

Strenx 960

General Product Description

Strenx 960 is a general structural steel that, depending on thickness, guarantees minimum yield strength up to 960 MPa. Strenx 960 meets the requirements of EN 10 025-6 for the S 960 grade and thicknesses. Typical applications are demanding load-bearing structures.

Available dimensions

Strenx 960 is available in plate thicknesses of 4 – 100 mm. Strenx 960 is available in widths up to 3350 mm and lengths up to 14630 mm depending on thickness. More detailed information on dimensions is provided in the dimension program at www.ssab.com.

Mechanical Properties

Thickness mm	Yield strength ¹⁾ R _{p0.2} Min MPa	Tensile strength ¹⁾ R _m Min MPa	Elongation A ₅ Min %
4 - 53	960	980 - 1150	12
(53) - 100	850	900 - 1100	10

¹⁾ For transverse test pieces according to EN 10 025.

Impact properties	E -40°C
Min. impact energy (J) for transverse testing Charpy V 10x10 mm tests specimens ²⁾	40 J
Exceeds the requirements for	S 960 QL

²⁾ Unless otherwise agreed, transverse impact testing according to EN 10 025-6 option 30 will apply. For thicknesses between 6 - 11.9 mm, subsize Charpy V-specimens are used. The specified minimum value is then proportional to the cross-sectional area of the specimen compared to a full-size specimen (10 x 10 mm).

Chemical Composition (ladle analysis)

C ¹⁾ Max %	Si ¹⁾ Max %	Mn ¹⁾ Max %	P Max %	S Max %	Cr ¹⁾ Max %	Cu ¹⁾ Max %	Ni ¹⁾ Max %	Mo ¹⁾ Max %	B ¹⁾ Max %
0.20	0.50	1.60	0.020	0.010	0.80	0.30	2.0	0.70	0.005

The steel is grain refined. ^{*)}Intentional alloying elements.

Maximum carbon equivalent CET (CEV)

Thickness mm	4 - (35)	35 - 100
Strenx 960: CET (CEV)	0.38 (0.58)	0.41 (0.67)

$$CET = C + \frac{Mn + Mo}{10} + \frac{Cr + Cu}{20} + \frac{Ni}{40}$$

$$CEV = C + \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Cu + Ni}{15}$$

Tolerances

More details are given in SSAB's brochures 41-General product information Strenx, Hardox, Armox and Toolox-UK and Strenx Guarantees or on www.ssab.com.

Thickness

Tolerances according to Strenx Thickness Guarantees.

Strenx Guarantees meet the requirements of EN 10 029 Class A, but offers narrower tolerances.

Length and width

According to SSAB's dimensions program. Tolerances conform with EN 10 029.

Shape

SSAB offers tolerances according to EN 10 029

Flatness

Tolerances according to Strenx Flatness Guarantee Class C, which are narrower than EN 10 029 Class N.

Surface Properties

According to EN 10 163-2 Class A, Subclass 1.

Bending

Tolerances according to Strenx Bending Radius Guarantee Class B.

Delivery Conditions

The delivery condition is Q+T (Quenched and Tempered). The plates are delivered with sheared or thermally cut edges. Untrimmed edges after agreement. Delivery requirements can be found in SSAB's brochure 41-General product information Strenx, Hardox, Armox and Toolox-UK or on www.ssab.com.

Fabrication and Other Recommendations

Welding, bending and machining

Recommendations are found in SSAB's brochures on www.ssab.com or consult Tech Support, techsupport@ssab.com.

Strenx 960 has obtained its mechanical properties by quenching and subsequent tempering. The properties of the delivery condition cannot be retained after exposure to temperatures in excess of 550°C.

Appropriate health and safety precautions must be taken when welding, cutting, grinding or otherwise working on this product. Grinding, especially of primer coated plates, may produce dust with a high particle concentration.

Contact and Information

For information, see SSAB's brochures on www.ssab.com or consult Tech Support, techsupport@ssab.com.