Strenx® 1100MC

General Product Description

The high-strength structural steel at 1100 MPa

Strenx® 1100MC is a hot-rolled structural steel made for cold forming, with a minimum yield strength of 1100 MPa for stronger and lighter structures.

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 a wide range of parts and components such as demanding load-bearing structures.

Dimension Range

Strenx® 1100MC is available as cut to length sheets with mill edge in thicknesses of 3.00 - 8.00 mm, widths up to 1700 mm and lengths up to 16 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 - 8.00	1100	1250 - 1450	7	4.0 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® 1100MC	27 J / -40 °C

[1] Impact testing according to EN ISO 148-1 is performed on thicknesses ≥ 6mm. The specified minimum value corresponds to a full-size specimen.

Chemical Composition (ladle analysis)

C *) (max %)	Si *) (max %)	Mn*) (max %)	Mn (max %)	P (max %)	S (max %)	Al (min %)
0.15	0.50	1.80	1.80	0.020	0.005	0.015

Carbon Equivalent CET(CEV)

Thickness (mm)	3.00 - 8.00
Typ CET(CEV)	0.33 (0.56)

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

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

Thermomechanically Rolled. Strenx® 1100 MC is available in as rolled surface condition.

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® 1100MC has good welding, cold forming and cutting performance.

Strenx® 1100MC is not suited for applications requiring hot working or heat treatments at temperatures above 200°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