

# TOLERANCES

## CARBON AND ALLOY PLATE

### Permissible Variations in Thickness for Rectangular Carbon, High-Strength, Low Alloy, and Alloy-Steel Plates, When Ordered to Thickness

NOTE 1 — Permissible variation under specified thickness, 0.01 in.

NOTE 2 — Thickness to be measured at  $\frac{3}{8}$  to  $\frac{3}{4}$  in. from the longitudinal edge.

NOTE 3 — For Thickness measured at any location other than that specified in Note 2, the permissible maximum over tolerance shall be increased by 75%, rounded to the nearest 0.01 in.

| Specified Thickness, in.               | Tolerance Over Specified Thickness For Widths Given, in. |                     |                |                |                |                 |                  |                  |
|----------------------------------------|----------------------------------------------------------|---------------------|----------------|----------------|----------------|-----------------|------------------|------------------|
|                                        | 48 and under                                             | Over 48 to 60, excl | 60 to 72, excl | 72 to 84, excl | 84 to 96, excl | 96 to 108, excl | 108 to 120, excl | 120 to 132, excl |
| To $\frac{1}{4}$ , excl                | 0.03                                                     | 0.03                | 0.03           | 0.03           | 0.03           | 0.03            | 0.03             | 0.03             |
| $\frac{1}{4}$ to $\frac{5}{16}$ , excl | 0.03                                                     | 0.03                | 0.03           | 0.03           | 0.03           | 0.03            | 0.03             | 0.04             |
| $\frac{5}{16}$ to $\frac{3}{8}$ , excl | 0.03                                                     | 0.03                | 0.03           | 0.03           | 0.03           | 0.03            | 0.03             | 0.04             |
| $\frac{3}{8}$ to $\frac{7}{16}$ , excl | 0.03                                                     | 0.03                | 0.03           | 0.03           | 0.03           | 0.03            | 0.04             | 0.04             |
| $\frac{7}{16}$ to $\frac{1}{2}$ , excl | 0.03                                                     | 0.03                | 0.03           | 0.03           | 0.03           | 0.03            | 0.04             | 0.04             |
| $\frac{1}{2}$ to $\frac{5}{8}$ , excl  | 0.03                                                     | 0.03                | 0.03           | 0.03           | 0.03           | 0.03            | 0.04             | 0.04             |
| $\frac{5}{8}$ to $\frac{3}{4}$ , excl  | 0.03                                                     | 0.03                | 0.03           | 0.03           | 0.03           | 0.04            | 0.04             | 0.04             |
| $\frac{3}{4}$ to 1, excl               | 0.03                                                     | 0.03                | 0.03           | 0.03           | 0.04           | 0.04            | 0.05             | 0.05             |
| 1 to 2, excl                           | 0.06                                                     | 0.06                | 0.06           | 0.06           | 0.06           | 0.07            | 0.08             | 0.10             |
| 2 to 3, excl                           | 0.09                                                     | 0.09                | 0.09           | 0.10           | 0.10           | 0.11            | 0.12             | 0.13             |
| 3 to 4, excl                           | 0.11                                                     | 0.11                | 0.11           | 0.11           | 0.11           | 0.13            | 0.14             | 0.14             |
| 4 to 6, excl                           | 0.15                                                     | 0.15                | 0.15           | 0.15           | 0.15           | 0.15            | 0.15             | 0.15             |
| 6 to 10, excl                          | 0.23                                                     | 0.24                | 0.24           | 0.24           | 0.24           | 0.24            | 0.24             | 0.24             |
| 10 to 12, excl                         | 0.29                                                     | 0.29                | 0.33           | 0.33           | 0.33           | 0.33            | 0.33             | 0.33             |
| 12 to 15, incl                         | 0.29                                                     | 0.29                | 0.35           | 0.35           | 0.35           | 0.35            | 0.35             | 0.35             |

