

**Product Name:** 4" SmartStud 23mil

**Description:** 400SS125-23

### Physical Properties

Web Depth (in)	4.000	Yield Stress Fy (KSI)	50
Flange Width (in)	1.250	Mils	23
Return Lip (in)	0.250	Design Thickness (in)	0.0245
Requested Coating	G60	Minimum Thickness (in)	0.0233
Weight (lb/ft)	0.576	Gauge EQ	20

### Section Properties

Cross Sectional Area (A)	0.169 in <sup>2</sup>
Moment of Inertia (Ix)	0.404 in <sup>4</sup>
Radius of Gyration (Rx)	1.545 in
Gross Moment of Inertia (Iy)	0.029 in <sup>4</sup>
Gross Radius of Gyration (Ry)	0.416 in

### Effective Section Properties

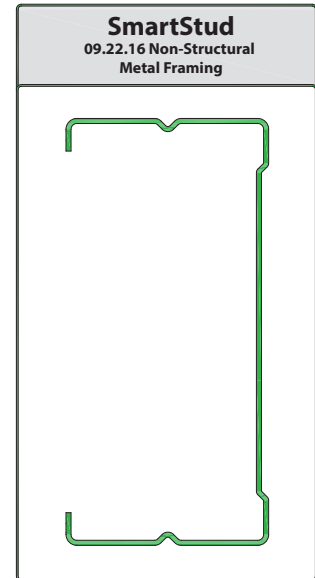
Moment of Inertia for Deflection (Ixe)	0.383 in <sup>4</sup>
Section Modulus (Sxe)	0.163 in <sup>3</sup>
Allowable Bending Moment (Ma)	4.080 in-k

### Torsional Properties

St. Venant Torsion Constant (Jx1000)	0.0333 in <sup>4</sup>
Warping Constant (Cw)	0.0965 in <sup>6</sup>
Distance from Shear Center to Neutral Axis (Xo)	-0.079 in
Radii of Gyration (Ro)	1.787 in
Torsional Flexural Constant (Beta)	0.803
Unbraced Length (Lu)	23.5 in

### Limiting Wall Heights - Composite

Spacing <small>4"SmartStud23mil</small>	5 psf			7.5 psf			10 psf		
	L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
12"	24'-10"	19'-10"	17'-5"	21'-10"	17'-4"	15'-4"	20'-1"f	15'-10"	13'-10"f
16"	22'-1"	17'-6"	15'-6"	19'-3"f	15'-6"	13'-10"	18'-10"f	14'-10"	12'-6"f
24"	19'-11"	15'-9"	13'-8"	17'-1"f	13'-9"	12'-2"	15'-6"f	12'-8"	11'-8"f



### MANUFACTURING Codes & Standards

- NASPEC AISI S100-07 IBC 2009 2012 Compliant
- Coated in accordance to ASTM A1003 & A653
- Meets or exceeds ASTM C645 & C745 & AISI S220
- Multiple UL Design Listings including U419
- 3rd Party Code Evaluation Report ICC-ESR #3943
- US Patent No. D618,365S

### 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