

Product Category: 05 41 00 - Structural Framing Product Name: 800S250-97

#### **Important Properties Notes:**

• Calculated properties are based on AISI S100-12 with S2-10 Supplement, North American Specification for Design of Cold-Formed Steel Structural Members.

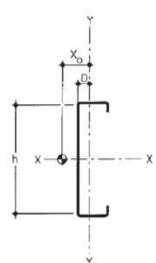
- The centerline bend radius is based on inside corner radii shown in thickness chart.
- Effective properties incorporate the strength
- cold work of forming as applicable per AISI A7.2.
- Tabulated gross properties are based on full-
- section of the studs, away from punchouts.
- For deflection calculations, use the effective
- Allowable moment includes cold-work of forming.
- For the steels that have both 33 and 50 ksi listing, if the design is based on 50 ksi, the 50 ksi steel needs to be

specified. (ex. 362S162-43 (50 ksi))

# **Properties**

## 800S250-97 Properties

Finish:	G90
Web Depth	8" in
Flange Width	2 1/2 in
Design Thickness	0.1017 in
Thickness	97 mils or 12GA
Yield stress, Fy	50 ksi
Weight	4.67 lb/ft



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# Project Information

Name: Address:

# Contractor Information Name:

Contact: Phone: Fax:

## Architect Information

Name: Contact: Phone: Fax:

# Distributor/Rep Information

Contact: Phone: Email /Web:

# 800S250-97 Section Properties

## **Gross Section Properties**

Cross sectional area (A)	1.372 in2
Moment of inertia (Ix)	12.793 In4
Section Modulus (Sx)	3.198 in3
Radius of gyration (Rx)	3.053 in
Gross moment of inertia (ly)	1.009 in4
Gross Radius of gyration (Ry)	0.858 in

### **Effective Section Properties**

12.428	in4
3.05	in3
102.6	In-k
86.81	In-K
10885	lb
5938	lb
	12.428 3.05 102.6 86.81 10885 5938

#### **Torsional Properties**

St. Venant torsion constant (J x 1000)	4.731 in4
Warping constant (Cw)	13.091 in6
Distance from shear center to neutral	-1.067 in
axis (Xo)	
Distance from shear center to	1.008 in
mid-plane (M)	
Radii of gyration (Ro)	3.555 in
Torsional flexural constant (Beta)	0.796
Unbraced Length (Lu)	46.4 in



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## **Limiting Heights Properties**

#### Limiting Wall Heights - Curtain Wall 1-Span

Spacing		5psf 15psf				20psf			25psf			
(inches)	L/120	L/240	L/360	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600
12	68'-9"	54'-7"	47'-8"	42'-7"	37'-3"	31'-5"	38'-9"	33'-10"	28'-6"	35'-11"	31'-5"	26'-6"
16	62'-6"	49'-7"	43'-4"	38'-9"	33'-10"	28'-6"	35'-2"	30'-9"	25'-11"	32'-8"	28'-6"	24'-0"
24	54'-7"	43'-4"	37'-10"	33'-10"	29'-6"	24'-11"	30'-9"	26'-10"	22'-7"	28'-6"	24'-11"	21'-0"

Spacing		30psf			35psf 40psf		Dpsf		50psf			
(inches)	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600	L/240	L/360	L/600
12	33'-10"	29'-6"	24'-11"	32'-1"	28'-1"	23'-8"	30'-9"	26'-10"	22'-7"	28'-6"	24'-11"	21'-0"
16	30'-9"	26'-10"	22'-7"	29'-2"	25'-6"	21'-6"	27'-11"	24'-4"	20'-7"	25'-11"	22'-7"	19'-1"
24	26'-10"	23'-5"	19'-9"	25'-6"	22'-3"	18'-9"	24'-4"	21'-3"	17'-11"	22'-7"	19'-9"	16'-8"

### **Additional Specification Information**

Studs Unlimited is an SFIA member. Studs Unlimited acts in accordance with the product and quality standards required by the SFIA program.

Studs Unlimited meets or exceeds ASTM C955, A653, and A1003.

## **LEED Specification Information**

Materials & Resources Credit 2: Construction Waste Management - Studs Unlimited Steel Framing Products are formed from steel and are 100% recyclable. (1 point)

Materials & Resources Credit 4: Recycled Content intends to increase demand for building products that incorporate recycled content materials, therefore reducing impacts resulting from extraction and processing of new virgin materials. As discussed and demonstrated below, North American steel building products contribute positively toward points under Credits 4.1 and 4.2. The following is required by LEED-NC Versions 2.2 and 2009:

Credit 4.1 (1 point) Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project.

Credit 4.2 (1 point) Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of pre-consumer content constitutes at least 20% of the total value of the materials in the project.

Materials & Resources Credit 5: Regional Materials - Contact Studs Unlimited directly for information at bjpowell@studsunlimited.com. Studs Unlimited is located in Oklahoma City, Oklahoma. (1 point)