / 61	78 / 48	67 / 38	58 / 31	51 / 26	41 / 18	33 / 13	26 - 4
Double	22	51 / 246	41 / 126	37 / 95	34 / 73	32 / 57	29 / 46	27 / 37	26 / 31	-	-	15 - 2
	20	81 / 302	65 / 155	59 / 116	54 / 89	49 / 70	42 / 56	37 / 46	32 / 38	26 / 26	-	19 - 5
	18	151 / 402	110 / 206	91 / 154	77 / 119	65 / 94	56 / 75	49 / 61	43 / 50	34 / 35	28 / 26	26 - 3
	16	215 / 506	139 / 259	115 / 195	97 / 150	82 / 118	71 / 94	62 / 77	55 / 63	43 / 44	35 / 32	31 - 8
Triple	22	58 / 192	47 / 98	42 / 74	39 / 57	36 / 45	33 / 36	31 / 29	-	-	-	15 - 5
	20	92 / 236	73 / 121	67 / 91	61 / 70	56 / 55	52 / 44	46 / 36	-	-	-	19 - 9
	18	171 / 314	136 / 161	113 / 121	95 / 93	81 / 73	70 / 59	61 / 48	-	-	-	26 - 7
	16	266 / 396	172 / 203	143 / 152	120 / 117	103 / 92	89 / 74	77 / 60	-	-	-	32 - 1

- 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](http://www.newmill.com) for Factory Mutual approved deck types and maximum FM construction spans.

## MAXIMUM CANTILEVER SPANS

Gage	F <sub>y</sub> (ksi)	Back-Span Condition		
		Single	Double	Triple
22	40	2 - 4	2 - 1	1 - 11
20	40	4 - 6	4 - 6	4 - 4
18	40	5 - 9	5 - 10	4 - 4
16	40	6 - 1	5 - 11	4 - 4

### 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.

