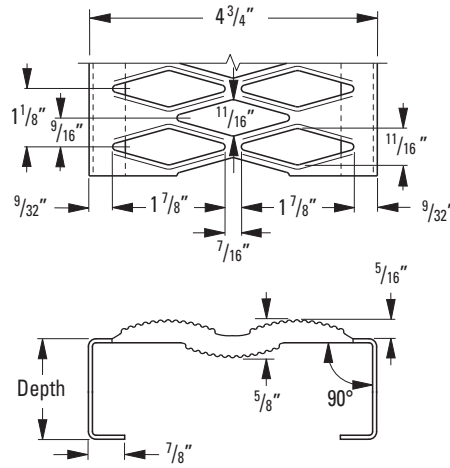


# Safe Loading Tables

## 2-Diamond Plank — 4<sup>3</sup>/<sub>4</sub>" Width



### Product Selection/Design Tables

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

| Material Gauge | Channel Depth in. (mm) | Weight lb./lin. ft. (kg/m) | Catalog Number | Span  |       |       |       |       |       |       |       |       |       |       |       |       |       |        |        |        |      |  |  |  |
|----------------|------------------------|----------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|------|--|--|--|
|                |                        |                            |                | 2'-0" | 2'-6" | 3'-0" | 3'-6" | 4'-0" | 4'-6" | 5'-0" | 5'-6" | 6'-0" | 6'-6" | 7'-0" | 7'-6" | 8'-0" | 9'-0" | 10'-0" | 11'-0" | 12'-0" |      |  |  |  |
| Steel 14 ga.   | 1 1/2" (38.1)          | 2.3 (3.42)                 | 21514          | U     | 1324  | 849   | 591   | 435   | 334   | 265   | 215   | 179   | 151   |       |       |       |       |        |        |        |      |  |  |  |
|                |                        |                            |                | D     | .06   | .10   | .14   | .20   | .26   | .32   | .40   | .49   | .58   |       |       |       |       |        |        |        |      |  |  |  |
|                |                        |                            |                | C     | 524   | 420   | 351   | 301   | 265   | 236   | 213   | 195   | 179   |       |       |       |       |        |        |        |      |  |  |  |
|                |                        |                            |                | D     | .05   | .08   | .11   | .16   | .20   | .26   | .32   | .39   | .47   |       |       |       |       |        |        |        |      |  |  |  |
|                | 2"                     | 2.6 (3.87)                 | 22014          | U     | 2198  | 1409  | 980   | 721   | 553   | 438   | 356   | 295   | 248   | 212   | 184   | 161   | 142   | 113    | 93     |        |      |  |  |  |
|                |                        |                            |                | D     | .06   | .09   | .13   | .17   | .23   | .29   | .35   | .43   | .51   | .60   | .70   | .81   | .92   | 1.18   | 1.47   |        |      |  |  |  |
|                |                        |                            |                | C     | 870   | 697   | 582   | 499   | 438   | 390   | 352   | 321   | 295   | 273   | 255   | 239   | 225   | 201    | 183    |        |      |  |  |  |
|                |                        |                            |                | D     | .04   | .07   | .10   | .14   | .18   | .23   | .28   | .34   | .41   | .48   | .56   | .65   | .74   | .94    | 1.18   |        |      |  |  |  |
|                | 2 1/2" (63.5)          | 2.8 (4.17)                 | 22514          | U     | 2522  | 1616  | 1124  | 827   | 634   | 502   | 408   | 338   | 285   | 244   | 211   | 184   | 163   | 139    | 106    | 88     | 75   |  |  |  |
|                |                        |                            |                | D     | .04   | .06   | .08   | .11   | .14   | .18   | .23   | .27   | .33   | .38   | .45   | .51   | .59   | .75    | .94    | 1.14   | 1.38 |  |  |  |
|                |                        |                            |                | C     | 998   | 800   | 667   | 573   | 502   | 447   | 404   | 368   | 338   | 313   | 292   | 273   | 257   | 231    | 210    | 193    | 178  |  |  |  |
|                |                        |                            |                | D     | .03   | .04   | .06   | .09   | .11   | .15   | .18   | .22   | .26   | .31   | .36   | .41   | .47   | .60    | .75    | .92    | 1.10 |  |  |  |
| Steel 12 ga.   | 1 1/2" (38.1)          | 3.2 (4.76)                 | 21512          | U     | 1751  | 1123  | 782   | 576   | 443   | 351   | 286   | 237   | 200   | 172   | 149   | 131   | 116   |        |        |        |      |  |  |  |
|                |                        |                            |                | D     | .07   | .11   | .15   | .21   | .27   | .35   | .43   | .52   | .62   | .74   | .86   | .99   | 1.14  |        |        |        |      |  |  |  |
|                |                        |                            |                | C     | 693   | 556   | 464   | 399   | 350   | 313   | 283   | 258   | 238   | 221   | 206   | 194   | 183   |        |        |        |      |  |  |  |
|                |                        |                            |                | D     | .05   | .08   | .12   | .17   | .22   | .28   | .34   | .42   | .50   | .59   | .69   | .79   | .91   |        |        |        |      |  |  |  |
|                | 2"                     | 3.6 (5.36)                 | 22012          | U     | 2792  | 1790  | 1245  | 917   | 703   | 557   | 453   | 375   | 317   | 271   | 235   | 205   | 181   | 145    | 119    | 99     | 85   |  |  |  |
|                |                        |                            |                | D     | .05   | .08   | .11   | .16   | .20   | .26   | .32   | .39   | .46   | .55   | .63   | .73   | .84   | 1.07   | 1.34   | 1.64   | 1.98 |  |  |  |
|                |                        |                            |                | C     | 1105  | 886   | 739   | 635   | 557   | 496   | 448   | 409   | 376   | 348   | 325   | 305   | 287   | 258    | 235    | 216    | 201  |  |  |  |
|                |                        |                            |                | D     | .04   | .06   | .09   | .12   | .16   | .21   | .26   | .31   | .37   | .44   | .51   | .59   | .67   | .86    | 1.07   | 1.31   | 1.58 |  |  |  |
|                | 2 1/2" (63.5)          | 4.0 (5.95)                 | 22512          | U     | 4179  | 2676  | 1860  | 1368  | 1049  | 830   | 673   | 557   | 469   | 400   | 346   | 302   | 266   | 211    | 172    | 143    | 121  |  |  |  |
|                |                        |                            |                | D     | .04   | .06   | .09   | .13   | .17   | .21   | .26   | .32   | .38   | .44   | .51   | .59   | .67   | .86    | 1.07   | 1.30   | 1.55 |  |  |  |
|                |                        |                            |                | C     | 1654  | 1324  | 1104  | 948   | 830   | 739   | 666   | 606   | 557   | 515   | 479   | 448   | 421   | 376    | 341    | 312    | 288  |  |  |  |
|                |                        |                            |                | D     | .03   | .05   | .07   | .10   | .13   | .17   | .21   | .25   | .30   | .35   | .41   | .47   | .54   | .69    | .85    | 1.04   | 1.24 |  |  |  |

