

# Compound Miter Chart

Where N is the number of sides in the assembly, S is the slope\* of the sides in degrees, MG is the miter gauge angle, and BT is the blade tilt needed to cut the compound miter:

$$\tan \text{MG} = 1 \div [\cos S \times \tan(360 \div 2N)] \quad (\text{for all joints})$$

$$\tan \text{BT} = \cos \text{MG} \times \tan S \quad (\text{for mitered joints})$$

$$\tan \text{BT} = \cos \text{MG} \div \tan S \quad (\text{for butted joints})$$

\*The slope is measured from horizontal, with the assembly resting on a bench or worksurface.

| "N"<br>4 Sides, Butted* |                   | 4 Sides, Mitered |           | 5 Sides, Mitered |           | 6 Sides, Mitered |           | 8 Sides, Mitered |           |       |
|-------------------------|-------------------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|-------|
| "MG"<br>MiterGauge      | "BT"<br>BladeTilt | MiterGauge       | BladeTilt | MiterGauge       | BladeTilt | MiterGauge       | BladeTilt | MiterGauge       | BladeTilt |       |
| "S" Slope               |                   |                  |           |                  |           |                  |           |                  |           |       |
| 0                       |                   | 45.00            | 0.00      | 54.00            | 0.00      | 60.00            | 0.00      | 67.50            | 0.00      |       |
| 5                       |                   | 45.11            | 3.53      | 54.10            | 2.94      | 60.09            | 2.50      | 67.58            | 1.91      |       |
| 10                      |                   | 45.44            | 7.05      | 54.42            | 5.86      | 60.38            | 4.98      | 67.81            | 3.81      |       |
| 15                      |                   | 45.99            | 10.55     | 54.94            | 8.75      | 60.85            | 7.44      | 68.19            | 5.68      |       |
| 20                      |                   | 46.78            | 14.00     | 55.68            | 11.60     | 61.52            | 9.85      | 68.73            | 7.52      |       |
| 25                      |                   | 47.81            | 17.39     | 56.64            | 14.38     | 62.38            | 12.20     | 69.42            | 9.31      |       |
| 30                      | 49.11             | 48.59            | 49.11     | 20.70            | 57.82     | 17.09            | 63.43     | 14.48            | 70.27     | 11.03 |
| 35                      | 50.68             | 42.15            | 50.68     | 23.93            | 59.24     | 19.70            | 64.69     | 16.67            | 71.26     | 12.68 |
| 40                      | 52.55             | 35.93            | 52.55     | 27.03            | 60.90     | 22.20            | 66.14     | 18.75            | 72.40     | 14.24 |
| 45                      | 54.74             | 30.00            | 54.74     | 30.00            | 62.81     | 24.56            | 67.79     | 20.70            | 73.68     | 15.70 |
| 50                      | 57.27             | 24.40            | 57.27     | 32.80            | 64.97     | 26.76            | 69.64     | 22.52            | 75.09     | 17.05 |
| 55                      | 60.16             | 19.21            | 60.16     | 35.40            | 67.38     | 28.78            | 71.68     | 24.18            | 76.64     | 18.27 |
| 60                      | 63.43             | 14.48            | 63.43     | 37.76            | 70.04     | 30.60            | 73.90     | 25.66            | 78.30     | 19.35 |
| 65                      | 67.09             | 10.29            | 67.09     | 39.86            | 72.93     | 32.19            | 76.29     | 26.95            | 80.07     | 20.29 |
| 70                      | 71.12             | 6.72             | 71.12     | 41.64            | 76.05     | 33.53            | 78.83     | 28.02            | 81.94     | 21.08 |
| 75                      | 75.49             | 3.84             | 75.49     | 43.08            | 79.35     | 34.59            | 81.50     | 28.88            | 83.88     | 21.69 |
| 80                      | 80.15             | 1.73             | 80.15     | 44.14            | 82.81     | 35.37            | 84.27     | 29.50            | 85.89     | 22.14 |
| 85                      | 85.02             | 0.44             | 85.02     | 44.78            | 86.38     | 35.84            | 87.12     | 29.87            | 87.93     | 22.41 |
| 90                      | 90.00             | 0.00             | 90.00     | 45.00            | 90.00     | 36.00            | 90.00     | 30.00            | 90.00     | 22.50 |

