

**Miscellaneous Shapes  
Single Angles  
Fendolite M-II and TG**

| ASTM Desig.     | W/D  | Metric Desig.   | M/D   | Hp/A  | 1-Hour | 1-1/2 Hour | 2-Hour | 3-Hour  | 4-Hour  |
|-----------------|------|-----------------|-------|-------|--------|------------|--------|---------|---------|
| L 8 x 8 x 1-1/8 | 1.80 | 203 x 203 x 29  | 106.2 | 73.3  | 7/16   | 5/8        | 13/16  | 1-1/4   | 1-5/8   |
| x 1             | 1.62 | x 25            | 95.6  | 81.5  | 7/16   | 11/16      | 7/8    | 1-5/16  | 1-3/4   |
| x 7/8           | 1.43 | x 22            | 84.4  | 92.3  | 1/2    | 11/16      | 15/16  | 1-3/8   | 1-7/8   |
| x 3/4           | 1.24 | x 19            | 73.2  | 106.5 | 1/2    | 3/4        | 1      | 1-1/2   | 2       |
| x 5/8           | 1.04 | x 16            | 61.4  | 126.9 | 9/16   | 13/16      | 1-1/8  | 1-5/8   | 2       |
| x 9/16          | 0.94 | x 14            | 55.5  | 140.4 | 9/16   | 7/8        | 1-1/8  | 1-5/8   | 2       |
| x 1/2           | 0.84 | x 13            | 49.6  | 157.1 | 5/8    | 15/16      | 1-3/16 | 1-5/8   | 2       |
| L8 x 6 x 1      | 1.60 | 203 x 152 x 25  | 94.4  | 82.5  | 7/16   | 11/16      | 7/8    | 1-5/16  | 1-3/4   |
| x 7/8           | 1.41 | x 22            | 83.2  | 93.6  | 1/2    | 11/16      | 15/16  | 1-3/8   | 1-7/8   |
| x 3/4           | 1.22 | x 19            | 72.0  | 108.2 | 1/2    | 3/4        | 1      | 1-1/2   | 2       |
| x 5/8           | 1.03 | x 16            | 60.8  | 128.2 | 9/16   | 13/16      | 1-1/8  | 1-5/8   | 2       |
| x 9/16          | 0.93 | x 14            | 54.9  | 141.9 | 5/8    | 7/8        | 1-3/16 | 1-5/8   | 2       |
| x 1/2           | 0.83 | x 13            | 49.0  | 159.0 | 5/8    | 15/16      | 1-3/16 | 1-5/8   | 2       |
| x 7/16          | 0.73 | x 11            | 43.1  | 180.8 | 11/16  | 1          | 1-5/16 | 1-13/16 | 2-5/16  |
| L8 x 4 x 1      | 1.58 | 203 x 102 x 25  | 93.2  | 83.5  | 7/16   | 11/16      | 7/8    | 1-5/16  | 1-3/4   |
| x 7/8           | 1.40 | x 22            | 82.6  | 94.3  | 1/2    | 3/4        | 15/16  | 1-7/16  | 1-7/8   |
| x 3/4           | 1.21 | x 19            | 71.4  | 109.1 | 1/2    | 3/4        | 1      | 1-1/2   | 2       |
| x 5/8           | 1.03 | x 16            | 60.8  | 128.2 | 9/16   | 13/16      | 1-1/8  | 1-5/8   | 2       |
| x 9/16          | 0.92 | x 14            | 54.3  | 143.5 | 5/8    | 7/8        | 1-3/16 | 1-5/8   | 2       |
| x 1/2           | 0.82 | x 13            | 48.4  | 161.0 | 5/8    | 15/16      | 1-1/4  | 1-13/16 | 2-5/16  |
| x 7/16          | 0.73 | x 11            | 43.1  | 180.8 | 11/16  | 1          | 1-5/16 | 1-13/16 | 2-5/16  |
| L7 x 4 x 3/4    | 1.20 | 178 x x102 x 19 | 70.8  | 110.0 | 1/2    | 3/4        | 1      | 1-1/2   | 2       |
| x 5/8           | 1.01 | x 16            | 59.6  | 130.7 | 9/16   | 7/8        | 1-1/8  | 1-5/8   | 2       |
| x 1/2           | 0.82 | x 13            | 48.4  | 161.0 | 5/8    | 15/16      | 1-1/4  | 1-13/16 | 2-5/16  |
| x 7/16          | 0.72 | x 11            | 42.5  | 183.3 | 11/16  | 1          | 1-5/16 | 1-13/16 | 2-5/16  |
| x 3/8           | 0.62 | x 9.5           | 36.6  | 212.9 | 11/16  | 1          | 1-3/8  | 2       | 2-11/16 |
| L6 x 6 x 1      | 1.58 | 152 x 152 x 25  | 93.2  | 83.5  | 7/16   | 11/16      | 7/8    | 1-5/16  | 1-3/4   |
| x 7/8           | 1.39 | x 22            | 82.0  | 95.0  | 1/2    | 3/4        | 15/16  | 1-7/16  | 1-7/8   |