### Permissible Variations in Width and Length for Sheared Plates $\frac{1}{2}$ in. and Under in Thickness

#### Variations over Specified Width and Length\* for Thicknesses, in., and Equivalent Weights, lb/ft<sup>2</sup>, Given

| Length           | Width           | To $\frac{3}{8}$ , excl |                | $\frac{3}{8}$ to $\frac{5}{8}$ , excl |                 | $\frac{5}{8}$ to 1, excl |                | 1 to 2, incl   |                |
|------------------|-----------------|-------------------------|----------------|---------------------------------------|-----------------|--------------------------|----------------|----------------|----------------|
|                  |                 | Width                   | Length         | Width                                 | Length          | Width                    | Length         | Width          | Length         |
| To 120, excl     | To 60, excl     | $\frac{3}{8}$           | $\frac{1}{2}$  | $\frac{7}{16}$                        | $\frac{5}{8}$   | $\frac{1}{2}$            | $\frac{3}{4}$  | $\frac{5}{8}$  | 1              |
|                  | 60 to 84, excl  | $\frac{7}{16}$          | $\frac{5}{8}$  | $\frac{1}{2}$                         | $\frac{11}{16}$ | $\frac{5}{8}$            | $\frac{7}{8}$  | $\frac{3}{4}$  | 1              |
|                  | 84 to 108, excl | $\frac{1}{2}$           | $\frac{3}{4}$  | $\frac{5}{8}$                         | $\frac{7}{8}$   | $\frac{3}{4}$            | 1              | 1              | $1\frac{1}{8}$ |
|                  | 108 and over    | $\frac{5}{8}$           | $\frac{7}{8}$  | $\frac{3}{4}$                         | 1               | $\frac{7}{8}$            | $1\frac{1}{8}$ | $1\frac{1}{8}$ | $1\frac{1}{4}$ |
| 120 to 240, excl | To 60, excl     | $\frac{3}{8}$           | $\frac{3}{4}$  | $\frac{1}{2}$                         | $\frac{7}{8}$   | $\frac{5}{8}$            | 1              | $\frac{3}{4}$  | $1\frac{1}{8}$ |
|                  | 60 to 84, excl  | $\frac{1}{2}$           | $\frac{3}{4}$  | $\frac{5}{8}$                         | $\frac{7}{8}$   | $\frac{3}{4}$            | 1              | $\frac{7}{8}$  | $1\frac{1}{4}$ |
|                  | 84 to 108, excl | $\frac{5}{8}$           | $\frac{7}{8}$  | $\frac{11}{16}$                       | $\frac{5}{8}$   | $\frac{13}{16}$          | $1\frac{1}{8}$ | 1              | $1\frac{3}{8}$ |
|                  | 108 and over    | $\frac{5}{8}$           | 1              | $\frac{3}{4}$                         | $1\frac{1}{8}$  | $\frac{7}{8}$            | $1\frac{1}{4}$ | $1\frac{1}{8}$ | $1\frac{3}{8}$ |
| 240 to 360, excl | To 60, excl     | $\frac{3}{8}$           | 1              | $\frac{1}{2}$                         | $1\frac{1}{8}$  | $\frac{5}{8}$            | $1\frac{1}{4}$ | $\frac{3}{4}$  | $1\frac{1}{2}$ |
|                  | 60 to 84, excl  | $\frac{1}{2}$           | 1              | $\frac{5}{8}$                         | $1\frac{1}{8}$  | $\frac{3}{4}$            | $1\frac{1}{4}$ | $\frac{7}{8}$  | $1\frac{1}{2}$ |
|                  | 84 to 108, excl | $\frac{5}{8}$           | 1              | $\frac{11}{16}$                       | $1\frac{1}{8}$  | $\frac{7}{8}$            | $1\frac{3}{8}$ | 1              | $1\frac{1}{2}$ |
|                  | 108 and over    | $\frac{11}{16}$         | $1\frac{1}{8}$ | $\frac{7}{8}$                         | $1\frac{1}{4}$  | 1                        | $1\frac{3}{8}$ | $1\frac{1}{4}$ | $1\frac{3}{4}$ |
| 360 to 480, excl | To 60, excl     | $\frac{7}{16}$          | $1\frac{1}{8}$ | $\frac{1}{2}$                         | $1\frac{1}{4}$  | $\frac{5}{8}$            | $1\frac{3}{8}$ | $\frac{3}{4}$  | $1\frac{5}{8}$ |
|                  | 60 to 84, excl  | $\frac{1}{2}$           | $1\frac{1}{4}$ | $\frac{5}{8}$                         | $1\frac{3}{8}$  | $\frac{3}{4}$            | $1\frac{1}{2}$ | $\frac{7}{8}$  | $1\frac{5}{8}$ |
|                  | 84 to 108, excl | $\frac{5}{8}$           | $1\frac{1}{4}$ | $\frac{3}{4}$                         | $1\frac{3}{8}$  | $\frac{7}{8}$            | $1\frac{1}{2}$ | 1              | $1\frac{7}{8}$ |
|                  | 108 and over    | $\frac{3}{4}$           | $1\frac{3}{8}$ | $\frac{7}{8}$                         | $1\frac{1}{2}$  | 1                        | $1\frac{5}{8}$ | $1\frac{1}{4}$ | $1\frac{7}{8}$ |

\*Permissible variation under specified width and length,  $\frac{1}{4}$  in.

### Permissible Variations in Width and Length for Rectangular Plates When Gas Cutting is Specified or Required

NOTE 1 — These variations may be taken all under or divided over and under, if so specified.

| Specified Thickness, in. | ALLOY                                                    | CARBON                                                   |
|--------------------------|----------------------------------------------------------|----------------------------------------------------------|
|                          | Variations Over for All Specified Widths or Lengths, in. | Variations Over for All Specified Widths or Lengths, in. |
| To 2, excl               | $\frac{3}{4}$                                            | $\frac{1}{2}$                                            |
| 2 to 4, excl             | 1                                                        | $\frac{5}{8}$                                            |
| 4 to 6, excl             | $1\frac{1}{8}$                                           | $\frac{3}{4}$                                            |
| 6 to 8, excl             | $1\frac{1}{4}$                                           | $\frac{7}{8}$                                            |
| 8 to 15, incl            | $1\frac{1}{2}$                                           | 1                                                        |