

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:

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

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

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

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

| "N" 4 Sides, Butted* | | 4 Sides, Mitered | | 5 Sides, Mitered | | 6 Sides, Mitered | | 8 Sides, Mitered | | |
|-------------------------|-------------------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|-------|
| "MG" MiterGauge | "BT" 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 |