# Safe Loading Tables

## 2-Diamond Plank — 4<sup>3</sup>/<sub>4</sub>" Width

### Product Selection/Design Tables

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

| Material Gauge         | Channel Depth in. (mm) | Weight lb./lin. ft. (kg/m) | Catalog Number |         | Span  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |        |  |
|------------------------|------------------------|----------------------------|----------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--|
|                        |                        |                            |                |         | 2'-0" | 2'-6" | 3'-0" | 3'-6" | 4'-0" | 4'-6" | 5'-0" | 5'-6" | 6'-0" | 6'-6" | 7'-0" | 7'-6" | 8'-0" | 8'-6" | 9'-0" | 9'-6" | 10'-0" |  |
| Alum. Alloy 5052 .080" | 1 1/2"* (38.1)         | .85 (1.26)                 | 21512-A        | U       | 998   | 639   | 443   | 326   | 248   | 196   | 159   | 131   | 110   | 94    |       |       |       |       |       |       |        |  |
|                        |                        |                            |                | D       | .10   | .15   | .22   | .31   | .40   | .51   | .63   | .76   | .90   | 1.08  |       |       |       |       |       |       |        |  |
|                        |                        |                            |                | C       | 395   | 316   | 263   | 226   | 197   | 175   | 157   | 143   | 131   | 121   |       |       |       |       |       |       |        |  |
|                        |                        |                            |                |         | D     | .08   | .12   | .18   | .25   | .32   | .41   | .50   | .61   | .73   | .85   |       |       |       |       |       |        |  |
|                        |                        | 2" (50.8)                  | .92 (1.37)     | 22012-A | U     | 1463  | 937   | 650   | 478   | 366   | 289   | 234   | 194   | 162   | 138   | 119   |       |       |       |       |        |  |
|                        | D                      |                            |                |         | .08   | .13   | .18   | .25   | .33   | .42   | .52   | .63   | .74   | .87   | 1.02  |       |       |       |       |       |        |  |
|                        | C                      |                            |                |         | 579   | 463   | 386   | 331   | 290   | 257   | 232   | 211   | 192   | 177   | 165   |       |       |       |       |       |        |  |
|                        |                        |                            |                |         | D     | .06   | .10   | .15   | .20   | .27   | .34   | .42   | .51   | .59   | .69   | .80   |       |       |       |       |        |  |
|                        |                        | 2 1/2"* (63.5)             | 1.00 (1.48)    | 22512-A | U     | 2199  | 1407  | 977   | 718   | 550   | 434   | 352   | 291   | 244   | 208   | 179   | 156   | 137   |       |       |        |  |
| D                      | .07                    |                            |                |         | .10   | .15   | .21   | .28   | .35   | .43   | .53   | .63   | .74   | .85   | .98   | 1.12  |       |       |       |       |        |  |
| C                      | 870                    |                            |                |         | 696   | 580   | 497   | 435   | 387   | 348   | 316   | 290   | 268   | 249   | 232   | 218   |       |       |       |       |        |  |
|                        |                        |                            |                | D       | .05   | .08   | .12   | .17   | .22   | .28   | .35   | .42   | .50   | .59   | .68   | .78   | .89   |       |       |       |        |  |
| Alum. Alloy 5052 .100" | 1 1/2"* (38.1)         | 1.08 (1.60)                | 21510-A        | U       | 1136  | 727   | 505   | 371   | 284   | 224   | 181   | 149   | 125   | 107   |       |       |       |       |       |       |        |  |
|                        |                        |                            |                | D       | .09   | .15   | .22   | .30   | .39   | .50   | .63   | .76   | .90   | 1.08  |       |       |       |       |       |       |        |  |
|                        |                        |                            |                | C       | 450   | 360   | 300   | 257   | 225   | 200   | 179   | 162   | 149   | 137   |       |       |       |       |       |       |        |  |
|                        |                        |                            |                |         | D     | .07   | .12   | .17   | .24   | .31   | .40   | .51   | .61   | .73   | .85   |       |       |       |       |       |        |  |
|                        |                        | 2" (50.8)                  | 1.20 (1.78)    | 22010-A | U     | 2049  | 1312  | 911   | 669   | 512   | 405   | 328   | 271   | 228   | 194   | 167   | 146   | 128   |       |       |        |  |
|                        | D                      |                            |                |         | .09   | .14   | .20   | .28   | .37   | .46   | .58   | .70   | .83   | .98   | 1.13  | 1.30  | 1.48  |       |       |       |        |  |
|                        | C                      |                            |                |         | 811   | 649   | 541   | 464   | 406   | 361   | 325   | 295   | 270   | 250   | 232   | 216   | 203   |       |       |       |        |  |
|                        |                        |                            |                |         | D     | .07   | .11   | .16   | .22   | .29   | .37   | .46   | .56   | .66   | .78   | .90   | 1.04  | 1.18  |       |       |        |  |
|                        |                        | 2 1/2"* (63.5)             | 1.31 (1.95)    | 22510-A | U     | 2820  | 1805  | 1253  | 921   | 705   | 557   | 451   | 373   | 313   | 267   | 230   | 201   | 176   |       |       |        |  |
| D                      | .07                    |                            |                |         | .11   | .16   | .22   | .28   | .36   | .45   | .54   | .64   | .76   | .88   | 1.01  | 1.15  |       |       |       |       |        |  |
| C                      | 1116                   |                            |                |         | 893   | 744   | 638   | 558   | 496   | 446   | 406   | 372   | 343   | 319   | 298   | 279   |       |       |       |       |        |  |
|                        |                        |                            |                | D       | .05   | .09   | .12   | .17   | .23   | .29   | .36   | .43   | .51   | .60   | .70   | .81   | .92   |       |       |       |        |  |

