

ASTM A572 Grade 50

General Product Description

The ASTM A572 specification is the Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel for used in general construction and structural applications. ASTM A572 includes five grades with specified minimum yield strengths of 42, 50, 55, 60, and 65 ksi, respectively. For applications where notch toughness is important, consult SSAB for specific Charpy V-notch toughness requirements. ASTM A572 grades are used in a wide variety of structural applications in many market segments.

Dimensions

Grade	Product Type	Thickness (Inches)	Width (Inches)	Length (Inches)
50	Mill Plate	0.188 - 4.00 ¹⁾	60 - 131.9 ¹⁾	120 - 1020 ¹⁾
50	Temper Leveled Plate ²⁾	0.100 - 0.625	48 - 96	72 - 720
	Coil for Conversion To ³⁾	0.188 - 0.625 ⁴⁾	60 - 96 ⁴⁾	

¹⁾ Please inquire for plate thicknesses over 3.0 inches, plate widths less than 72 inches and greater than 120 inches, and for plate lengths less than 120 inches and greater than 1020 inches.

²⁾ SSAB's Cut-To-Length facilities use the temper leveled coil (TLC) process to produce temper leveled plate products. For additional information concerning our temper leveling process, please refer to our SSAB Americas: North American Cut-to-Length Operations brochure located under the Downloads section of our Commercial Steel Overview page.

³⁾ Coils are excluded from qualification to this specification until they are processed into a finished plate product and all required processing, inspections, and testing are performed. Coils For Conversion To product will be certified to chemistry only. Coils will be subject to availability, so please inquire.

⁴⁾ Please inquire for coil thicknesses greater than 0.625 inches and for coil widths less than 60 inches and greater than 96 inches. Slitting capabilities are determined by strength levels and thicknesses, so please inquire all slit coil opportunities.

Mechanical Properties

Tensile testing is performed in the transverse direction according to ASTM A6 requirements. The tensile property requirements are tabulated below:

Grade	Thickness (Inches)	Yield Strength (min ksi)	Tensile Strength (min ksi)	Elongation in 2" ¹⁾ (min %)	Elongation in 8" ¹⁾ (min %)
50 ²⁾	0.100 - 4.00	50	65	21	18

¹⁾ For plates wider than 24 in., the elongation requirement is reduced two percentage points. Additional elongation requirement adjustments are allowed per the Tension Test section of Specification ASTM A6.

²⁾ Can be dual certified as A572 Grade 50/CSA G40.21 50W upon request.

Tolerances

Tolerances for Mill Plate:

Thickness, width and length tolerances for A572, Grade 50 plates are in accordance with ASTM A6. ASTM A6 Half-Standard Flatness tolerances are available for plate thicknesses of 3/8 inches to 3.0 inches. Inquire for specific mill flatness capabilities.

Tolerances for Temper Leveled Plate:

Thickness, width and length tolerances for A572, Grade 50 plates are in accordance with ASTM A6. ASTM A6 Half-Standard Flatness tolerances or better are available for temper leveled plates. Flatness capabilities are determined by the processing line and the minimum yield strength of the material.

Tolerances for Coils for Conversion To:

For minimum gauge orders, thickness and width tolerances are in accordance with the respective ASTM specifications of A568 for thicknesses of less than 0.230 inches(exclusive), and A635 for thicknesses of 0.230 inches to 1.00 inch, inclusive. Thickness tolerances are in accordance with Table S1.1 found in each of the ASTM specifications of A635 and A568, respective of thickness. Width tolerances are in accordance with Table 6 of ASTM A568 and Table 3 of ASTM A635. Thickness tolerances for nominal gauge orders must be inquired.

All tolerances will be confirmed to the customer via SSAB's Order Acknowledgement document.

Contact Information

www.ssab.com/contact