STRENX®
PERFORMANCE STEEL

StrenX 700 MC Plus

Advanced High Strength steel

General Product Description

StrenX 700 MC Plus is a hot-rolled structural steel with a minimum yield strength of 700 MPa intended to give stronger and lighter structures. StrenX 700 MC Plus meet or exceed the requirements of S700MC in EN 10149-2.
Typical applications can be a wide range of components and parts, for example demanding load bearing structures.

Available dimensions

StrenX 700 MC Plus is available as cut to length sheets in thicknesses of 3.00-12.00 mm, widths up to 1525 mm and lengths up to 13 meters.

Mechanical Properties

Yield strength R_{eH} [1] Min MPa	Tensile strength R_m MPa	Elongation A_5 Min % Sheet thickness t ≥ 3mm
700[2]	750 - 950	13

The mechanical properties are tested in the longitudinal direction.
[1] If R_{eH} is not applicable then $R_{p\,0.2}$ is used.
[2] On thicknesses >8 mm the minimum yield strength may be 20MPa lower.

Impact properties	700 MC Plus -60°C
Minimum energy for test on longitudinal Charpy V 10x10 mm test specimens (J)	40

Impact testing in the transverse direction 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.

Bending properties	3 mm ≤ t ≤ 10 mm	t > 10 mm
Min. inner bending radius for a 90° bend	1.0xt	1.5xt

For both longitudinal and transverse direction.

Chemical Composition (ladle analysis)

C % Max	Si % Max	Mn % Max	P % Max	S % Max	Al_{tot} % Min	Nb % Max	V % Max	Ti % Max
0.12	0.25	2.10	0.020	0.010	0.015	0.09[1]	0.20[1]	0.15[1]

The steel is grain refined.
1) Sum of Nb, V and Ti = max 0.22%

Carbon equivalent

	3mm ≤ t < 11.50 mm	11.50 mm ≤ t ≤ 12 mm
CET / CEV Typical	0.24 / 0.38	0.26 / 0.40

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

SSAB

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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.
Length tolerances only apply for cut to length sheets.

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 700 MC Plus is available in as rolled or pickled surface condition.

Fabrication and Other Recommendations

Welding, bending and machining
StrenX 700 MC Plus has good welding, cold forming and cutting performance.

StrenX 700 MC Plus is a cold forming steel not suited for heat treatments at temperatures above 580°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 and Information

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