\* Available on special order.

### Engineering Data For Both Channels

| Material Gauge | Channel Depth in. | Sx in. <sup>2</sup> | Ix in. <sup>4</sup> | EI lb. x in. <sup>2</sup> |
|----------------|-------------------|---------------------|---------------------|---------------------------|
| Steel 14 ga.   | 1 1/2"            | .174                | .102                | 2.96 x 10 <sup>6</sup>    |
|                | 2"                | .270                | .193                | 5.60 x 10 <sup>6</sup>    |
|                | 2 1/2"            | .307                | .335                | 9.71 x 10 <sup>6</sup>    |
| Steel 12 ga.   | 1 1/2"            | .216                | .125                | 3.62 x 10 <sup>6</sup>    |
|                | 2"                | .342                | .264                | 7.66 x 10 <sup>6</sup>    |
|                | 2 1/2"            | .504                | .488                | 14.09 x 10 <sup>6</sup>   |
| Aluminum .080" | 1 1/2"            | .171                | .137                | 1.40 x 10 <sup>6</sup>    |
|                | 2"                | .251                | .246                | 2.51 x 10 <sup>6</sup>    |
|                | 2 1/2"            | .379                | .441                | 4.50 x 10 <sup>6</sup>    |
| Aluminum .100" | 1 1/2"            | .196                | .156                | 1.59 x 10 <sup>6</sup>    |
|                | 2"                | .352                | .309                | 3.15 x 10 <sup>6</sup>    |
|                | 2 1/2"            | .456                | .544                | 5.55 x 10 <sup>6</sup>    |

### Strut Loading

| Material Gauge | Type Loading** | Load | Deflection in. |
|----------------|----------------|------|----------------|
| Steel 14 ga.   | U              | 6268 | .10            |
|                | Cs             | 1240 | .08            |
| Steel 12 ga.   | U              | 8619 | .10            |
|                | Cs             | 1705 | .08            |
| Aluminum .080" | U              | 4677 | .12            |
|                | Cs             | 925  | .10            |
| Aluminum .100" | U              | 5847 | .12            |
|                | Cs             | 1157 | .10            |

\*\* U = Allowable Uniform Load (lb./ft.<sup>2</sup>)  
Cs = Allowable Concentrated Load per ft. of length at mid-width (lb./ft.)