



## STRENX 110 XF

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#### General Product Description

The thermomechanically rolled steel for cold forming  
Strenx 110 XF is a thermomechanically rolled steel at 110 ksi made for cold forming and used for light and heavy transportation components and solutions. It comes in coils, slit coils and cut-to-length sheets. Thickness measurements in inches can be found in the data sheet.

#### Dimension Range

Strenx 110 XF is available in thicknesses of 0.079- 0.393 inches (2-10 mm), and in widths up to 63 inches (1600 mm) as coil, slit coil and cut to length sheets in lengths up to 630 inches (16000 mm).

#### Mechanical Properties

Thickness (mm)	Yield Strength $R_{eH}$ (min ksi)	Tensile Strength $R_m$ (min ksi)	Elongation $A_{50}$ , Sheet thickness $t \geq 2\text{mm}$ (min %)	Min. inner bending radius for a 90° bend
2- 3.49	110	118	15	0.8 x t
3.5- 5.9	110	118	15	1.2 x t
6- 10	110	118	15	1.6 x t

The mechanical properties are tested in the transverse direction.

#### Impact Properties

Minimum energy for test on longitudinal Charpy V 10x10 mm test specimens <sup>1)</sup>	Test temperature
20 ft-lbs	-40 °F

<sup>1)</sup>Impact testing according to EN ISO 148-1 is performed on thicknesses  $\geq 0.177$  inch (4.5mm). The specified minimum value corresponds to a full-size specimen.

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## Chemical Composition (ladle analysis)

C (max %)	Si <sup>1)</sup> (max %)	Mn (max %)	P (max %)	S (max %)	Al (min %)	Nb <sup>2)</sup> (max %)	V <sup>2)</sup> (max %)	Ti <sup>2)</sup> (max %)
0.12	0.21	2.10	0.025	0.010	0.015	0.09	0.20	0.15

<sup>1)</sup> If the material is to be hot-dip galvanized, this must be specified at the time of order.

<sup>2)</sup> Sum of Nb, V and Ti = 0.22% max

## Tolerances

More details are given on [www.ssab.com](http://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 110 XF is available in as rolled or pickled surface condition with mill or cut edge.

## Fabrication and Other Recommendations

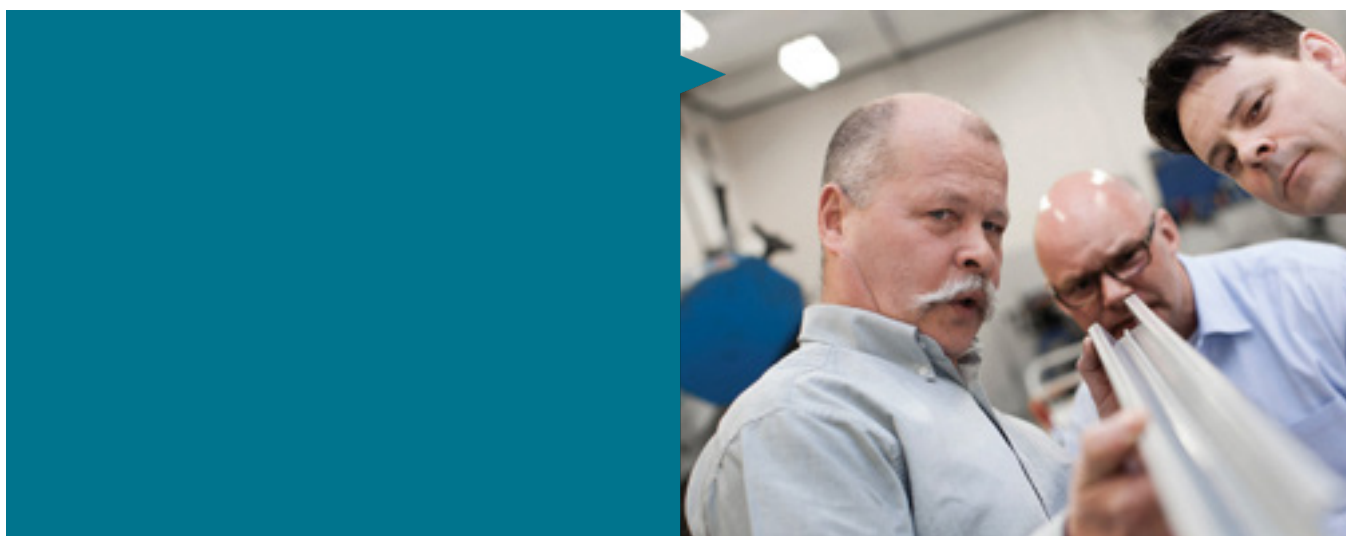
### Welding, bending and machining

Strenx 110 XF has good welding, cold forming and cutting performance. Strenx 110 XF is a cold forming steel not suited for heat treatments at temperatures above 1080°F (580°C) since the material then may lose its guaranteed properties.

For information concerning fabrication, see SSAB's brochures on [www.ssab.com](http://www.ssab.com) or consult Tech Support, [techsupport@ssab.com](mailto:techsupport@ssab.com).

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

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