

**Product Name:** 4" Stud  
**Description:** 400S250-54

### Physical Properties

|                     |       |                        |        |
|---------------------|-------|------------------------|--------|
| Web Depth (in)      | 4.000 | Gauge                  | 16     |
| Flange Width (in)   | 2.500 | Mils                   | 54     |
| Return Lip (in)     | 0.625 | Design Thickness (in)  | 0.0566 |
| Standard Coating    | CP60  | Minimum Thickness (in) | 0.0538 |
| Available Coating * | CP90  | Yield Stress Fy (ksi)  | 50     |
| Weight (lb/ft)      | 1.890 | Ultimate, Fu (ksi)     | 65     |

### Section Properties

|                               |                       |
|-------------------------------|-----------------------|
| Cross Sectional Area (A)      | 0.556 in <sup>2</sup> |
| Moment of Inertia (Ix)        | 1.512 in <sup>4</sup> |
| Radius of Gyration (Rx)       | 1.649 in              |
| Gross Moment of Inertia (Iy)  | 0.490 in <sup>4</sup> |
| Gross Radius of Gyration (Ry) | 0.938 in              |

### Effective Section Properties

|  |                       |
|--|-----------------------|
| Moment of Inertia for Deflection (Ixe) | 1.496 in <sup>4</sup> |
| Section Modulus (Sxe)                  | 0.576 in <sup>3</sup> |
| Allowable Bending Moment (Ma)          | 17.24 in-k            |

### Torsional Properties

|   |                       |
|---|-----------------------|
| St. Venant Torsion Constant (Jx1000)            | 0.594 in <sup>4</sup> |
| Warping Constant (Cw)                           | 1.821 in <sup>6</sup> |
| Distance from Shear Center to Neutral Axis (Xo) | -2.124 in             |
| Radii of Gyration (Ro)                          | 2.848 in              |
| Torsional Flexural Constant (Beta)              | 0.444                 |

\*By request



### MANUFACTURING Codes & Standards

NASPEC AISI S100-07 IBC 2009 2012 Compliant  
Coated in accordance to ASTM A1003 & A653  
Meets or exceeds ASTM C955 & AISI S200  
Code Evaluation Report ICC-ESR #3957

### GREEN Benefits & LEED Data:

LEED Credit MR 2 - Construction Waste Mgmt - 1-2 Points  
LEED Credit MR 4 - Recycled Credit - 1-2 Points  
LEED Credit MR 5 - Regional Materials - 1-2 Points  
CRACO products are 100% recyclable  
Contact Technical Services for more information