

# **Product Submittal Sheet**

Technical Services: 888-437-3244 Engineering Services: 877-832-3206 Sales: 800-543-7140 clarkdietrich.com

S250 (2-1/2" Flange Structural Stud) **Product category: Product name:** 250S250-54 (50ksi, CP60) P - Punched

> 54mils (16ga) Coating: CP60 per ASTM C955

> > Color coding: Green

### **Geometric Properties**

Web depth 2.500 in Flange width 2.500 in Punchout width 0.75 in Stiffening lip 0.625 in Punchout length 4.00 in Design thickness 0.0566 in Min. steel thickness 0.0538 in Yield strength, Fy 50 ksi Fy with Cold-Work, Fya 53.5 ksi Ultimate, Fu 65.0 ksi

#### **Gross Section Properties of Full Section, Strong Axis**

Cross sectional area (A)	0.471 in <sup>2</sup>
Member weight per foot of length	1.60 lb/ft
Moment of inertia (Ix)	0.524 in⁴
Section modulus (Sx)	0.419 in <sup>3</sup>
Radius of gyration (Rx)	1.055 in
Gross moment of inertia (ly)	0.412 in⁴
Gross radius of gyration (Ry)	0.935 in

#### **Effective Section Properties, Strong Axis**

Effective Area (Ae)	0.326 in <sup>2</sup>
Moment of inertia for deflection (Ix)	0.521 in⁴
Section modulus (Sx)	0.335 in <sup>3</sup>
Allowable bending moment (Ma)	10.74 in-k
Allowable moment based on distortion buckling (Mad)	11.54 in-k
Allowable shear force in web (solid section)	2353 lb
Allowable shear force in web (perforated section)	565 lb
Unbraced length (Lu)	52.3 in

#### **Torsional Properties**

St. Venant torsion constant (J x 1000)	0.503 in <sup>4</sup>
Warping constant (Cw)	0.778 in <sup>6</sup>
Distance from shear center to neutral axis (Xo)	-2.389 in
Distance between shear center and web centerline (m)	1.349 in
Radii of gyration (Ro)	2.774 in
Torsional flexural constant (Beta)	0.258

#### **ASTM & Code Standards:**

- AISI North American Specification [NASPEC] S100-12
- \* Effective properties incorporate the strength increase from the cold work of forming
- Gross properties are based on the cross section away from the punchouts
- Structural framing is produced to meet or exceed ASTM C955
- Sheet steel meets or exceeds mechanical and chemical requirements of ASTM A1003
- · ClarkDietrich's structural and nonstructural framing comply with the SFIA Code Compliance Certification Program, ICC-ES ESR-1166P and Intertek CCRR-0206
- SDS & Product Certification Information is available at itools.clarkdietrich.com

## For installation & storage information refer to ASTM C1007

#### **Sustainability Credits:**

For more details and LEED letters contact Technical Services at 888-437-3244 or visit www.clarkdietrich.com/LEED

LEED v4 MR Credit -- Building Product Disclosure and Optimization: EPD (1 point) - Sourcing of Raw Materials (1 point) - Material Ingredients (1 point) - Construction and Demolition Waste Management (up to 2 points) - Innovation Credit (up to 2 points).

LEED 2009 Credit MR 2 & MR 4 - ClarkDietrich's steel products are 100% recyclable and have a national average recycled content of 34.2% (19.8% post-consumer and 14.4% pre-consumer). If seeking a higher number to meet Credit MR 5, please contact us at (info@clarkdietrich.com / 888-437-3244)

05.40.00 (Cold-Formed Metal Framing)

#### **Used in framing applications:**

- Load-bearing walls
- Curtain walls
- Tall interior walls
- Floor & ceiling joists
- Trusses



East market punchout spacing: 12" from lead end then 24" o.c.

West market punchout spacing: 24" from lead end then 24" o.c.

Mana a		
Name:	Name:	Name:
Address:	Contact:	Contact:
	Phone:	Phone:
	Fax:	Fax: