

COR-TEN® A, hot rolled

General Product Description

With its anti-corrosive properties, COR-TEN® minimizes the need for maintenance and corrosion-prevention treatment, contributing significantly to low maintenance costs throughout the product lifecycle. In addition to low maintenance costs, the reduced need for corrosion prevention means less use of paint and solvents, making COR-TEN® an environmental friendly choice of steel.

Typical applications are structural components for buildings, transmission poles, bridges and many others.

Dimension Range

COR-TEN® A Hot rolled is available in thickness 2.00-12.70 mm and width up to 1860 mm as coil, slit coil and cut to length and 3300 mm as plate. Length up to 16 meters as cut to length and 13 meters as plate.

Mechanical Properties

Yield strength R_{eL} (min MPa)	Tensile strength R_m (min MPa)	Elongation A_{50} (min %)	Min. bending radius 90° bend
345	485	20	2.0 x t

The mechanical properties are tested transverse to the direction of rolling.

Chemical Composition (ladle analysis)

C (max %)	Si (%)	Mn (%)	P (%)	S (max %)	Al (%)	Cu (%)	Cr (%)	Ni (max %)
0.12	0.25 - 0.75	0.20 - 0.50	0.07 - 0.15	0.030	0.015 - 0.06	0.25 - 0.55	0.50 - 1.25	0.65

Carbon Equivalent CEV

Delivery form	Hot rolled strip	Hot rolled plate
Thickness (mm)	2 - 12.7	6 - 12.7
Typical CEV (%)	0.35	0.39

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

Tolerances

COR-TEN® A is delivered with SSAB Weathering tolerances, with improved guarantees compared to corresponding EN standards. More details are available at SSAB.com

Thickness

Hot rolled Strip: Thickness tolerances correspond to ¾ of EN 10051 as default value. After special agreement, tolerances down to ½ of EN 10051 can be delivered for certain products and dimensions.

Plate: Thickness tolerances that correspond to ¾ of EN 10029 as default value.

Length and Width

Hot rolled Strip: Width and length tolerances according to SSAB standard which offer narrower tolerances compared to EN 10051.

For coil and sheet with mill edge, the width tolerances are corresponding to -0/+20 mm.

For coil and sheet with cut edge, the width tolerances are corresponding to -0/+2 mm.

Length tolerances only apply for cut to length sheets.

Plate: Width tolerance is -0/+4-10mm depending on the thickness. Length tolerances are -0/+15-75mm depending on length.

Shape

Hot rolled Strip: Shape tolerances in accordance to EN 10051. Narrower tolerances according to the SSAB standard are available on request.

Plate: Shape tolerances in accordance to EN 10029.

Flatness

Strip:

Flatness tolerances guarantee a maximum flatness deviation of 3 mm/m in addition to the EN 10051 flatness requirements.

Flatness guarantees only apply for cut to length sheets.

Plate: Max flatness deviation 6 mm/m.

Surface Properties

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

Delivery Conditions

Coils, slit coils and cut to length: Controlled rolled or thermomechanically rolled.

Plate: Hot-rolled, normalized rolled or normalized in furnace.

Inspection documents

The inspection document shall be specified at the time of order. The European types of inspection documents are defined in the EN 10204 standard.

Fabrication and Other Recommendations

COR-TEN® A has extra corrosion resistance with good formability, toughness and weldability.

COR-TEN® is an internationally registered trademark of United States Steel Corporation.

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