

# Marino\WARE® Product Submittal Data

**PRODUCT NAME:** 400S200-54

**MARINO\WARE PART #** 400SJ16

**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>	2"	<b>Tensile Strength Fu (KSI)</b>	65
<b>C. Lip (in)</b>	5/8"	<b>Design Thickness (in)</b>	0.0566
<b>Mils</b>	54	<b>Minimum Thickness (in)</b>	0.0538
<b>Available Finish</b>	G90	<b>Gauge</b>	16

## SECTION PROPERTIES

### GROSS SECTION PROPERTIES

Cross Sectional Area: <b>A</b> (in <sup>2</sup> )	0.500
Weight of Member: (lb/ft)	1.70
Moment of Inertia: <b>Ix</b> (in <sup>4</sup> )	1.292
Section Modulus: <b>Sx</b> (in <sup>3</sup> )	0.646
Radius of Gyration: <b>Rx</b> (in)	1.608
Gross Moment of Inertia: <b>Iy</b> (in <sup>4</sup> )	0.287
Gross Radius of Gyration: <b>Ry</b> (in)	0.758

### EFFECTIVE SECTION PROPERTIES

Moment of Inertia-Deflection: <b>Ixe</b> (in <sup>4</sup> )	1.29
Section Modulus: <b>Sxe</b> (in <sup>3</sup> )	0.55
Allowable Local Bending Moment: <b>Mal</b> (in-k)	16.43
Allowable Distortional Bending Moment: <b>Mad</b> (in-k)	16.60
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> )	0.534
Torsional Warping Constant: <b>Cw</b> (in <sup>6</sup> )	1.083
Shear Center to Centroid on Principal X-axis: <b>Xo</b> (in)	-1.662
Shear Center to Mid-Plane of the Web: <b>m</b> (in)	0.993
Radius of Gyration on the Centroid Principal axis: <b>Ro</b> (in)	2.433
Torsional Flexural Constant: <b>β</b> 1-(xo/Ro) <sup>2</sup>	0.534

## 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.