\*Not practical for slopes less than 33 degrees because table saw blade won't

tilt past 45 degrees.

|       | 10 Sides, Mitered |           | 12 Sides, Mitered |           | 16 Sides, Mitered |           | 20 Sides, Mitered |           | 24 Sides, Mitered |           |
|-------|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|
|       | MiterGauge        | BladeTilt | MiterGauge        | BladeTilt | MiterGauge        | BladeTilt | MiterGauge        | BladeTilt | MiterGauge        | BladeTilt |
| Slope |                   |           |                   |           |                   |           |                   |           |                   |           |
| 0     | 72.00             | 0.00      | 75.00             | 0.00      | 78.75             | 0.00      | 81.00             | 0.00      | 82.50             | 0.00      |
| 5     | 72.06             | 1.54      | 75.05             | 1.29      | 78.79             | 0.97      | 81.03             | 0.78      | 82.53             | 0.65      |
| 10    | 72.26             | 3.08      | 75.22             | 2.58      | 78.92             | 1.94      | 81.13             | 1.56      | 82.61             | 1.30      |
| 15    | 72.58             | 4.59      | 75.49             | 3.84      | 79.12             | 2.89      | 81.30             | 2.32      | 82.75             | 1.94      |
| 20    | 73.02             | 6.07      | 75.87             | 5.08      | 79.41             | 3.83      | 81.53             | 3.07      | 82.95             | 2.56      |
| 25    | 73.59             | 7.50      | 76.35             | 6.28      | 79.78             | 4.73      | 81.83             | 3.79      | 83.20             | 3.16      |
| 30    | 74.28             | 8.89      | 76.94             | 7.44      | 80.23             | 5.60      | 82.19             | 4.49      | 83.50             | 3.74      |
| 35    | 75.10             | 10.21     | 77.62             | 8.54      | 80.75             | 6.42      | 82.61             | 5.15      | 83.84             | 4.29      |
| 40    | 76.02             | 11.46     | 78.40             | 9.58      | 81.34             | 7.20      | 83.08             | 5.77      | 84.24             | 4.81      |
| 45    | 77.06             | 12.62     | 79.27             | 10.55     | 81.99             | 7.93      | 83.61             | 6.35      | 84.68             | 5.30      |
| 50    | 78.20             | 13.69     | 80.23             | 11.44     | 82.71             | 8.59      | 84.19             | 6.88      | 85.16             | 5.74      |
| 55    | 79.44             | 14.66     | 81.26             | 12.24     | 83.49             | 9.20      | 84.81             | 7.36      | 85.68             | 6.14      |
| 60    | 80.77             | 15.52     | 82.37             | 12.95     | 84.32             | 9.73      | 85.47             | 7.79      | 86.23             | 6.49      |
| 65    | 82.18             | 16.26     | 83.54             | 13.57     | 85.19             | 10.18     | 86.17             | 8.15      | 86.82             | 6.79      |
| 70    | 83.66             | 16.88     | 84.76             | 14.08     | 86.11             | 10.56     | 86.90             | 8.45      | 87.42             | 7.05      |
| 75    | 85.19             | 17.37     | 86.03             | 14.48     | 87.05             | 10.86     | 87.65             | 8.69      | 88.05             | 7.24      |
| 80    | 86.77             | 17.72     | 87.34             | 14.77     | 88.02             | 11.08     | 88.42             | 8.86      | 88.69             | 7.39      |
| 85    | 88.38             | 17.93     | 88.66             | 14.94     | 89.01             | 11.21     | 89.21             | 8.97      | 89.34             | 7.47      |
| 90    | 90.00             | 18.00     | 90.00             | 15.00     | 90.00             | 11.25     | 90.00             | 9.00      | 90.00             | 7.50      |