

CSA 50WT

General Product Description

The Canadian Standards Association (CSA) specification G40.20/G40.21 covers structural quality steel of a number of different product forms. SSAB produces structural quality plates and sheet in accordance with CSA G40.20/G40.21 with specified minimum yield strengths of 38 ksi to 70 ksi. CSA G40.20/G40.21 also specifies different chemistry and mechanical property requirements for American Petroleum Institute (API) plate applications listed in API 620 and 650. CSA 50WT is a weldable, notch-tough steel with a specified minimum yield strength of 50 ksi for thicknesses up to 2.5 inches and a specified minimum yield strength of 46 ksi for thicknesses greater than 2.5 inches along with specified minimum Charpy V-notch impact toughness.

Dimensions

Grade	Product Type	Thickness (Inches)	Width (Inches)	Length (Inches)
50WT	Mill Plate	0.188 - 3.0 ¹⁾	60 - 120 ¹⁾	120 - 1020 ¹⁾
50WT	Temper Levelled Plate ²⁾	0.100 - 0.625	48 - 96	72 - 720
	Coil for Conversion To ³⁾	0.188 - 0.750	60 - 96 ⁴⁾	

¹⁾Please inquire for plate thicknesses greater than 2.0 inches and up to 3.0 inches, for 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 levelled coil (TLC) process to produce temper levelled 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 Steels 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, testing are performed. Coils For Conversion To product will be certified to chemistry only. Inquire for physical properties testing. Coils will be subject to availability, so please inquire.

⁴⁾Please inquire for coil widths less than 72 inches and greater than 96 inches. Slitting capabilities are determined by strength levels and thicknesses, so please inquire all slit coil opportunities.

Mechanical Properties

Grade	Thickness (Inches)	Yield Strength (min ksi)	Tensile Strength ²⁾ (ksi)	Elongation in 2" ¹⁾ (min %)	Elongation in 8" ¹⁾ (min %)
50WT	0.100 - 2.50	50	65 - 95	20	17
50WT	2.51 - 3.00	46	65 - 95	20	17

¹⁾ See elongation requirement adjustment of CSA G40.20-13(Latest Edition).

²⁾ Plate applications listed in API 620 and 650 must be inquired to ensure that the tensile strength upper limit is within 20 ksi of the specified minimum.

Impact Properties

Grade ^{1) 4)}	Thickness ^{2) 4) 5)}	Minimum Longitudinal Average Impact Energy ^{2) 4)}	Standard Longitudinal Test Temperature (max) ^{3) 4)}
50WT Category 1	0.188 - 3.00 Inches	20 ft-lbs	32 °F
50WT Category 2	0.188 - 3.00 Inches	20 ft-lbs	0 °F
50WT Category 3	0.188 - 3.00 Inches	20 ft-lbs	-20 °F
50WT Category 4	0.188 - 3.00 Inches	20 ft-lbs	-50 °F
50WT Category 5	0.188 - 3.00 Inches	inquire	inquire

¹⁾ 50WT must be inquired to determine mandatory Charpy impact testing category and is subject to review before acceptance.

²⁾ Testing to be completed per CSA G40.21 requirements following Size Group requirements.

³⁾ Actual test temperature may be lower than standard temperature and will be reported with absorbed energy values.

⁴⁾ Category 5 must be inquired and is subject to review. Any values other than these shown and/or transverse testing shall be inquired as Category 5.

⁵⁾ Please inquire for impact testing for thicknesses ≤ 0.188 inches.

Available Chemistries

Tensile testing is performed in the transverse direction.

Tolerances

Tolerances for Mill Plate:

Thickness, width and length tolerances for CSA G40.21 50WT plates are in accordance with ASTM A6. ASTM A6 Half-Standard Flatness tolerances are available for plate thicknesses of 3/8 inches to 2.0 inches. Inquire for CSA Restrictive Flatness tolerances and for specific mill flatness capabilities.

Tolerances for Temper Levelled Plate:

Thickness, width and length tolerances for CSA G40.21 50WT plates are in accordance with ASTM A6. ASTM A6 Half-Standard Flatness tolerances or better are available for temper levelled plates. Flatness capabilities are determined by the processing line and the minimum yield strength of the material. Inquire for CSA Restrictive Flatness tolerances.

Tolerances for Coils for Conversion To:

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. Flatness tolerances for thicknesses of less than 0.230 inches(exclusive) are guaranteed per ASTM A568 Table 14 when adequate flattening operations are performed.

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

Contact Information

www.ssab.com/contact