

# Marino\WARE® Product Submittal Data

**PRODUCT NAME:** 400S162-54

**MARINO\WARE PART #** 400SS16

05.40.00 Cold-Formed Metal Framing

## PROPERTIES:

|                         |        |                                  |        |
|-------------------------|--------|----------------------------------|--------|
| <b>A. Web (in)</b>      | 4"     | <b>Yield Strength Fy (KSI)</b>   | 50     |
| <b>B. Flange (in)</b>   | 1-5/8" | <b>Tensile Strength Fu (KSI)</b> | 65     |
| <b>C. Lip (in)</b>      | 1/2"   | <b>Design Thickness (in)</b>     | 0.0566 |
| <b>Mils</b>             | 54     | <b>Minimum Thickness (in)</b>    | 0.0538 |
| <b>Available Finish</b> | G60    | <b>Gauge</b>                     | 16     |

## SECTION PROPERTIES

### GROSS SECTION PROPERTIES

|   |       |
|---|-------|
| Cross Sectional Area: <b>A</b> (in <sup>2</sup> )     | 0.443 |
| Weight of Member: (lb/ft)                             | 1.51  |
| Moment of Inertia: <b>Ix</b> (in <sup>4</sup> )       | 1.098 |
| Section Modulus: <b>Sx</b> (in <sup>3</sup> )         | 0.549 |
| Radius of Gyration: <b>Rx</b> (in)                    | 1.574 |
| Gross Moment of Inertia: <b>Iy</b> (in <sup>4</sup> ) | 0.159 |
| Gross Radius of Gyration: <b>Ry</b> (in)              | 0.600 |

### EFFECTIVE SECTION PROPERTIES

|  |       |
|--|-------|
| Moment of Inertia-Deflection: <b>Ixe</b> (in <sup>4</sup> )  | 1.10  |
| Section Modulus: <b>Sxe</b> (in <sup>3</sup> )               | 0.50  |
| Allowable Local Bending Moment: <b>Mal</b> (in-k)            | 14.89 |
| Allowable Distortional Bending Moment: <b>Mad</b> (in-k)     | 14.40 |
| Allowable strong axis shear away from punch: <b>Vag</b> (lb) | 3372  |
| Allowable strong axis shear at punch: <b>Vanet</b> (lb)      | 1223  |

### TORSIONAL SECTION PROPERTIES

|   |        |
|---|--------|
| St. Venant Torsional Constant: <b>Jx1000</b> (in <sup>4</sup> )   | 0.473  |
| Torsional Warping Constant: <b>Cw</b> (in <sup>6</sup> )          | 0.560  |
| Shear Center to Centroid on Principal X-axis: <b>Xo</b> (in)      | -1.238 |
| Shear Center to Mid-Plane of the Web: <b>m</b> (in)               | 0.754  |
| Radius of Gyration on the Centroid Principal axis: <b>Ro</b> (in) | 2.090  |
| Torsional Flexural Constant: <b>β</b> 1-(xo/Ro) <sup>2</sup>      |        |

## CODES & STANDARDS

- AISI S100, S240 & ICC ES ESR-4062
- ASTM A 1003, A 653, & C 955
- IBC 2012, 2015, 2018, 2021 & FBC 2020, 2023

## GREEN INFO

- LEED credits available
- Contact Technical Services for more information.

