



ULTRA HIGH PERFORMANCE
STRUCTURAL COMPOSITE DECKING SYSTEM

MECHANICAL PROPERTIES

400 Commonwealth Ave.
Bristol, Virginia 24201 USA
(276) 645-8000
www.strongdek.com

$I = 0.119 \text{ in}^4$ or (49,531.54 mm^4)
 $A = 1.43 \text{ in}^2$ or (921.93 mm^2)
 $wt = 4.87 \text{ lb / linear foot}$ or (7.25 kg / linear meter)
 $E = 3,000,000 \text{ psi}$ or (2,068,427 N/cm^2)

| Uniform Load [Deflection in inches (mm)] | | | | | | | | |
|--|--------------|---------|--------------|---------|--------------|---------|--------------|---------|
| LOAD in LB/SQUARE FOOT (PSF) or KG/SQUARE METER (KG/M ²) | | | | | | | | |
| SPAN | 40 (195) | | 60 (293) | | 80 (391) | | 100 (488) | |
| | Deflection | L/Ratio | Deflection | L/Ratio | Deflection | L/Ratio | Deflection | L/Ratio |
| 12 in (0.30m) | 0.001 (0.03) | 11076 | 0.002 (0.04) | 7384 | 0.002 (0.06) | 5538 | 0.003 (0.07) | 4430 |
| 16 in (0.41m) | 0.003 (0.09) | 4673 | 0.005 (0.13) | 3115 | 0.007 (0.17) | 2336 | 0.009 (0.22) | 1869 |
| 19.2 in (0.49m) | 0.007 (0.18) | 2704 | 0.011 (0.27) | 1502 | 0.014 (0.36) | 1127 | 0.018 (0.45) | 901 |
| 24 in (0.61m) | 0.017 (0.44) | 1385 | 0.026 (0.66) | 923 | 0.035 (0.88) | 692 | 0.043 (1.10) | 554 |
| 30 in (0.76m) | 0.042 (1.07) | 709 | 0.063 (1.61) | 473 | 0.085 (2.15) | 354 | 0.106 (2.69) | 284 |
| 36 in (0.91m) | 0.088 (2.23) | 410 | 0.132 (3.34) | 273 | 0.176 (4.46) | 205 | 0.219 (5.57) | 164 |

| Concentrated Load [Deflection in inches (mm)] | | | | |
|---|-------------|---------|-------------|---------|
| LOAD in LBS or kN | | | | |
| SPAN | 300 (1.33) | | 500 (2.22) | |
| | Deflection | L/Ratio | Deflection | L/Ratio |
| 12 in (0.30m) | 0.03 (0.77) | 397 | 0.05 (1.28) | 238 |
| 16 in (0.41m) | 0.07 (1.82) | 223 | 0.12 (3.04) | 134 |
| 19.2 in (0.49m) | 0.12 (3.15) | 155 | 0.21 (5.25) | 93 |
| 24 in (0.61m) | 0.24 (6.15) | 99 | | |
| 30 in (0.76m) | | | | |
| 36 in (0.91m) | | | | |

Notes:
 Concentrated loads applied at mid-span over an area equal or larger to 4" x the full width.
 Wheel loads assumed to be applied by pneumatic tires only.
 Step nosing load conditions are not included.
 Deflection values are limited to 0.25" maximum deflection.