PRODUCT CODE: **SS-21254-G90**
PUBLICATION DATE: **DECEMBER 2024**

SUBMITTAL SHEET

2-1/2” 54 Mils Structural Stud with 1-5/8” Flange (G90)

PRODUCT INFORMATION

Description	**2-1/2” 54 Mils Structural Stud with 1-5/8” Flange (G90)**
Code	**SS-21254-G90**
Category	**Studco Structural Stud**

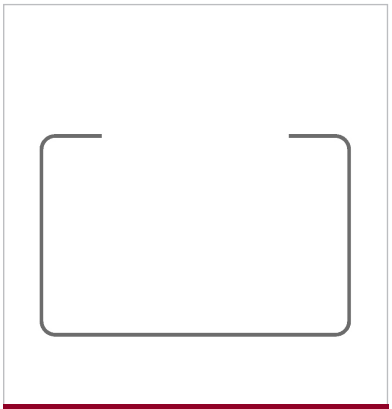
GEOMETRIC PROPERTIES

Web Depth (in)	**2-1/2”**
Flange Height (in)	**1-5/8”**
Stiffening Lip	**1/2”**
Weight (lb/ft)	**1.22**
Punchout Width	**3/4”**
Punchout Height	**1-1/2”**
Gauge	**16 GA**
Design Thickness	**0.0566**
Thickness - Mils	**54**
Yield Strength FY (KSI)	**50**
Coating	**G90**

SS-21254-G90

GROSS SECTION PROPERTIES

Cross Section Area **A**	**0.358 in.2**
Moment of inertia **Ixx**	**0.370 in.4**
Section modulus **Sxx**	**0.296 in.3**
Radius of gyration **Rxx**	**1.016 in.**
Moment of inertia **Iyy**	**0.135 in.4**
Radius of gyration **Ryy**	**0.613 in.**



SS-21254-G90 PROFILE

EFFECTIVE SECTION PROPERTIES

Moment of inertia for deflection **Ixx**	**0.370 in4**
Section modulus **Sxx**	**0.284 in3**
Allowable bending moment **Ma-L**	**9.42 in.-k**
Allowable moment based on distortional buckling **Ma-D**	**9.46 in-k**
Critical value of rotational stiffness **KfC**	**0.00**
Allowable strong axis shear away from punchouts **Vag**	**2353.00 lbs**
Allowable strong axis shear at punchouts **VaNet**	**565 lbs**

TORSION PROPERTIES

St Venant torsion constant **J1000**	**0.383 in.4**
Warping constant **Cw**	**0.223 in.6**
Distance from shear center to neutral axis **Xo**	**-1.443 in.**
Distance from shear center to mid-plane of web **m**	**0.845 in.**
Polar radius of gyration **Ro**	**1.868 in.**
Beta **β**	**0.403 β**
Max. unbraced length **Lu**	**33.900 in.**

SUSTAINABILITY & LEED

LEED credit MR 2.1 (1 point)
LEED credit MR 2.2 (1 point)
LEED credit MR 4.1 (1 point)
LEED credit MR 4.2 (1 point)
LEED credit MR 5.1 (1 point)
LEED credit MR 5.2 (1 point)
ISO14001:2015 certified company
Total recycled content 32.7%
(Content: post consumer 25.5%, pre consumer 6.8%)

Suitable for UL Assemblies U419, U465 & U411

ASTM INFORMATION

All products manufactured by Studco Building Systems are certified to meet or exceed all applicable American Society for Testing & Materials standards as listed below. Studco Building Systems is also accredited to ISO9001- an internationally recognized standard - and an established member of the Steel Stud Manufacturers Association (SSMA).

Material Specifications (ASTM)

• All STUDCO Structural framing members conform to A1003 - A1003 is the Standard specification for steel sheet, Carbon, Metallic- and Nonmetallic - Coated for Cold Formed Framing Members Coating Specification (ASTM) .

• All STUDCO Structural framing members conform to C955 - C955 Standard specification for load-bearing (transverse and axial) steel studs, runners (tracks), and bracing or bridging for screw application of gypsum panel products and metal plaster bases.

Product Specifications (ASTM)

• All STUDCO Structural framing members conform to C955 - C955 Standard specification for load-bearing (transverse and axial) steel studs, runners (tracks), and bracing or bridging for screw application of gypsum panel products and metal plaster bases.

All Structural products have a G60 minimum weight conforming to ASTM Specification A1003 or have a protective coating with the industry standard requirements of ASTM C645. A G90 Coating is available upon request.

All Structural Studs Conform to U420 Standards for Fire Rated Assemblies.

SS-21254-G90_US_1224