

**Product Name:** 2-1/2" SmartStud 33mil  
**Description:** 250SS125-33

### Physical Properties

Web Depth (in)	2.500	Yield Stress Fy (KSI)	33
Flange Width (in)	1.250	Mils	33
Return Lip (in)	0.250	Design Thickness (in)	0.0346
Standard Coating	G40	Minimum Thickness (in)	0.0329
Weight (lb/ft)	0.600	Gauge	20

### Section Properties

Cross Sectional Area (A)	0.176 in <sup>2</sup>
Moment of Inertia (Ix)	0.178 in <sup>4</sup>
Radius of Gyration (Rx)	1.006 in
Gross Moment of Inertia (Iy)	0.033 in <sup>4</sup>
Gross Radius of Gyration (Ry)	0.431 in

### Effective Section Properties

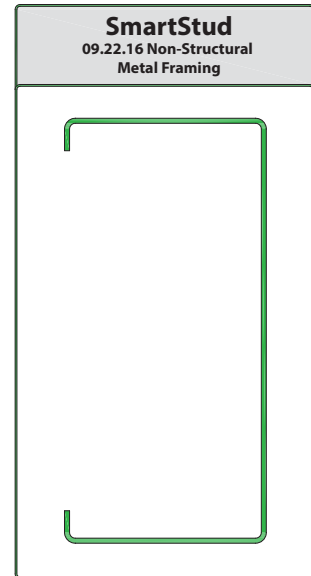
Moment of Inertia for Deflection (Ixe)	0.175 in <sup>4</sup>
Section Modulus (Sxe)	0.125 in <sup>3</sup>
Allowable Bending Moment (Ma)	2.480 in-k

### Torsional Properties

St. Venant Torsion Constant (Jx1000)	0.0700 in <sup>4</sup>
Warping Constant (Cw)	0.0400 in <sup>6</sup>
Distance from Shear Center to Neutral Axis (Xo)	-0.885 in
Radii of Gyration (Ro)	1.408 in
Torsional Flexural Constant (Beta)	0.605
Unbraced Length (Lu)	28.9 in

### Limiting Wall Heights - Composite

Spacing <small>2-1/2" SmartStud33</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"	19'-8"	15'-8"	13'-8"	17'-3"	13'-8"	11'-11"	15'-8"	12'-5"	10'-10"
16"	17'-11"	14'-3"	12'-5"	15'-8"	12'-5"	10'-10"	14'-3"	11'-3"	9'-10"
24"	15'-8"	12'-5"	10'-10"	13'-8"	10'-10"	9'-5"	12'-4"	9'-10"	8'-4"



### 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