| x 3/4           | 1.21 | x 19            | 71.4  | 109.1 | 1/2    | 3/4        | 1      | 1-1/2   | 2       |
| x 5/8           | 1.02 | x 16            | 60.2  | 129.4 | 9/16   | 13/16      | 1-1/8  | 1-5/8   | 2       |
| x 9/16          | 0.92 | x 14            | 54.3  | 143.5 | 5/8    | 7/8        | 1-3/16 | 1-5/8   | 2       |
| x 1/2           | 0.82 | x 13            | 48.4  | 161.0 | 5/8    | 15/16      | 1-1/4  | 1-13/16 | 2-5/16  |
| x 7/16          | 0.72 | x 11            | 42.5  | 183.3 | 11/16  | 1          | 1-5/16 | 1-13/16 | 2-5/16  |
| x 3/8           | 0.62 | x 9.5           | 36.6  | 212.9 | 11/16  | 1          | 1-3/8  | 2       | 2-11/16 |
| x 5/16          | 0.52 | x 7.9           | 30.7  | 253.8 | 3/4    | 1-1/16     | 1-7/16 | 2-1/8   | 2-13/16 |
| L6 x 4 x 7/8    | 1.37 | 152 x 102 x 22  | 80.8  | 96.4  | 1/2    | 3/4        | 15/16  | 1-7/16  | 1-7/8   |
| x 3/4           | 1.19 | x 19            | 70.2  | 110.9 | 9/16   | 13/16      | 1-1/16 | 1-9/16  | 2       |
| x 5/8           | 1.00 | x 16            | 59.0  | 132.0 | 9/16   | 7/8        | 1-1/8  | 1-5/8   | 2       |
| x 9/16          | 0.90 | x 14            | 53.1  | 146.7 | 5/8    | 7/8        | 1-3/16 | 1-5/8   | 2       |
| x 1/2           | 0.80 | x 13            | 47.2  | 165.0 | 5/8    | 15/16      | 1-1/4  | 1-13/16 | 2-5/16  |
| x 7/16          | 0.71 | x 11            | 41.9  | 185.9 | 11/16  | 1          | 1-5/16 | 1-13/16 | 2-5/16  |
| x 3/8           | 0.61 | x 9.5           | 36.0  | 216.4 | 11/16  | 1-1/16     | 1-3/8  | 2-1/16  | 2-11/16 |
| x 5/16          | 0.51 | x 7.9           | 30.1  | 258.8 | 3/4    | 1-1/8      | 1-7/16 | 2-3/16  | 2-13/16 |
| L6 x 3.5 x 1/2  | 0.81 | 152 x 89 x 13   | 47.8  | 163.0 | 5/8    | 15/16      | 1-1/4  | 1-13/16 | 2-5/16  |
| x 3/8           | 0.61 | x 9.5           | 36.0  | 216.4 | 11/16  | 1-1/16     | 1-3/8  | 2-1/16  | 2-11/16 |
| x 5/16          | 0.51 | x 7.9           | 30.1  | 258.8 | 3/4    | 1-1/8      | 1-7/16 | 2-3/16  | 2-13/16 |

**Miscellaneous Shapes  
Single Angles  
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| ASTM Desig.      | W/D  | Metric Desig.  | M/D  | Hp/A  | 1-Hour | 1-1/2 Hour | 2-Hour  | 3-Hour  | 4-Hour  |
|------------------|------|----------------|------|-------|--------|------------|---------|---------|---------|
| L5 x 5 x 7/8     | 1.38 | 127 x 127 x 22 | 81.4 | 95.7  | 1/2    | 3/4        | 15/16   | 1-7/16  | 1-7/8   |
| x 3/4            | 1.20 | x 19           | 70.8 | 110.0 | 1/2    | 3/4        | 1       | 1-1/2   | 2       |
| x 5/8            | 1.02 | x 16           | 60.2 | 129.4 | 9/16   | 13/16      | 1-1/8   | 1-5/8   | 2       |
| x 1/2            | 0.82 | x 13           | 48.4 | 161.0 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 7/16           | 0.72 | x 11           | 42.5 | 183.3 | 11/16  | 1          | 1-5/16  | 1-13/16 | 2-5/16  |
| x 3/8            | 0.62 | x 9.5          | 36.6 | 212.9 | 11/16  | 1          | 1-3/8   | 2       | 2-11/16 |
| x 5/16           | 0.52 | x 7.9          | 30.7 | 253.8 | 3/4    | 1-1/16     | 1-7/16  | 2-1/8   | 2-13/16 |
| L5 x 3.5 x 3/4   | 1.18 | 127 x 89 x 19  | 69.6 | 111.9 | 9/16   | 13/16      | 1-1/16  | 1-9/16  | 2       |
| x 5/8            | 1.00 | x 16           | 59.0 | 132.0 | 9/16   | 7/8        | 1-1/8   | 1-5/8   | 2       |
