PRODUCT CODE: **SS-454-G90**
PUBLICATION DATE: **DECEMBER 2024**

SUBMITTAL SHEET

4” 54 Mils Structural Stud with 1-5/8” Flange (G90)

PRODUCT INFORMATION

Description	**4” 54 Mils Structural Stud with 1-5/8” Flange (G90)**
Code	**SS-454-G90**
Category	**Studco Structural Stud**

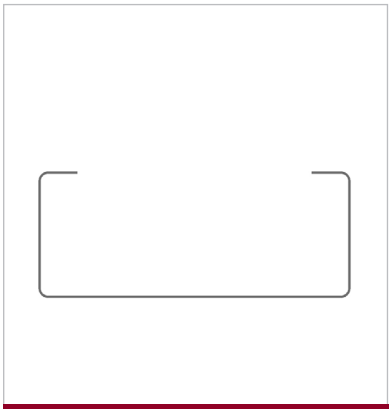
SS-454-G90

GEOMETRIC PROPERTIES

Web Depth (in)	**4”**
Flange Height (in)	**1-5/8”**
Stiffening Lip	**1/2”**
Weight (lb/ft)	**1.51**
Punchout Width	**1-1/2”**
Punchout Height	**2-1/4”**
Gauge	**16 GA**
Design Thickness	**0.0566**
Thickness - Mils	**54**
Yield Strength FY (KSI)	**50**
Coating	**G90**

GROSS SECTION PROPERTIES

Cross Section Area **A**	**0.443 in.2**
Moment of inertia **Ixx**	**1.098 in.4**
Section modulus **Sxx**	**0.549 in.3**
Radius of gyration **Rxx**	**1.574 in.**
Moment of inertia **Iyy**	**0.159 in.4**
Radius of gyration **Ryy**	**0.600 in.**



SS-454-G90 PROFILE

EFFECTIVE SECTION PROPERTIES

Moment of inertia for deflection **Ixx**	**1.098 in4**
Section modulus **Sxx**	**0.498 in3**
Allowable bending moment **Ma-L**	**14.90 in.-k**
Allowable moment based on distortional buckling **Ma-D**	**15.25 in-k**
Critical value of rotational stiffness **KfC**	**0.00**
Allowable strong axis shear away from punchouts **Vag**	**3372.00 lbs**
Allowable strong axis shear at punchouts **VaNet**	**1223 lbs**

TORSION PROPERTIES

St Venant torsion constant **J1000**	**0.473 in.4**
Warping constant **Cw**	**0.560 in.6**
Distance from shear center to neutral axis **Xo**	**-1.238 in.**
Distance from shear center to mid-plane of web **m**	**0.754 in.**
Polar radius of gyration **Ro**	**2.090 in.**
Beta **β**	**0.649 β**
Max. unbraced length **Lu**	**34.100 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.

For Sales Inquiries, please contact Studco Building Systems on 800.675.8023
Studco Building Systems US LLC 1700 Boulter Industrial Parkway Webster NY 14580 USA www.studcosystems.com