Strenx® 960MC

General Product Description

The high-strength structural steel at 960 MPa

Strenx® 960MC is a hot-rolled structural steel made for cold forming, with a minimum yield strength of 960 MPa.

Strenx® 960MC meets and exceeds the requirements of S960MC in EN 10149-2. These cut-to-length sheets feature excellent thickness accuracy and surface quality in relation to strength level, providing an outstanding finish to the final products.

Typical applications include advanced lifting devices and lighter transport solutions and components.

Dimension Range

Strenx® 960MC is available as cut to length sheets with mill edge in thicknesses of 3.00 - 10.00 mm, widths up to 1860 mm and lengths up to 12.3 meters.

Mechanical Properties

Thickness (mm)	Yield strength R_{eH} [1] (min MPa)	Tensile strength R_m (MPa)	Elongation A_5 (min %)	Min. inner bending radius for a 90° bend [2]
3.00 - 10.00	960	980 - 1250	7	3.5 x t

The mechanical properties are tested in the longitudinal direction.

[1] If R_{eH} is not applicable then $Rp_{0.2}$ is used.

[2] For both longitudinal and transverse direction.

Impact Properties

Product	Min. impact energy for longitudinal testing, Charpy V 10x10 mm test specimen [1]
Strenx® 960MC	27 J / -40 °C

[1] Impact testing according to EN 10149-2 (-20 °C /minimum 40J) is available if specified at the time of order.

Impact testing according to EN ISO 148-1 is performed on thicknesses ≥ 5mm. The specified minimum value corresponds to a full-size specimen.

Chemical Composition (ladle analysis)

C (max %)	Si (max %)	Mn (max %)	P (max %)	S (max %)	Nb (max %)	V (max %)	Ti (max %)
0.12	0.25	1.30	0.020	0.010	0.05	0.05	0.07

Carbon Equivalent CET(CEV)

Thickness (mm)	3.00 - 7.99	8.00 - 10.00
Typ CET(CEV)	0.28 (0.51)	0.30 (0.57)

$$CET = C + \frac{Mn + Mo}{10} + \frac{Cr + Cu}{20} + \frac{Ni}{40} \qquad CEV = C + \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Cu + Ni}{15}$$

Tolerances

More details are given in SSAB's brochure Strenx® Guarantees or on www.ssab.com.

Thickness

Tolerances according to Strenx® Thickness Guarantee.

Strenx® Guarantees offer considerably narrower thickness tolerances compared to EN 10051.

Length and Width

Width and length tolerances according to SSAB standard.

SSAB standard offer narrower width and length tolerances compared to EN 10051.

Length tolerances only apply for cut to length sheets.

Shape

Tolerances according to EN 10051. Narrower tolerances according to the SSAB standard are available on request.

Flatness

Tolerances according to Strenx® Flatness Guarantee Class A.

Strenx® Flatness Guarantee offer narrower tolerances compared to EN 10051.

Flatness guarantees only apply for cut to length sheets.

Surface Properties

According to EN 10163-2 Class A, Subclass 3.

Delivery Conditions

Strenx® 960MC is supplied in as rolled surface condition, pickled surface is available in a limited thickness range. The product is thermomechanically rolled.

Delivery requirements can be found in SSAB's brochure Strenx® Guarantees or on www.ssab.com.

Fabrication and Other Recommendations

Welding, bending and machining

Strenx® 960MC has good welding, cold forming and cutting performance.

Strenx® 960MC is a cold forming steel not suited for heat treatments at temperatures above 400°C since the material then may lose its guaranteed properties.

For information concerning fabrication, see SSAB´s brochures on www.ssab.com or consult Tech Support.

Appropriate health and safety precautions must be taken when bending, welding, cutting, grinding or otherwise working on the products.

Contact Information

www.ssab.com/contact

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