| x 1/2            | 0.81 | x 13           | 47.8 | 163.0 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 3/8            | 0.61 | x 9.5          | 36.0 | 216.4 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.51 | x 7.9          | 30.1 | 258.8 | 3/4    | 1-1/8      | 1-7/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.41 | x 6.4          | 24.2 | 322.0 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |
| L5 x 3 x 1/2     | 0.81 | 127 x 76 x 13  | 47.8 | 163.0 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 7/16           | 0.71 | x 11           | 41.9 | 185.9 | 11/16  | 1          | 1-5/16  | 1-13/16 | 2-5/16  |
| x 3/8            | 0.61 | x 9.5          | 36.0 | 216.4 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.51 | x 7.9          | 30.1 | 258.8 | 3/4    | 1-1/8      | 1-7/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.41 | x 6.4          | 24.2 | 322.0 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |
| L4 x 4 x 3/4     | 1.17 | 102 x 102 x 19 | 69.0 | 112.8 | 9/16   | 13/16      | 1-1/16  | 1-9/16  | 2       |
| x 5/8            | 0.99 | x 16           | 58.6 | 132.8 | 9/16   | 7/8        | 1-1/8   | 1-5/8   | 2       |
| x 1/2            | 0.80 | x 13           | 47.2 | 165.0 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 7/16           | 0.70 | x 11           | 41.3 | 188.6 | 11/16  | 1          | 1-5/16  | 1-13/16 | 2-5/16  |
| x 3/8            | 0.61 | x 9.5          | 36.0 | 216.4 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.51 | x 7.9          | 30.1 | 258.8 | 3/4    | 1-1/8      | 1-7/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.41 | x 6.4          | 24.2 | 322.0 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |
| L4 x 3.5 x 1/2   | 0.79 | 109 x 89 x 13  | 46.6 | 167.1 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 3/8            | 0.60 | x 9.5          | 35.4 | 220.0 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.51 | x 7.9          | 30.1 | 258.8 | 3/4    | 1-1/8      | 1-7/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.41 | x 6.4          | 24.2 | 322.0 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |
| L4 x 3 x 5/8     | 0.97 | 102 x 76 x 16  | 57.2 | 136.1 | 9/16   | 7/8        | 1-1/8   | 1-5/8   | 2       |
| x 1/2            | 0.79 | x 13           | 46.6 | 167.1 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 3/8            | 0.60 | x 9.8          | 35.4 | 220.0 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.50 | x 7.9          | 29.5 | 264.0 | 3/4    | 1-1/8      | 1-7/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.41 | x 6.4          | 24.2 | 322.0 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |
| L3.5 x 3.5 x 1/2 | 0.80 | 89 x 89 x 13   | 47.2 | 165.0 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 7/16           | 0.71 | x 11           | 41.9 | 185.9 | 11/16  | 1          | 1-5/16  | 1-13/16 | 2-5/16  |
| x 3/8            | 0.61 | x 9.5          | 36.0 | 216.4 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.51 | x 7.9          | 30.1 | 258.8 | 3/4    | 1-1/8      | 1-7/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.42 | x 6.4          | 24.8 | 314.3 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |
| L3.5 x 3 x 1/2   | 0.80 | 89 x 76 x 13   | 47.2 | 165.0 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 7/16           | 0.71 | x 11           | 41.9 | 185.9 | 11/16  | 1          | 1-5/16  | 1-13/16 | 2-5/16  |
| x 3/8            | 0.61 | x 9.5          | 36.0 | 216.4 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.52 | x 7.9          | 30.7 | 253.8 | 3/4    | 1-1/16     | 1-7/16  | 2-1/8   | 2-13/16 |
