

Strenx® 1100 MC

General Product Description

The high-strength structural steel at 1100 MPa

Strenx® 1100 MC 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® 1100 MC is available as cut to length sheets in thicknesses of 3.00 to 8.00 mm, widths up to 1700mm 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- 8	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

Test direction	Min impact energy for Charpy V 10x10 mm tests specimens
Longitudinal	27 J/- 40 °C

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 %)	P (max %)	S (max %)	Al (min %)
0.15	0.5	1.8	0.020	0.005	0.015

The steel is grain refined.

In addition Nb, V, Cr, Mo, B and Ti may be used.

Carbon equivalent CET(CEV)

Thickness (mm)	3.0 - 8.0
Typical CET(CEV)	0.33 (0.56)

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

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

Tolerances

More details are given on www.ssab.com.

Thickness

Tolerances according to Strenx® Thickness Guarantees. Strenx® Guarantees offer considerably narrower thickness tolerances compared to EN 10 051.

Length and Width

Width and length tolerances according to SSAB standard. The SSAB standard offer narrower width and length tolerances compared to EN 10 051.

Shape

Tolerances according to EN 10 051. Narrower tolerances according to the SSAB standard are available on request.

Flatness

Tolerances according to Strenx® Flatness Guarantees Class A. Strenx® Flatness Guarantees offer narrower tolerances compared to EN 10 051. Flatness guarantees only apply for cut to length sheets.

Surface Properties

According to EN 10 163-2 Class A, Subclass 3.

Delivery Conditions

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

Fabrication and Other Recommendations

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

Strenx® 1100 MC 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, techsupport@ssab.com. Appropriate health and safety precautions must be taken when bending, welding, cutting, grinding or otherwise working on the product.

Contact Information

www.ssab.com/contact