| x 1/4            | 0.42 | x 6.4          | 24.8 | 314.3 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |

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Single Angles  
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| ASTM Desig.      | W/D  | Metric Desig. | M/D  | Hp/A  | 1-Hour | 1-1/2 Hour | 2-Hour  | 3-Hour  | 4-Hour  |
|------------------|------|---------------|------|-------|--------|------------|---------|---------|---------|
| L3.5 x 2.5 x 1/2 | 0.80 | 89 x 64 x 13  | 47.2 | 165.0 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 3/8            | 0.61 |               | 36.0 | 216.4 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.51 | x 7.9         | 30.1 | 258.8 | 3/4    | 1-1/8      | 1-7/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.41 | x 6.4         | 24.2 | 322.0 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |
| L3 x 3 x 1/2     | 0.79 | 76 x 76 x 13  | 46.6 | 167.1 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 7/16           | 0.70 | x 11          | 41.3 | 188.6 | 11/16  | 1          | 1-5/16  | 1-13/16 | 2-5/16  |
| x 3/8            | 0.60 | x 9.5         | 35.4 | 220.0 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.51 | x 7.9         | 30.1 | 258.8 | 3/4    | 1-1/8      | 1-7/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.41 | x 6.4         | 24.2 | 322.0 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |
| L3 x 2.5 x 1/2   | 0.79 | 76 x 64 x 13  | 46.6 | 167.1 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 7/16           | 0.70 | x 11          | 41.3 | 188.6 | 11/16  | 1          | 1-5/16  | 1-13/16 | 2-5/16  |
| x 3/8            | 0.60 | x 9.5         | 35.4 | 220.0 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.51 | x 7.9         | 30.1 | 258.8 | 3/4    | 1-1/8      | 1-7/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.41 | x 6.4         | 24.2 | 322.0 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |
| L3 x 2 x 1/2     | 0.78 | 76 x 51 x 13  | 46.0 | 169.2 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 3/8            | 0.60 | x 9.5         | 35.4 | 220.0 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.51 | x 7.9         | 30.1 | 258.8 | 3/4    | 1-1/8      | 1-7/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.41 | x 6.4         | 24.2 | 322.0 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |
| L2.5 x 2.5 x 1/2 | 0.77 | 64 x 64 x 13  | 45.4 | 171.4 | 5/8    | 15/16      | 1-1/4   | 1-13/16 | 2-5/16  |
| x 3/8            | 0.59 | x 9.5         | 34.8 | 223.7 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.50 | x 7.9         | 29.5 | 264.0 | 3/4    | 1-1/8      | 1-7/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.40 | x 6.4         | 23.6 | 330.0 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |
| L2.5 x 2 x 3/8   | 0.59 | 64 x 51 x 9.5 | 34.8 | 223.7 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.50 | x 7.9         | 29.5 | 264.0 | 3/4    | 1-1/8      | 1-7/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.41 | x 6.4         | 24.2 | 322.0 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |
| L2 x 2 x 3/8     | 0.58 | 51 x 51 x 9.5 | 34.2 | 227.6 | 11/16  | 1-1/16     | 1-3/8   | 2-1/16  | 2-11/16 |
| x 5/16           | 0.49 | x 7.9         | 28.9 | 269.4 | 15/16  | 1-1/4      | 1-9/16  | 2-3/16  | 2-13/16 |
| x 1/4            | 0.40 | x 6.4         | 23.6 | 330.0 | 1      | 1-3/8      | 1-11/16 | 2-3/8   | 3       |